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## **BLUE RING OCTOPUS: SMALL BUT DEADLY**

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### **INTRODUCTION**

At first glance, the blue-ringed octopus looks completely harmless. Its hallucinogenic shading and diminutive bundling cause it to appear to be more charming than disturbing. Yet, don't let its cuddly outside fool you: this minuscule octopus can kill you, rapidly. A blue-ringed octopus is one of the most hazardous creatures in the sea. Its chomp can be deadly to people. Nonetheless, not very many individuals have passed on from a blue-ringed octopus chomp. These octopuses are not forceful and will quite often mind their own business except if they are gone after.

### **What Is a Blue-Ringed Octopus?**

A blue-ringed octopus is one of a few types of little octopuses that show little, radiant blue rings on their body when they are frightened. They live in tide pools and shallow reefs. They like moderate-temperature water and are tracked down in the jungles and calm locales of the world. At the point when they are very still, they are dark or beige and their rings aren't apparent.

Blue-ringed octopuses are little. Their bodies are about the size of a golfball and their arms are 3 to 4 inches long. They conceal in breaks and under rocks during the day. They eat little crabs, loner crabs, and shrimp.

Local to the Pacific Sea, the blue-ringed octopus can be found in the delicate, sandy lower part of shallow tide pools and coral reefs. While not looking for food or a mate, blue-ringed octopuses frequently conceal in fissure, shells or marine trash. In the event that you get them beyond their comfortable concealing spots, it's not difficult to perceive how the creature gets its name: when undermined, radiant blue rings show up all around its body as an advance notice sign to expected hunters.

Albeit all octopuses (as well as cuttlefish and some squid) are venomous, the blue-ringed octopus is truly amazing. Its toxin is multiple times more remarkable than cyanide, and this

golf-ball measured stalwart packs sufficient toxin to kill 26 people in practically no time. Nothing unexpected it's perceived as one of the most hazardous creatures in the sea.

Blue-ringed octopuses produce a powerful neurotoxin called tetrodotoxin, a possibly destructive substance likewise tracked down in pufferfish. The toxin is delivered by harmonious microorganisms in the creature's salivary organs and is more poisonous than that of any land vertebrates. It's fundamentally utilized while hunting: the octopus catches crabs, shrimp and little fish by pecking through its prey's exoskeleton with its mouth and embedding the toxin. Then, at that point, it will utilize its nose to take out meat while its prey remains defenselessly incapacitated. Eventually, just the intense external shell of its prey remains.

All in all, what occurs on the off chance that you're nibbled by a blue-ringed octopus? In the first place, the toxin blocks nerve signals all through the body, causing muscle deadness. Different side effects incorporate queasiness, vision misfortune or visual deficiency, loss of faculties and loss of coordinated movements. Eventually, it will cause muscle loss of motion — including the muscles required for people to inhale, prompting respiratory capture. There is no known cure, however casualties can be saved assuming that counterfeit breath is begun right away.

On the off chance that you at any point experience this blue and yellow excellence, step back in a rush — its chomp is normally effortless, so you probably won't realize you've been nibbled until it's past the point of no return. Luckily, the blue-ringed octopus isn't forceful; it's simply prone to chomp people whenever cornered or dealt with. As a matter of fact, there have been no known passings from its nibble since the 1960s. However long you hush up about your hands, you ought to be fine.

### **What is a blue-ringed octopus and where do you find it?**

Blue-ringed octopuses are a group of *highly venomous cephalopods*. These little octopuses have been tracked down in the Pacific and Indian seas. They regularly live on coral reefs and rough region of the ocean bottom, however some might be found in tide pools, seagrass and algal beds. They are typically nighttime, arising around evening time to chase scavengers and now and again little fish.

As their name recommends, these octopuses include various blue rings on their bodies and arms. These rings are an illustration of aposematism, where creatures utilize splendid varieties as an advance notice to would-be hunters.

However, not at all like other aposematic creatures, for example, poison dart frogs or velvet insects, which for all time show their splendid varieties, blue-ringed octopuses possibly show theirs off when they feel undermined.

Octopuses have thousands chromatophores under their skin. These are specific cells that permit them to promptly change tone. Blue-ringed octopuses put on a danger show utilizing these chromatophores and iridophores, a specific kind of light-reflecting chromatophore that gives the blue rings their luminosity.

