

Lords & Ladies berries



Lords & Ladies flower

11 In the hedge bases look for Lords and Ladies; When Darwin placed its berries in salt water, he found that they could survive for a month, which he calculated could allow for a journey of more than 924 miles on an Atlantic current. He also carried out experiments to show that although some flies which crawl into the flowers (attracted by the smell of rotting meat) become trapped, many manage to escape and fertilise other flowers.



14 At this spot look for toadflax in summer. Darwin found that when he grew self-pollinated and crossed seedlings of this wild plant in the experimental bed in his garden, 'the crossed plants when fully grown were plainly taller and more vigorous than the self-fertilised ones.... Bees incessantly visit the flowers... and carry pollen from one to the other; and if insects are excluded, the flowers produce extremely few seeds'. As you continue, in spring, look over the railings to see Goldilocks (wood buttercup) growing in the Churchyard.



Toadflax

**When a path crosses the lane, turn L and continue between the hedges.**

12 Look for hazel amongst the trees for linnets calling 'tsoo-eet' in bounding flight. In discussing successful in winning a female, Darwin noted that the male linnet, 'The common linnet distends his rosy breast slightly expands his brown wings and tail, so as to make the best of them by exhibiting their white edgings'.



Hazel leaves and nuts



Male Linnet



Goldilocks buttercup

15 Continue past Downe Church into High Elms Road. Pass school and take bridleway parallel to road all the way to Cuckoo Lodge. Notice the thick hedgerows, rich in species. Some have been laid. This traditional method of maintaining a stockproof barrier has been practised for hundreds of years. Look at hedge bases to see if you can tell which are the most ancient.

13 As the hedge on your R becomes lower notice bracken on field edge: you are now on the more acid soil derived from clay-with flints which forms the flat high land between the chalk of the Cudham and Downe valleys. Darwin wrote how his son Francis discovered that there were large glands at the base of the bracken fronds which when young 'excrete much sweetish fluid, which is eagerly sought by innumerable ants'.



Bracken

16 Cross road at Cuckoo Lodge, once the Gamekeeper's cottage at the entrance to High Elms Estate, and follow track which leads down into the Cudham Valley. Changes in vegetation show where the underlying geology changes from clay-with-flints of the plateau to the chalky slope of the valley side. Look for bluebells on the more acid soils, pink campion where there is more chalk. Pink campion has separate male and female flowers which need insects with long tongues for pollination. Darwin observed the long-tongued hoverfly (*Rhingia rostrata*) pollinating it and noted how some species of flies, 'keep to the flowers of the same species with almost as much regularity as do bees'.



Pink Campion: flower

**Cross Orange Court Lane and follow path across field waymarked 'Cudham Circular Walk'. Turn R, with hedge on right then pass via a narrow path onto Rookery Road. You are opposite a house well known to Darwin, called, 'The Rookery'. Turn R, cross road to face oncoming traffic and take great care as you walk towards Downe village. When you reach North End Lane cross road to walk on the pavement.**



Pink Campion: section female flower



Pink Campion: section male flower



Long-tongued Hoverfly

**A footpath comes in from R, just past here fork R then turn R through a kissing gate into a field called Burnt Gorse on the 1841 tithe map.**

