

Botanics identify the twelve plants of Christmas

Scientists at The Royal Botanical Garden Edinburgh (RBGE) have reimagined the lyrics of the Twelve Days of Christmas with a selection of the nation's flora.

The choices include a pear tree – without a partridge – while the flowering woodland plant known as lords and ladies replaces lords-a-leaping and 12 drummers drumming are represented by the small moss best known as drumsticks.

Scientists at RBGE deconstructed the classic Christmas carol and transformed it into a cumulative song of British flora.

The botanical version aligns the traditional lyrics with the common names of native plants used in the pioneering Darwin Tree of Life (DToL) project.

The DToL project, which involves scientists from across Britain and Ireland, aims to sequence the genomes of all 70,000 species of native complex living organisms found on these islands.

The scientists discovered that botanical samples they collected for the project dovetailed remarkably well with the festive favourite.

They start with *Pyrus communis*, the pear tree – albeit without its partridge – a specimen of which they collected for sampling at Hermitage of Braid in Edinburgh.

The second day of Christmas celebrates the immortal Two Turtle Doves with the delicate flowers of *Geranium molle*, the dove's foot cranesbill, collected on a verge in East Lothian.

Three French hens are represented in the vivid purple of *Orchis mascula* or hen's kames, from the slopes of Ben Lawers.

Four calling birds are replaced by *Scapania ornithopodioides*, the birds-foot earwort collected at the Beinn Eighe Nature Reserve, and the five golden rings are *Solidago virgaurea*, or goldenrod from woodland near the banks of Loch Lomond.

Six geese a-laying are reimagined as *Ribes uva-crispa*, the gooseberry, and seven swans a-swimming as *Mnium hornum*, the swan's neck thyme moss, found at the RBGE in Edinburgh.

On day eight, maids a-milking are the *Polygala serpyllifolia*, or heath milkwort, and the following day nine ladies dancing are *Alchemilla alpina*, the alpine lady's mantle, both collected from the area around Ben Lawers.

Ten lords a-leaping are the *Arum maculatum*, better known as "lords and ladies" and eleven pipers piping are represented by *Hylocomiadelphus triquetrus*, pipe-cleaner moss, found at Dawyck Botanic Garden, near Peebles.

The twelfth day sees drummers drumming replaced by the gentle green shadings of *Aulacomnium androgynum*, the small moss commonly known as drumsticks.

Biodiversity Scientist and co-lyricist Dr Laura Forrest said: "We decided to celebrate (the Twelve Days of Christmas) with our own gentler biodiversity bonanza using our wealth of botanical knowledge about how and where to collect specimens, how to identify them and their importance in everyday life – evident by the use of common names.

"Although a bit of fun, we are also giving a nod to the huge collaborative effort around the United Kingdom and Ireland to

collect and sequence the plants, fungi, animals and protists that are native to or naturalised on these islands.

“While the ambitions of the Darwin Tree of Life initiative are massive and require serious commitment from the ten institutes involved, we hope we can also bring the lighter side to our work.”



Day 3: Three French hens – *Orchis mascula*, hen's kames.



Day 1: A partridge in a pear tree – *Pyrus communis*, the pear tree.



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Day 2: Two turtle doves – *Geranium molle*, the dove's foot cranesbill.



Day 3: Three French hens – *Orchis mascula*, hen's kames.



Day 4: Four calling birds – *Scapania ornithopodioides*, the birds-foot earwort.



Day 5: Five golden rings – *Solidago virgaurea*,

goldenrod.



Day 6: Six geese a-laying – *Ribes uva-crispa*,
gooseberry.



Day 7: Seven swans a-swimming – *Mnium hornum*, swan's neck thyme moss.



Day 8: Eight maids a-milking – *Polygala serpyllifolia*, heath milkwort.



Day 9: Nine ladies dancing – *Alchemilla alpina*, the alpine lady's mantle.



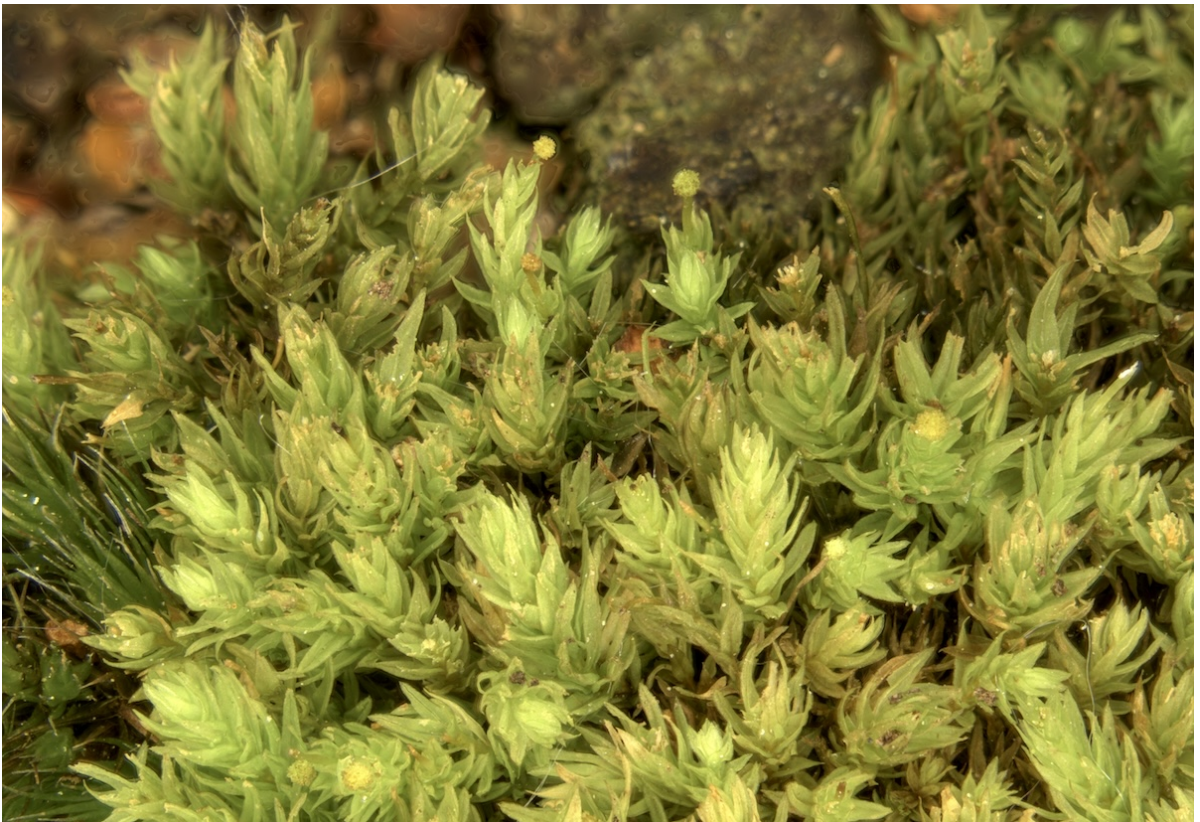
Day 9: Nine ladies dancing – *Alchemilla alpina*, the alpine lady's mantle.



Day 10: Ten lords a-leaping – *Arum maculatum*, lords and ladies.



■ Day 11: Eleven pipers piping – *Hylocomiadelphus triquetrus*, pipe-cleaner moss.



■ Day 12: Twelve drummers drumming – *Aulacomnium androgynum*, drumsticks.