At the point when frightened or gone after, these creatures rapidly change tone. They use muscles to make their blue examples show up, showing them on top of a yellow or cream-shaded base with dim pigmented cells under the rings, which assists with strengthening their variety.

Like bunches of other octopuses, blue-ringed octopuses can likewise utilize their chromatophores to assist with covering themselves. They invest a great deal of their energy concealed in fissure, stowing away from creatures that could attempt to eat them.

A minuscule blue-ringed octopus is close to an individual's finger for size examination. Blue-ringed octopuses are minuscule, however they are likewise a portion of the sea's most harmful creatures © Mike Worker/Shutterstock

There might associate with 10 distinct types of blue-ringed octopus, however just four have been given logical names. The more noteworthy blue-ringed octopus (*Hapalochlaenalanulata*) is around 12 centimeters in length including its arms. This species favors the shallows, up to 20 meters down. It has been tracked down in the waters around Indonesia, the Philippines, Papua New Guinea, Vanuatu and the Solomon Islands.

The Southern blue-ringed octopus (*Hapalochlaenamaculosa*) is found up to 50 meters along Australia's southern shore, including around Tasmania. It arrives at around 22 centimeters in length and its base can go from dark green to cream, with 50-60 blue rings.

In spite of its name, the blue-lined octopus (*Hapalochlaenafasciata*) is likewise an individual from the gathering. It highlights glowing blue lines on its mantle (the solid design behind the octopus' head, which holds every one of its organs), however it likewise has the mark blue rings on its arms. This species arrives at 15 centimeters in length and is found in the waters off eastern Australia, from southern Queensland to southern New South Wales at profundities of up to 20 meters.

The fourth species is *Hapalochlaenanierstraszi*, which has just been formally recorded two times: in the waters around the Andaman Islands in 1938, and in 2013 when one was trapped in a fishing net close to Chennai in southeast India. Little is had some significant awareness of this species, however the 1938 example had a 16-centimeter-long mantle.

Notwithstanding their name, blue-lined octopuses are essential for the gathering known as blue-ringed octopuses

### **Blue-ringed octopus toxin**

The energetic danger presentations of blue-ringed octopuses aren't only to look good. Cooperative microorganisms in blue-ringed octopus salivary organs produce tetrodotoxin (TTX). This substance is powerfully neurotoxic, impeding the transmission of nerve motivations. This prevents muscles from having the option to contract and has possibly destructive outcomes. A few reports express that TTX is north of 1,000 times more poisonous than cyanide.

TTX is found in an assortment of creatures including fish, creatures of land and water and shellfish. Pufferfish are one notable model. These fish can be eaten, yet they sequester TTX in their interior organs, so in the event that they aren't as expected ready, they can cause lethal harming.

Blue-ringed octopuses scatter TTX all through their body. On the off chance that they are eaten by another creature, the TTX goes about as a toxic substance. There has been no less than one instance of human harming brought about by somebody erroneously eating a blue-ringed octopus, however an investigation discovered that gulping TTX can make it multiple times less poisonous than when it is conveyed through different means.

### **A more prominent blue-ringed octopus**

Blue-ringed octopuses use muscles to cause their glowing examples to show up © Rickard Zerpe through Flickr (CC BY-SA 2.0) Blue-ringed octopuses can infuse TTX as well, conveying it as a toxin by means of a close easy nibble. Chomps from blue-ringed octopuses are sensibly uncommon, yet these creatures truly do convey a portion of TTX that is deadly for people. There have been a small bunch of deadly experiences with these creatures.

TTX can produce results rapidly, quickly debilitating and incapacitating muscles close by a large group of other expected secondary effects, like regurgitating and unsteadiness. While progressively incapable to move, TTX casualties by and large stay cognizant and mindful until an absence of oxygen renders them oblivious. Demise is generally by respiratory disappointment, the stomach having become deadened. This can happen inside only minutes. There is no remedy for TTX, and most consideration is strong, for example, ventilation to keep a patient breathing until the impacts of the poison wear off.

### **Are blue-ringed octopuses jeopardized?**

Specialists doesn't know the number of blue-ringed octopuses there are, and it's muddled whether their populaces are in decline. While the species are not generally officially viewed as in danger, human exercises might in any case be influencing them.

Blue-ringed octopuses are dazzling creatures. They are globally exchanged, however they probably wouldn't make great pets. One potential effect is to their key environments. Blue-ringed octopuses are known to occupy coral reefs, which are confronting dangers, for example, from warming waters, sea fermentation and contamination, to give some examples. Seagrasses are in basically the same manner in decline. The obliteration of these natural surroundings compromises the endurance of the creatures that depend on them.

