



Pinn Meadows: spring entering a watercourse

Iron-oxidising bacteria associated with springs on Pinn Meadows.

Some watercourses, swales, culverts and other wet areas on Pinn Meadows sometimes have rust-coloured patches or, in some cases, run with rust-coloured water, particularly after wet weather. This colouration is likely to indicate the presence of iron-oxidising bacteria, which may also form petrol-like films on the surface of water as the bacteria decompose. Rust colouration occurs as these bacteria oxidise soluble iron, converting it to an insoluble reddish-brown precipitate. This may be most pronounced in areas where iron-rich, deoxygenated spring water reaches the surface and becomes oxygenated. Rust colouration was recently observed where small springs were running on Pinn Meadows. Springs in this area are also confirmed by the historical record which mentions the presence of "boiling springs" on Pinn Fields¹. The Ordnance Survey 1:2500 County Series map of 1896 shows spring-fed streams on Pinn Meadows, although these appear to be culverted now. Some of the culverts currently entering the River Pinn within Pinn Meadows are likely to carry these "lost" streams and the rust-colour associated with the culvert outfalls is consistent with them discharging spring water.

¹Bowlit, E. M., (1994) *Ruislip Past*. London: Historical Publications. p.74

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petrol-like film



River Pinn: rust-coloured water from culvert

More information is available from: [Iron Oxidising Bacteria in Lye Valley Owen Green Dec 2020.pdf](#) (friendsoflyevalley.org.uk)