# Chapter 22: Phyla Nemertea – Ribbon Worms

With over 1,300 described species, the **Phylum Nemertea** is a group of elongated, unsegmented wormsknown for their **remarkable hunting abilities, extreme body flexibility, and unique proboscis-based feeding mechanism**. Commonly called ribbon worms, nemerteans inhabit marine, freshwater, and even terrestrial environments, where they function as predators, scavengers, and, in some cases, commensals. Despite their soft-bodied appearance, these animals are highly specialized and often aggressive hunters, capable of **ejecting a long, muscular proboscis** to ensnare or stab their prey.

One of the most distinctive features of nemerteans is their hydrostatic feeding mechanism, powered by a **fluid-filled cavity known as the rhynchocoel**. This adaptation allows them to **launch their proboscis with incredible speed**, in some species using a **sharp, venomous stylet to pierce prey**, while others rely on mucus entanglement. The proboscis can also be highly branched, creating a writhing net of sticky tendrils to capture multiple prey at once. Some nemerteans, such as the **bootlace worm**, are among the longest animals on Earth, while others, like the self-decapitating worm, can regenerate entire body segments with ease.

Nemerteans are often overlooked due to their secretive nature and soft bodies, but their biology is filled with strange and extreme adaptations. Some produce acidic, tissue-dissolving mucus, while others rely on **catastrophic metamorphosis**, where the juvenile worm completely destroys its larval body before emerging as an adult. This chapter explores the evolution, anatomy, feeding strategies, life cycle, and ecological roles of these enigmatic, highly adaptable invertebrates.

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