Blue-ringed octopuses are likewise universally exchanged to be kept in aquaria. While a portion of their reach falls inside Marine Safeguarded Regions, these creatures have been known to be reaped from the wild in regions where there can be not many guidelines on gathering them. They additionally have short life expectancies, living for 2-3 years, and allegedly don't passage well on the way.

Apparently, blue-ringed octopuses wouldn't make great pets. Like other octopuses, they are slick people, to get themselves out of even the most dependable tanks. This would make them a gamble to inquisitive kids and good natured individuals who could incautiously scoop them up to return them to their tank. This naivety is maybe demonstrated by numerous instances of individuals getting wild blue-ringed octopuses and showing them off via virtual entertainment, ignorant that they are holding one of the sea's most venomous animals.

Blue-ringed octopuses are amazingly lovely creatures, particularly when they flaunt their brilliant examples. In any case, regardless of their little size and lovely tones, it's memorable's essential that their conspicuous rings are not an inactive danger. On the off chance that you are sufficiently fortunate to see one in the wild, it's protected to watch them from a deferential distance, however you ought to never get one.

### **Blue-Ringed Octopus Venom**

While blue-ringed octopuses have incredibly harmful toxin, they don't make it themselves. They use microscopic organisms they track down in the sea and store it in their salivary organs. The microorganisms emit a poison called tetrodotoxin, or TTX. It then utilizes its snout to make an opening in its prey's shell to spit the spit in it.

The poison in the spit deadens the prey while the blue-ringed octopus eats it. The TTX that a blue-ringed octopus infuses is destructive to the point that 1 milligram of it can kill a human. It's one of the most powerful poisons on the planet, and there is no counteractant.

### **Side effects of a Blue-Ring Octopus Nibble?**

TTX does likewise to people as it does to little crabs the blue-ringed octopus eats. It incapacitates you. On the off chance that you don't get prompt treatment, each of your

muscles will ultimately become deadened and you will not have the option to relax. The actual nibble is tiny. Just a little cut produces all things considered a drop of blood.

You may not actually acknowledge you've been nibbled until you begin to encounter side effects. Certain individuals who have been nibbled said that they were cognizant and mindful of what was happening however couldn't move. Inside 5 to 10 minutes of a chomp, you might begin to encounter:

- A consuming or prickling sensation
  - Deadness
  - Shortcoming that deteriorates
  - Trouble relaxing
  - Trouble gulping
  - Queasiness
  - Retching
  - Inconvenience seeing
  - Trouble talking
  - Not all nibbles contain a similar measure of toxin. How extreme your side effects are will rely heavily on how much poison was moved into you with the chomp. Kids and little grown-ups are more in danger. With extreme chomps, your side effects might deteriorate and include:
- Loss of motion
  - Respiratory disappointment
  - Obviousness
  - Passing

### **How Is a Blue-Ringed Octopus Nibble Treated?**

On the off chance that you are chomped by a blue-ringed octopus, look for clinical assistance right away. Assuming you are with somebody who is nibbled, you ought to:

- Call crisis benefits right away.
  - Keep the individual who was chomped as still as could be expected.
  - Have them rests if conceivable.
  - Apply a wide versatile wrap to the chomped region.
  - Swathe the whole appendage. Wrap it as firmly as you would for a hyper-extended lower leg.
  - Apply an inflexible brace to the appendage. You can utilize a branch, a piece of wood, or rolled-up paper if necessary.
  - Remain with them and sit tight for a rescue vehicle.
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- Get ready to perform cardiopulmonary revival (CPR) if necessary.

### **What Is the Guess for a Blue-Ringed Octopus Blue-ringed Nibble?**

However long you get speedy treatment, you will presumably totally recuperate from a blue-ringed octopus chomp. You might require assist breathing until the impacts of the toxin with wearing off. The toxin doesn't influence the heart or cerebrum, so as long as you can keep breathing, there typically aren't any drawn out issues.

Passings because of a blue-ringed octopus nibble are incredibly uncommon. There have just been 3 known passings. A lot more individuals have been nibbled yet made due.

### **How Might You Stay away from a Blue-Ringed Octopus Chomp?**

Blue-ringed octopuses are not forceful. They attempt to stay away from a conflict by leveling their bodies. You are simply prone to get chomped assuming that you step on them or incite them. In the event that you see one, step back and let it be. Assuming you are in a space where they are normal, try not to stick your hands into hole in the event that you can't understand what's inside them.

