
8 Kingwater

Theme: Rivers, seas and life

Location

8 Kingwater fossil trees. Take the road to Spadeadam and park before the no entry signs. Kingwater is just over a 1 kilometre walk northwest from there [NY 609 698].

Description

North of Gilsland is a small stream; Kingwater. Sitting in the bed of the stream, exactly where they grew 340 million years ago, are nine fossil tree stumps: the best example of a grove of Carboniferous trees in life position in Britain.

The largest stump of these primitive trees is almost 2.5 metres in diameter, so they grew to a considerable size. They are called *Pitus primaeva* and when looked at under the microscope show a cell structure typical of a type of seed ferns called *Lyginopterid pteridosperms*. The organic material in these stumps has, over time, been replaced by dolomite and calcite, minerals which percolated down from limestones above and preserved the anatomy of the trees. As you might expect, fossils like these, which can tell us much about the environment so long ago and how early plants and trees developed on Earth, are very rare and very delicate. This is a Site of Special Scientific Interest and if you visit, please take only photographs.

Despite, or perhaps because, there is an RAF Electronic Warfare facility close by, the upper reaches of Kingwater are quiet and secluded, sheltered by commercial conifer plantations. Roe deer are abundant, there are wild brown trout and if you are very very lucky you may see a goshawk.

Photographs

(Photo 08-1) Stump of fossil tree in the bed of Kingwater.

(Photo 08-2) Kingwater.

(Photo 08-3) Image of thin section of fossil tree under microscope.



(Photo 08-1) Stump of fossil tree in the bed of Kingwater.



(Photo 08-2) Kingwater.



(Photo 08-3) Image of thin section of fossil tree under microscope.