

THE TRUTH BEHIND THE FICTION

Darwin & The Fox

The scene is set in 1854. The Latin name for a fox is *Vulpes vulpes*. Darwin did come across a fox sleeping in the ‘Big Woods’ whilst with his Spitz dog. Darwin did meet foxes trotting home at dawn. Foxes are found in the countryside around Downe. Darwin is said to have walked stealthily as he had done in the forests of Brazil in the hope of catching sight of wildlife. Darwin did study primroses and cowslips in the ‘Big Woods’. Some people did think primroses could turn into cowslips, as presented in ‘The Gardener’s Chronicle’. In 1854, Darwin did grow lots of primroses and cowslips in his garden. As far as we know....he didn’t talk to foxes!

Darwin & The Field Mouse

The scene is set before 1859; say 1854. Darwin did own meadows in the grounds of Down House. Red clover do grow there. Darwin did look at how bees were key pollinators of red clover and considered how their numbers were controlled by mice. He

also noted that mice were controlled by cats. Therefore indirectly (through what is now called a ‘food chain’) the top predator had control over the successful reproduction of this particular flower. He wrote about this in ‘On the Origin of Species’. Field mice are found in the countryside around Downe. Long-tailed field mice are also called Wood Mice. The Latin name for a field mouse is *Apodemus sylvaticus*. Darwin did have a cat called ‘Phisty’. It was described by his daughter as a ‘beautiful Persian (cat) with very tufted ears and of remarkable character; he amused us all, prancing sideways all across the garden to attack us, and when he was asleep, he was so drunk with sleep that you could prop him up in any attitude, and he trickled over just as the force of gravity acted.’ He had ‘fierce and tigerish charms.’ As far as we know... Darwin didn’t talk to field mice!

Darwin & The Lizard

The earlier scene is set in 1855. The Latin name for common lizards is *Lacerta vivipara*. Darwin did at least once come across sand lizards on 3rd July 1826 as a seventeen year old; it had several eggs in its body. He did advertise for the capture of sand lizard eggs in an advert within the 1855 ‘Gardeners’ Chronicle

and Agricultural Gazette' no. 21 (26 May) as he wanted to test whether they were tolerant of sea water in his investigations on how lizards come to colonise islands. He did regularly visit Keston Common to take samples of sundew to take back home. He did treat them with various nutrients and chemicals to see if this affected their growth. He did meet William Baxter on Keston Common; the account of their meeting is quite accurate as it was recounted in an article in the Bromley & District Times in 1929. Common lizards are found on Keston Common whilst sand lizards have never been recorded there. As far as we know....he didn't talk to lizards!

Darwin & The Duck

The story is set in the summer of 1859. Darwin did regularly visit the grounds of Holwood. Emma did recall good memories of their times at Holwood, including the children racing 'down the pretty green slope'. Darwin did later study the male flowers of Horse Chestnut during May 1860. He did observe earthworm casts at Holwood. A number of ponds do occur in the grounds of Holwood. Mallard ducks are found in ponds around Downe. The Latin name for a mallard is *Anas platyrhynchos*. Darwin

did observe how ducks would emerge from ponds covered in duckweed and had noticed how recently hatched freshwater snails clung to the feet of ducks (but in aquariums in his house), on which he reported in ‘On the Origin of Species’. As far as we know...he didn’t talk to ducks!

Darwin & The Roman Snail

The day is set in September 1862. Darwin referred in 1843 on coming to Downe that ‘The valleys...generally run north & south; their sides near the summits generally become suddenly more abrupt & are fringed with narrow strips, or as they are here called ‘shaws’ of wood; sometimes merely by hedgerows run wild’. Darwin did report on mulleins (*Verbascum* species) in letters and papers dated 1862. White and great mulleins are found in the chalk grasslands between High Elms and Orchis Bank (Downe Bank Nature Reserve). Darwin did plant a hybrid mullein in his kitchen garden in 1863 and found it to remain sterile. Roman snails are found in the chalk grasslands around Downe. Their Latin name is *Helix pomatia*. Darwin did refer to the work of Mr. Lonsdale in the 1871 work ‘The Descent of Man, and Selection in Relation to Sex’; dated after the date this

scene is set. Darwin did collect Roman snails and when hibernating put them in sea-water for twenty days to check whether they perfectly recovered to test whether land-snails could colonise islands if transported across the sea on a piece of drifted timber - but a few years earlier, before 1859. Red and blue varieties of scarlet pimpernel, or *Anagallis arvensis*, do grow in the location in which the story is set; Darwin studied this species. As far as we know....he didn't talk to Roman snails!