The name 'blue-ringed octopus' doesn't really allude to a solitary animal varieties, but instead a sort of animal varieties, all with the roundabout, brilliant blue markings for which they are named. These markings are surely exceptionally gorgeous and striking to check out, but they are possibly shown when the octopus is going to administer its dangerous toxin, so stick to seeing them in photos!

### **Portrayal**

Size varies between species, however they range from four to six centimeters in length, with arms arriving at lengths of seven to 10 centimeters. The gathering is named for the glowing blue markings that dab their bodies; but these are normally possibly seen when the octopus feels undermined and is going to assault. This adjustment of variety is because of color cells known as chromatophores. They, alongside any remaining octopuses, have eight arms which are joined around their mouth. These arms have columns of expansive, solid suckers.

The cerebrum of an octopus is formed like a doughnut, and is based on their throat. They have two very advanced eyes that are like those moved by vertebrates. Octopuses have three hearts, with a focal heart and one over every gill. These gills thus are suspended in a pit under the body. Seawater enters the octopus through this hole, because of the siphoning activity of the mantle, a strong sack like construction inside which is put away the organs of the octopus. The mantle isn't liable for discarding the seawater from the body be that as it may, rather the water is shot out through a pipe, which can be pointed this way and that. The drive of water

from this pipe permits the octopus to move quickly in escape. The pipe can likewise shoot out ink in some blue-ringed octopuses, which comes from an organ situated in the liver.

Despite the fact that molluscs overall are known for their shells, in the octopuses this shell has been enormously diminished through advancement, and presently exists just as two little bars. One more particular component of the octopuses is the shade of their blood: straightforward blue. This is because of the respiratory shade of the octopuses being founded on a copper iota; the respiratory color of a human depends on an iron molecule, which makes our crimson.

### **Family**

Blue-ringed octopuses have a place with the Phylum Mollusca (the molluscs) which incorporates snails, slugs and bivalves. They are important for the Class Cephalopodea, a particular gathering of creatures so named on the grounds that their appendages are joined to their head. The name cephalopod comes from the Greek words kephalos for head and podos for foot. Inside the cephalopods they have a place with Subclass Coleoidea, which incorporates cuttlefish, squid and octopuses. All octopuses have a place with the Request Octopoda, while the blue-ringed octopuses can be tracked down inside the Family Octopodidae. They make up the family Hapalochlaena .

### **Territory**

The blue-ringed octopuses range from the Ocean of Japan down to the waters of southern Australia; opposite the Philippines to Vanuatu. They occupy profundities from intertidal pads down to 50m. They will generally conceal in cleft or under rocks during the day, and arise around evening time.

### **Mating**

One of the appendages of the male octopus, generally the third right arm, is changed to mate. This arm has a score inserted into it and the end is formed like a spoon. During mating, guys embed the spoon-like construction into the oviduct of the female. They then, at that point, place spermatophores (little "bundles" of sperm) into the score on this arm. These then slide down the arm and into the oviduct of the female. She doesn't consider right away, but instead keeps the sperm until she is prepared to lay her eggs. The female deals with the eggs until they hatch; females generally bite the dust once this occupation is finished.

### **Poisons**

The blue-ringed octopus has a dreadful treat for any expected prey or hunters. Inside its salivary organs live microbes, which produce the synthetic tetrodotoxin. This is areas of strength for a, acting poison that incapacitates the objective by obstructing the nerves from



communicating messages. This poison can be deadly; it has known to have caused the passings of something like three individuals: two in Australia and one in Singapore. A lot more individuals have come near death because of the chomp of the blue-ringed octopus. The loss of motion that defeats the casualty is just to their deliberate muscles; they remain completely cognizant. Passing generally happens because of absence of oxygen. Subsequently, if mouth to mouth revival is given to a survivor of a blue-ringed octopus, they ought to completely recuperate. The uplifting news for swimmers in the waters where blue-ringed octopuses are found, is that they are resigning animals and will possibly chomp assuming they are being bothered and jabbed.

