

# Grimpoteuthis

<sup>[1]</sup>***Grimpoteuthis*** is a genus of pelagic umbrella octopuses known as the **dumbo octopuses**.<sup>[2]</sup> The name "dumbo" originates from their resemblance to the title character of Disney's 1941 film *Dumbo*, having a prominent ear-like fin which extends from the mantle above each eye. There are 13 species recognized in the genus.<sup>[3]</sup> Prey include crustaceans, bivalves, worms and copepods.<sup>[2]</sup> The average life span of various *Grimpoteuthis* species is 3 to 5 years.

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## Species and Taxonomy

### *Grimpoteuthis*



### Scientific classification

Kingdom:	Animalia
Phylum:	Mollusca
Class:	Cephalopoda
Order:	Octopoda
Family:	Opisthoteuthidae
Genus:	<i>Grimpoteuthis</i> Robson, 1932

### Type species

*Cirroteuthis umbellata*  
Fischer, 1884

### Species

14, see text

Species Name	Reference	Geographic Range	Depth Range (meters)	Taxonomic Notes
<i>Grimpoteuthis abyssicola</i>	O'Shea, 1999 <sup>[4][5]</sup>	South Pacific (off New Zealand and Australia)	3145-3180	
<i>Grimpoteuthis bathynectes</i>	Voss & Percy, 1990 <sup>[6][7]</sup>	North Pacific (Tufts and Cascadia Abyssal Plains off Oregon)	3932	
<i>Grimpoteuthis boylei</i>	Collins, 2003 <sup>[8][9]</sup>	Northeast Atlantic (Porcupine and Madeira Abyssal Plains)	4845-4847	
<i>Grimpoteuthis challengerii</i>	Collins, 2003 <sup>[8][10]</sup>	Northeast Atlantic (Porcupine Abyssal Plain)	4828-4838	
<i>Grimpoteuthis discoveryi</i>	Collins, 2003 <sup>[8][11]</sup>	Northeast Atlantic	2600-4870	
<i>Grimpoteuthis hippocrepium</i>	Hoyle, 1905 <sup>[12][13]</sup>	East Pacific (off Malpelo Island)	3334	Previously assigned to genus <i>Stauroteuthis</i> ; known from a single, "sadly mutilated" individual according to Hoyle <sup>[12]</sup>
<i>Grimpoteuthis innominata</i>	O'Shea, 1999 <sup>[4][14]</sup>	South Pacific (East of New Zealand)	2000	Alternatively classified as <i>Enigmatiteuthis</i> <sup>[4]</sup>
<i>Grimpoteuthis meangensis</i>	Hoyle, 1885 <sup>[15][16]</sup>	West Pacific (off Meangis Islands, near Philippines)	925	Previously assigned to genera <i>Cirroteuthis</i> <sup>[15]</sup> and <i>Stauroteuthis</i> <sup>[12]</sup>
<i>Grimpoteuthis megaptera</i>	Verrill, 1885 <sup>[15][17]</sup>	Northwest Atlantic (Southeast of Martha's Vineyard)	4600	Previously assigned to genus <i>Cirroteuthis</i> <sup>[15]</sup>
<i>Grimpoteuthis pacifica</i>	Hoyle, 1885 <sup>[15][18]</sup>	South Pacific (off Papua New Guinea)	4500	Previously assigned to genus <i>Cirroteuthis</i> <sup>[15]</sup>
<i>Grimpoteuthis plena</i>	Verrill, 1885 <sup>[15][19]</sup>	Northwest Atlantic	2000	Previously assigned to genus <i>Cirroteuthis</i> <sup>[15]</sup>
<i>Grimpoteuthis tuftsi</i>	Voss & Percy, 1990 <sup>[6][20]</sup>	North Pacific (Tufts and Cascadia Abyssal Plains off Oregon)	3900	
<i>Grimpoteuthis umbellata</i>	P. Fischer, 1883 <sup>[15][21]</sup>	North Atlantic (off Morocco, Canary Islands, and the Azores)	2235	Previously assigned to genus <i>Cirroteuthis</i> <sup>[15]</sup>
<i>Grimpoteuthis wuelkeri</i>	Grimpe, 1920 <sup>[22][23]</sup>	Northeast and Northwest Atlantic	2055	