Darwin & The Honey Bee

The Latin name for honey bee is *Apis mellifera*. Darwin did keep bee hives. Darwin did write about the evolutionary development of honeycombs of bee colonies. Darwin did visit Green Hill on April 1st 1863 and did mark up six violets pollinated by a 'hive bee' and did return to check how many had developed seed. Darwin did study, at Hangrove, how bees pierced the side of violets to extract their nectar on 15th April 1863. Many violets grow along The Terrace beside the grounds of Down House and at Hangrove these days. As far as we know....he didn't talk to bees!

Darwin & The Badger

The scene is set in 1863. Darwin did observe white bryony in a gale, to check on the strength of its tendrils. He later drew a sketch of the way the tendril changed direction in the middle, like an old-fashioned telephone cable, after it was safely attached. White bryony is dioecious and has male and female flowers on different plants. Berries are only found on the females. The Latin name for a badger is *Meles meles*. On 26th December 1863 Darwin wrote to H. Falconer about the ‘stupendous duration of the same form’ using the badger as an example. Darwin did study the abundance of earthworms in the neighbourhood and eventually came to write the book ‘The Formation of Vegetable Mould Through the Action of Earthworms’. As far as we know....he didn’t talk to badgers!

Darwin & The Newt

This story is set on 10th August 1864. Darwin had contributed funds to the establishment of Cudham Primary School and his sister did perform social duties at the school. The Latin name for a smooth newt is *Triturus vulgaris*. Darwin did catch newts as a child in The Quarry pool in Shrewsbury, when 8 ½ years

old. Darwin did visit Cudham School Pond on 10th August 1864 and write notes of what he found there; one of the things being a newt. Darwin did write about newts in ‘The Descent of Man, and Selection in Relation to Sex’ which was published in 1871. Newts are found in Cudham Pond and in the countryside around Downe. Darwin did take samples of mud from the pond on April 6th 1856 and made a note of germinating seedlings on May 10th. As far as we know....he didn’t talk to newts!

Darwin & The Squirrels

The scene is set in 1864. Darwin’s children reported how Darwin would sometimes creep along quietly through the woods like he had done in the forests of Brazil, to look out for wildlife. Darwin did on one occasion stand still whilst out in the neighbourhood, when some young squirrels ran up his back and legs whilst their mother barked at them from a tree. Darwin did write about how he had witnessed squirrels eating galls from an oak tree. Red squirrels are no longer found in the countryside around Downe; grey squirrels have replaced them. The Latin name for red squirrel is *Sciurus vulgaris*. Darwin did undertake studies on Spindle (*Euonymus europaeus*) growing

in the hedge alongside one of his meadows in around 1864. Darwin had written in the ‘Gardener’s Chronicle’ in 1843 about the double-flowers of autumn gentian (*Gentianella amarella*). As far as we know....he didn’t talk to squirrels!

Darwin & The Stag Beetles

This story is set in July 1868. Darwin did visit the Bonham-Carters at Ravensbourne Lodge on various occasions. The family helped provide evidence for the ‘expression of emotions’ for Darwin’s book and in 1881 Darwin gave a lecture on sundews at Keston Mark, which was chaired by H. Bonham Carter. It is suspected that Darwin would have been familiar with Padmall Wood as it was obviously a long-established feature of the landscape and close-by to Keston Common. We know that as a young man Darwin was obsessed in observing beetles and that this was a pursuit he carried on when living at Downe, but not with such gusto. Darwin mentions stag beetles, ‘well adapted for fighting by possessing great toothed mandibles’, in his 1871 ‘The Descent of Man’ book. In this he mentions his fellow naturalists’ experiences and the fact that male stag beetles emerge from their ‘pupal state about a week before the other sex so

that several may often be seen pursuing the same female’. The stag beetle (*Lucanus cervus*) is the largest beetle in Britain and does take up to seven years to develop into an adult. It only lives a few weeks during June to July. It does occur in and around Padmall Wood. As far as we know...Darwin didn’t talk to beetles!