### **Environment**

There are perhaps 10 distinct types of blue-ringed octopus however just 4 have been officially names and all are occupants of asian-pacific waters:

- More noteworthy Blue-ringed Octopus (*Hapalochlaenalanulata*)
- Lesser Blue-ringed Octopus or Southern Blue-ringed Octopus (*Hapalochlaenamaculosa*)
- Blue-lined Octopus (*Hapalochlaenafasciata*)
- *Hapalochlaenanierstraszi*

They are one of the gems of the sea, with clear blue rings apparent over the body while hunting, seeking or frightened. They are simply 12 to 20 cm (5 to 8 inches) long yet are viewed as one of the world's most venomous marine creatures. At the point when the octopus is unsettled, the earthy colored patches obscure emphatically, and brilliant blue rings or clusters of rings show up and throb inside the maculae. Normally 50-60 blue rings cover the dorsal and sidelong surfaces of the mantle. They chase little crabs, loner crabs, and shrimp, and may nibble assailants, including people, whenever incited.

### **Blue-ring octopus-Behaviour**

The blue-ringed octopus goes through quite a bit of its time on earth concealing in cleft. Like all octopuses, it can change its shape effectively, which assists it with getting into hole a lot more modest than itself. This helps protect the octopus from hunters and it might try and stack up rocks outside the entry to its sanctuary. Just the same as other octopuses, the blue-ringed octopus swims by removing water from its hyponome (channel) in a type of fly impetus. Assuming the blue-ringed octopus loses an arm, it can recover it in six weeks or less.

### **Life-cycle**

Blue-ringed octopus females lay just a single grasp of around 50-100 eggs in the course of their life. The eggs are laid then hatched under the female's arms for roughly a half year, and during this cycle she won't eat.

After the eggs hatch, the female passes on, and the youthful larval octopuses will then benefit from copepods, larval crabs and larval starfish until they are prepared to move further into the sea then arriving at development and will actually want to mate quite soon.

Once the larval octopuses develop to be one to two years of age they produce eggs and proceed with the cycle. Like most octopuses, they have a life expectancy of roughly 1-2 years

### **Blue ring octopus-Venom**

In spite of this little size and generally resigned nature, its toxin is sufficiently strong to kill people. The toxin is a neurotoxin called tetrodotoxin, it is likewise tracked down in pufferfish and is multiple times more poisonous than cyanide. The poison is infused utilizing the octopus' nose and causes engine loss of motion and respiratory capture in practically no time, prompting heart failure because of an absence of oxygen.

It conveys sufficient toxin to kill 26 grown-up people in no time. Their nibbles are small and frequently effortless, with numerous casualties not understanding they have been envenomated until respiratory misery and loss of motion begin to set in.

### **Side effects**

Respiratory capture can happen inside the space of minutes as the poison blocks nerve transmission. Different side effects incorporate regurgitating, muscle shortcoming and loss of motion of respiratory muscles. Casualties are completely conscious until absence of oxygen, from the powerlessness to inhale, prompts obviousness.

### **Treatment**

Tetrodotoxin causes extreme and frequently all out body loss of motion; the casualty stays cognizant and alert, yet this impact is brief and will blur over a time of hours as the tetrodotoxin is utilized and discharged by the body.

There is at present no serum toxin accessible, and casualties are as often as possible saved in the event that fake breath is begun and kept up with before stamped cyanosis and hypotension create. Medical aid therapy is in this way tension on the injury and counterfeit breath once the loss of motion has crippled the casualty's respiratory muscles. Casualties who survive the initial 24 hours by and large proceed to make a total recuperation.

Fundamental salvage breathing be gone on immediately until the loss of motion dies down and the casualty recovers the capacity to inhale all alone. This is an overwhelming actual

possibility for a solitary individual, however utilization of a pack valve veil respirator diminishes weakness to maintainable levels until help can show up.

Conclusive emergency clinic therapy includes putting the patient on a clinical ventilator until the poison is killed by the body.

It is fundamental that endeavors go on regardless of whether the casualty seems not to answer. Tetrodotoxin harming can bring about the casualty being completely mindful of their environmental elements yet incapable to relax. In light of the loss of motion that happens they have absolutely no chance of motioning for help or some approach to demonstrating trouble. Respiratory help, along with consolation, until clinical help shows up guarantees that the casualty will by and large recuperate well.

### **Avoidance**

It might really shock jumpers however blue-ringed octopuses are normal in exceptionally shallow water. Subsequently, kids are likely most in danger as they are drawn to the clear blue rings showed by the octopus when compromised: the octopus is little as is many times gotten by curious youngsters. For jumpers, as usual, incredible consideration ought to be taken while contacting the reef as, when not undermined, the octopus' disguise can be exceptionally viable. They are not forceful and their most memorable type of protection is to escape.

