

Difference Between Hemichordata and Chordata

www.differencebetween.com

Key Difference - Hemichordata vs Chordata

Kingdom Animalia is composed of [multicellular](#), heterotrophic, [eukaryotic](#) animals. There are different phyla coming under Kingdom Animalia. Chordata and Hemichordata are two phyla of animals. Phylum Hemichordata includes marine worm-like animals that are [invertebrates](#). Phylum Chordata includes animals that possess a notochord, a dorsal hollow nerve cord and paired pharyngeal gill slits. It includes both vertebrates and invertebrates. **Hemichordata possesses an epidermal nervous system while Chordata possesses a [central nervous system](#).** This is the **key difference** between Hemichordata and Chordata.

What is Hemichordata?

Hemichordata is a phylum of Kingdom Animalia. It includes animals that live in marine environments and those who consume sediments and dissolved organic matter as their foods. They are worm-like deuterostome animals. They possess an epidermal nervous system. All the marine animals in the phylum hemichordate are invertebrates. This phylum is considered as a sister group of [Echinodermata](#).



Figure 01: Acorn Worm

There are three main classes of hemichordate. They are Enteropneusta, Pterobranchia and Planctosphaeroidea. Class Enteropneusta contains acorn worms. Class Pterobranchia includes graptolites while class Planctosphaeroidea includes a single species that was identified by its larvae. Phylum hemichordata contains approximately 120 living species. Animals of the hemichordate are [bilaterally symmetrical](#), and the body can be divided into three sections; proboscis, collar and the trunk. Their reproduction is mainly by sexual means. Their body cavity is a true [coelom](#) and posses a partially open circulatory system. Their excretory organ is glomerulus.

What is Chordata?

Chordata is a phylum of Kingdom Animalia. It is the phylum that includes humans and other familiar animals that are highly evolved. Phylum Chordata consists of animals that possess several characteristic features such as the presence of notochord (a stiff, dorsal supporting rod), a dorsal hollow nerve cord and paired pharyngeal gill slits. It includes both vertebrates such as fish, [amphibians](#), [reptiles](#), [birds](#) and mammals and invertebrates that live in water, land and air (in all most all major habitats). Chordata animals reproduce mostly by the [sexual reproduction](#). Some species show asexual reproduction as well. These animals possess a central nervous system, well-developed coelom, complete digestive system, cartilaginous endoskeleton and closed blood system. Their body shows a bilateral symmetry, and the body is segmented.



Figure 02: Chordata

There are three subphyla in the phylum chordate. They are Urochordata (Tunicata), Cephalochordata (Acrania) and Vertebrata (Craniata). There are more than 65000 living species in this phylum under several categories such as fish, amphibians, reptiles, birds, mammals, salps, sea squirts and lancelets etc.

What are the Similarities Between Hemichordata and Chordata?

- Chordata and Hemichordata are two phyla of animals.
- Chordata and Hemichordata share a common ancestor.
- Both groups are deuterostome phyla.
- Both hemichordates and chordates are coelomates.
- Both Hemichordata and Chordata contain pharyngeal gill slits.
- Both groups are closely related.
- Both Hemichordata and Chordata have a dorsal tubular nerve cord.
- Animals in both phyla show bilateral symmetry.

What is the Difference Between Hemichordata and Chordata?

Ganglion vs Synapse	
Hemichordata is a phylum of kingdom Animalia that includes worm-like marine animals.	Chordata is a phylum of kingdom Animalia that includes highly advanced animals with the notochord. They live in all major habitats.
Habitat	
Hemichordata live in marine systems.	Chordata live in all major habitats such as water, soil and air.
Food	
Hemichordata use sediment and suspended organic matter as their food.	Chordata feeds on all types of foods through ingestion.
Sub Groups	
Hemichordata classes are Enteropneusta, Pterobranchia, and Planctosphaeroidea	Chordata has three subphyla; Urochordata, Cephalochordata, and Vertebrata.
Members	

Hemichordata: Acorn worms, Pterobranchs.	Chordata includes fish, amphibians, reptiles, birds, mammals, salps, sea squirts and lancelets.
Vertebrate or Invertebrate	
Hemichordata are invertebrates.	Chordata are vertebrates and invertebrates.
Body Structure	
Hemichordata have soft-bodied and worm-like.	Chordata has advanced and more complex bodies.
Nervous System	
Hemichordata have a epidermal nervous system	Chordata has a central nervous system.
Number of Living Species	
Hemichordata include 120 living species.	Chordata include more than 65000 living species.

Summary - Hemichordata vs Chordata

Hemichordata and chordate are two phyla of animals. Hemichordata includes marine animals. Chordata includes advanced animals that possess a backbone. They live in all major habitats. Both phyla are closely related, and they show a similar body plan. Both groups are deuterostomes. Both groups contain animals with bilateral symmetrical bodies. Hemichordata animals possess an epidermal nervous system while chordate animals possess a central nervous system. This is the difference between Hemichordata and Chordata.

Reference:

1. "Hemichordate." Wikipedia, Wikimedia Foundation, 22 Jan. 2018. [Available here](#)
2. Ghiselin, Michael T. "Chordate." Encyclopædia Britannica, Encyclopædia Britannica, inc., 22 Nov. 2017. [Available here](#)

Image Courtesy:

1. 'Eichelwurm' By User Necrophorus on de.wikipedia - Foto: de:Benutzer:Necrophorus, [\(CC BY-SA 3.0\)](#) via [Commons Wikimedia](#)
2. 'Chordata diversity' By S. Taheri, edited by Firoo02 ; Nnobgood Nick Hobgood ; Philippe Guillaume ; Rob Hanson. [\(CC BY 2.5\)](#) via [Commons Wikimedia](#)

How to Cite this Article?

APA: Difference Between Hemichordata and Chordata.(2018 January 29). Retrieved (date), from <http://differencebetween.com/difference-between-hemichordata-and-vs-chordata/>

MLA: "Difference Between Hemichordata and Chordata" Difference Between.Com. 29 January 2018. Web.

Chicago: "Difference Between Hemichordata and Chordata." Difference Between.Com. <http://differencebetween.com/difference-between-hemichordata-and-vs-chordata/> accessed (accessed [date]).



Copyright © 2010-2017 Difference Between. All rights reserved