

Graptolite Collection

Graptolites are an extinct group of entirely marine, colonial organisms that are abundant and very important in the fossil record.

They are often found preserved as flattened, carbonised specimens in sediments, typically mudstones, deposited in deep water environments.

Occasionally, rocks are found with examples preserved in three dimensions, and these specimens provide valuable information about the morphology and mode of life of this strange fossil group.

They belong to a group of animals known as the Hemichordata which also includes modern forms such as acorn worms and pterobranchs, whose nearest relatives are echinoderms such as star fish and sea urchins. The graptolites appeared in the Cambrian period, around 520 million years ago, and then thrived and diversified before becoming extinct during the mid-Carboniferous, 320 million years ago. Graptolites had a worldwide distribution and evolved very rapidly, making them important zone fossils used to date and correlate rock sequences around the world.

Charles Lapworth was the leading expert on this group of fossils, and with his two research workers (Gertrude Elles & Ethel Wood), produced *The Monograph of British Graptolites*, the most definitive work that has been produced on this very important fossil group.

Lapworth recognised the stratigraphic zonation value of the graptolites, and used this to help him unravel the geological structure and history of the Southern Uplands of Scotland- a complex area of geology that had been the subject of considerable debate until Lapworth's pioneering work.

Lapworth amassed a large collection of UK graptolites containing many designated type specimens, and numerous examples figured in the graptolite monograph and other publications.

He worked closely with other notable geologists especially in Scandinavia, Canada and the USA, identifying, dating and interpreting material that they had collected. Many of these overseas geologists presented him with specimens and the resulting collection is of great scientific and historical importance.



Graptolite from Dudley



Tetragraptid graptolite