Try not to let the excellence or size of the blue-ringed octopus fool you. The body of the minuscule octopus doesn't get a lot greater than a golf ball and can be basically as little as a penny. While the blue-ringed octopus is very dazzling, with radiant yellow skin designed with little blue rings that strengthen when it is compromised or under pressure, this octopus is incredibly venomous.

They're local to the Pacific Sea, from Australia and Indonesia to the Philippines, Japan and South Korea. They live in coral reefs and tide pools, and when they're not out chasing after food or searching for a mate, they conceal in hole or shells. They for the most part eat little scavengers, like crabs and shrimp, and can live for around two years.

### **Not Only One Animal varieties**

The blue-ringed octopus is truth be told not one single animal categories. There are two species that are known as blue-ringed octopuses: *Hapalochlaenalunulata*, the more noteworthy blue-ringed octopus, and *Hapalochlaenamaculosa*, the southern blue-ringed octopus, otherwise called the lesser blue-ringed octopus. Moreover, there are two other affirmed species that are individuals from similar class, *Hapalochlaena*.

Peter Morse, a marine zoologist at James Cook College in North Queensland, Australia, who studies these octopuses, specifically their mating propensities, says that one of the principal distinctions between the two types of blue-ringed octopus is the way they replicate.

The more prominent blue-ringed octopuses, alongside living longer and for the most part growing somewhat bigger, have a planktonic larval stage, implying that they get going as tiny fish prior to developing into octopuses we know. This assists them with scattering a lot farther, making their reach more extensive, and their populace higher. The southern blue-ringed octopus, then again, hatch as smaller than expected grown-ups.

"They can get to the extent that they can slither in a lifetime," Morse says of the southern species, and that truly intends that there is more inbreeding among this species.

### **They Sneak up all of a sudden**

Beside its striking shading, what the blue-ringed octopus is generally well known for is its exceptionally harmful toxin. Its toxin is multiple times more impressive than cyanide and every octopus has sufficient toxin to kill in excess of 20 people in no time.

The dangerous toxin is a strong neurotoxin called tetrodotoxin — a similar toxin tracked down in pufferfish. While their nibble might be exceptionally poisonous, blue-ringed octopuses are for the most part not a threat to people; they ordinarily won't chomp except if incited.

So what occurs on the off chance that an individual truly does get nibbled? The toxin endures somewhere in the range of 12 and 48 hours, contingent upon the size of the individual and how much toxin they get from the chomp. The toxin is a post-synaptic blocker, and that implies it blocks synapses, or nerve signals, in the body. That implies the individual nibbled will go limp in what is known as 'flabby loss of motion.' This mainly influences smooth muscles, so while it doesn't influence the heart, it raises a ruckus around town, so the individual will quit relaxing. This occurs promptly after being nibbled.

Different indications of flabby loss of motion could be queasiness, obscured vision or troublesomely gulping. Also, the awful news is there is no neutralizer accessible, so crisis care would be required right away.

"Since they're nighttime and they're extremely modest and they give a lot of caution too, you truly would need to be exceptionally obstinate to get chomped," Morse says. "The toxin is extremely intense and there isn't a counter-agent. Yet, the toxin wears off, so if the [bitten] individual could get life-saving methods during that time, they could be alright."

The uplifting news is there are a couple of chomps to people consistently, and there have been just three known passings from blue-ringed octopus nibbles.

## **Hunting and Eating Prey**

That is probable since blue-ringed octopuses generally utilize their toxin to chase and eat. At the point when they're youthful, they eat tiny shrimps, and as they progress in years and greater, they bring down crabs and little prawns. To take care of, they utilize their toxin in several different ways:

- by hopping on the rear of their prey, and breaking the shell with their bill and afterward infusing the toxin straightforwardly into the injury, or
- by delivering a haze of toxin into the water close to the prey so they will take it in through their gills.

Crabs, for instance, have an open circulatory framework, so the toxin goes through their body before long and they go limp. Blue-ringed octopuses by and large feed on scavengers that are equivalent to or more modest than the size of their own heads.

"Blue-ringed octopuses, despite the fact that they have toxin, typically don't face an excessive number of challenges in light of the fact that an enormous crab can in any case cause some harm," Morse says. "Anything greater is likely not worth the effort for them."

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