

# SGI 33 Regent's Park Fossil Trees

London Borough of Camden

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Silicified fossil trees of the species *Protocupressinoxylon purbeckensis* Francis are found *in situ* growing out of the Tithonian (Upper Jurassic) Great Dirt Bed palaeosol (Mupe Member of the Lulworth Formation of the Purbeck Group). These large and spectacular fossils were collected by quarrymen working the underlying Portland Stone and often sold on to collectors and museums. Purbeck fossil tree trunks were also popular as ornamental features in parks and gardens during the second half of the 19<sup>th</sup> Century and the early 20<sup>th</sup> Century. The tree trunks were permineralized by silica-rich fluids, allowing very detailed preservation of the grain, bark and cell structure of the wood.

*Protocupressinoxylon purbeckensis* Francis (Francis, 1983) were conifers which grew in thin, calcareous soils on the margins of hypersaline lagoons during the latest Jurassic. An associated common feature in the Great Dirt Bed are circular 'burrs', these are calcified algae which built up around the bases of the tree trunk. These geological deposits are known as 'thrombolite'.



**Fossil tree stumps on the lake shore**



**Garden area with several tree stumps and two algal burrs**



**planar surface of a stump with the structure of the permineralised wood evident**



**an algal burr**

Photos: Ruth Siddall

The group of Purbeck fossil trees in Regent's Park are located in the Japanese Garden within the Inner Circle on the north side of the lake and at a junction with the lakeside path and a path heading uphill. There are two groupings; four stumps are located on the shore of the lake, and north of these (on the other side of the lakeside path) are a group of at least three stumps, two burrs and a small 'outcrop' representing the upper Portland Limestone Formation beds (Roach) and the Great Dirt Bed of the Lower Purbeck Group. One of the burrs sits on top of this Portland and Purbeck 'cliff'. These items are located a triangular area created by the junction of the two paths and planted with ferns and tree ferns.

Little is known about the history of this grove of Purbeck trees in Regent's Park, except that they were donated to the Royal Park by the Royal Botanical Society in the late 19<sup>th</sup> or early 20<sup>th</sup> Century.

*References:*

Francis, J. E., 1983, The dominant conifer of the Jurassic Purbeck Formation, England., *Palaeontology*, 26 (2), 277-294.

Regent's Park Fossil Trees #1: London Pavement Geology:

<https://www.londonpavementgeology.co.uk/location-details/?id=4665>

Regent's Park Fossil Trees #2: London Pavement Geology:

<https://www.londonpavementgeology.co.uk/location-details/?id=4666>