As noted above, many species collected on the *Challenger* expedition were initially classified in the genera *Cirroteuthis* and *Stauroteuthis*.<sup>[15][12]</sup> Several species formerly classified in this genus were moved to other opisthoteuthid genera. A new family, Grimpoteuthididae, has been proposed to accommodate these species and those of genus *Enigmatiteuthis*.<sup>[4][24]</sup> The persistent confusion and disparity about the taxonomy of these species has been attributed to the poor quality and limited number of specimens available for study.<sup>[24]</sup>

# Range and habitat

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Species of *Grimpot euthis* are assumed to have a worldwide distribution, living in the cold, abyssal depths ranging from 1000 to 4,800 metres (13,000 ft). Specimens have been found off the coast of Oregon, the Philippines, Martha's Vineyard, the Azores, New Zealand,<sup>[25]</sup> Australia, California, Gulf of Mexico, Papua, and New Guinea. Dumbo octopuses are among the deepest living octopuses known.

## Threats

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Species of *Grimpot euthis* face few direct threats from humans, living at depths of 1,000 meters (3,300 ft) and below. Natural predators include sharks and predatory cephalopods. The *Grimpot euthis* does not have an ink sack and therefore, they change colors and size due to their chromatophore cells that helps them protect themselves from predators.<sup>[26]</sup> Some color changes can be red, white, pink, brown, or they become an invisible color so that they can blend in with the ocean floor.<sup>[27]</sup> Besides the threats they face *Grimpot euthis* feed on worms, crustaceans, shellfish, and copepods.<sup>[28]</sup>

## Movement, characteristics and food supply

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The genus has a distinct habit of swimming. Whilst it appears that the large fins on the side of the head are propelling the creature, it is actually a siphon, pushing water out the back, creating propulsion. The fins are in fact primarily used for stabilization and steering.<sup>[29]</sup> Movement of the arms can be used to help the animal move in any direction. The arms permit the animal to crawl along the seafloor, to capture prey, lay eggs, explore, etc. Dumbos hover above the sea floor, searching for polychaete worms, pelagic copepods, isopods, amphipods, and other crustaceans for food.<sup>[30]</sup> Prey is captured by pouncing on the target, which then is swallowed whole.<sup>[31]</sup> It is also interesting to know that contrast to other octopuses, dumbo octopuses do not produce ink. This makes sense considering the fact that their habitat is a deep, dark place in the ocean. Instead of ink sacs, dumbo octopuses take advantage of a strand-like structure on their suckers to help them sense the surrounding environment as well as looking for food. The dumbo octopus has a distinct characteristic, what was once thought to be white spot(s) above their eyes, near the base of the fins is transparent patches. These patches function to detect (unfocused) light.<sup>[32]</sup>

## Breeding

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Females have no distinct period for breeding. Females carry multiple eggs in various stages of maturation, suggesting that they have no optimal breeding period. Male octopuses have a separate protuberance on one of their arms that carries an encapsulated sperm packet to the female. It is hypothesized that the female can then distribute this sperm to the eggs at any given time based on environmental conditions. The females lay the eggs under small rocks or on shells in the deep ocean or can even carry them on her arms, by tucking the eggs behind the wide webbing, until she finds a safe place that would provide them with the best fitness. As with other octopuses, females do not invest any further time in the young after they hatch because once they are born they are able to defend themselves. In 2018, Shea *et al.* determined that *Grimpot euthis* hatchlings emerge as "fully competent" juveniles with all of the sensory and motor features to survive on their own.<sup>[33]</sup> Females can be distinguished from males by body type. Females have a much more

prevalent gelatinous body type with size being more width than length, having 1.5 to 2 time more short arms. Other differences include females having broadly U-shaped shells, larger eyes, and gills with six lamellae.<sup>[34]</sup>

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## External links

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- [Dumbo Octopus \(https://www.bbc.co.uk/nature/life/Grimpoteuthis#p00hn4zc\)](https://www.bbc.co.uk/nature/life/Grimpoteuthis#p00hn4zc) video at BBC
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