

What to look for outdoors

April – June

Horsechestnut Flowers



Have a magnifying glass in your pocket.

Horsechestnut tree flowers are often called candles.

Questions



Do you think it looks as if the tree is covered in candles?



What colour would you say the flowers are?
White?



A horsechestnut tree in bloom

They look white but, if you go close to the flowers, you will see that each candle is made up of many small flowers.



Scientists call a pyramid shape of flowers on a stalk an '*inflorescence*'.

Do



Each of the small flowers has a patch of colour. What colours can you see now?



White, of course.
Yellow? Orange? Red (you might call it dark pink)?



Newly emerged horsechestnut inflorescence

Questions



Do you think the flower starts with one particular colour and then changes?

That doesn't seem likely to me but it turns out to be a fact!
When the flowers first come out they have a yellow patch.



Scientists call a patch of colour a '*blaze*'.



What do you think could trigger a change from yellow to red?



Clue: It has something to do with bees.



Horsechestnut inflorescence

Yes, after a bee has visited a flower, taken its nectar and collected pollen from it, the blaze on the flower gradually turns from yellow to orange and then dark pink.

I find that amazing. Want to check?

Do



Use your magnifying glass to look at the pollen-bearing anthers, the yellow tips at the end of the strands that curve outwards above the bottom petals.

You will see that the flowers with a yellow blaze still have pollen-covered anthers. The flowers with an orange or red blaze have shrivelled, dry-looking anthers: their pollen has gone, their job is done.



Horsechestnut flower anthers



In what way do you think **bees** might benefit from having flowers with no nectar being a different colour from flowers that do have nectar?

Yes, it saves them wasting time visiting flowers that are out of nectar: The bees make a bee line for a yellow blaze!



Which colour do you think bees see better? Red or yellow?



Clue: Bees aim for the colour they see best.

Yes, bees see yellow better.



In what way do you think the **tree** might benefit from having flowers with no nectar being a different colour from flowers that do have nectar?

Yes, if bees go straight to the flowers that have not yet been pollinated, the tree is more likely to get more flowers pollinated.



You could tie a piece of string or wool at the base of the 'candle' you have been looking at and come back another time to see if any more flowers have been pollinated.

! You will have to have remembered the position of the flowers that had already been pollinated.



It is fun to make a note of what you saw and did today



For more about horsechestnut trees, what came before and what comes next, see Hello Trees book Horace Horsechestnut, <http://www.hellotrees.co.uk>