Darwin & The Butterfly

The scene is set in 1875. Darwin did write a book on orchids called ‘The Various Contrivances by which Orchids are Pollinated by Insects’; the second edition, which is the one most widely used, was published in 1877. He did work out which insects pollinated the Pyramidal Orchid, especially during 1875. 17 moths and 6 butterflies were listed, one of which was the large skipper butterfly. Many butterfly species, including the large skipper, are found in the countryside around Downe. The Latin name for the large skipper is *Ochlodes venata*. Pyramidal orchids still grow at Orchis Bank (Downe Bank Nature Reserve). Each orchid flower has a pair of special club-shaped structures called pollinia; each is topped by a pollen sac. Orchids rely on insects to collect these clubs

and carry them to other orchid flowers. Almost all other flowers have stamens with anthers filled with pollen, that remain fixed; insects simply collect the pollen from them. Darwin was given a Comet Orchid and in 1862 predicted that a moth with a long proboscis would pollinate it. *Xanthopan morgani praedicta* is the Madagascan race of an African sphingid which pollinates the fragrant, white flowers at night. It was named in 1903. The last paragraph of 'On the Origin of Species' refers to an entangled bank which is believed to have been inspired by Orchis Bank. In it he refers to '...birds singing in the bushes, with various insects flitting about...'. The paragraph summarises his theory of natural selection. As far as we know....Darwin didn't talk to butterflies!

Darwin & The Rabbit

The scene is set in 1878. Darwin did note White Helleborine at Hangrove and it does still grow in the vicinity. Darwin did study toothwort which he referred to in 'The Power of Movement in Plants' (1880). Darwin did study the differences between domesticated rabbits and wild rabbits. Darwin did have the skull of a wild rabbit which he labelled 'Downe', and is now

in the Natural History Museum in London. Rabbits do live in the countryside around Downe. The Latin name for rabbit is *Oryctolagus cuniculus*. As far as we know...he didn't talk to rabbits!

Darwin & The Wren

The scene is set in 1879. Darwin did comment on the range of woodland flowers he encountered in the woodlands around Downe, including a reference to them being 'brilliantly blue with blue-bells'. Darwin did receive a letter from Professor Batalin in February 1879 informing him of his experiment on wood sorrel. Darwin was said by his children to have a special genius in finding birds nests. He did show a young boy the location of a wren's nest where there were three eggs; Darwin did stop the boy from taking one. Darwin did write about the camouflaged nature of other birds such as red grouse and ptarmigan. Darwin did write about not understanding why every man should not be an ornithologist. Wrens are found in the countryside around Downe. The Latin name for a wren is *Troglodytes troglodytes*. As far as we know....he didn't talk to wrens!

Darwin & The Spider

Emma did play the piano to Darwin; she was trained in part by Chopin in her youth. Amongst the pieces she played were Beethoven, Mozart and Handel. Darwin did use to lie on the sofa. Darwin did write that he would listen to more music and poetry if he had his life over again. The Latin name for the garden spider is *Araneus diadematus*. Darwin did refer to spiders in 'On the Origin of Species' about how crippled spiders resort to hunting and hunting spiders resort to spinning a web when with young. He was unsure as to how the 'web spinning organ' evolved. He did say that spiders are attracted to music and that sound-producing instruments brought the sexes together. He did have a friend called Romanes who did publish a book on 'Animal Intelligence' in 1882, which included an extensive section on spiders. They corresponded and talked about many aspects of nature and evolution, including in preparation for Romanes book, but there is no direct evidence that they spoke to each other about spiders. Romanes wrote that spiders were able to distinguish between persons and approach those who they found to be friendly, whilst shunning strangers. Darwin

did write about the morphology of bats. The scene is set in 1881, as Darwin's health is declining and where his friendship with Romanes is strong. As far as we know..... Darwin didn't talk to spiders!

VISIT THE PLACES MENTIONED IN THE STORIES

Downe Bank Nature Reserve, Hangrove Hill, Downe

Down House & Grounds, Downe

Green Hill, Downe

High Elms Country Park, Shire Lane, Farnborough

Keston Common, Westerham Road, Keston

West Kent Golf Course Nature Reserve, Milking Lane, Downe

For the remaining locations, follow the various trails around

Downe's countryside.

For more information visit www.madaboutcharlesdarwin.co.uk