

## A cautionary tale

Whilst out bryologizing in Holkham Dunes NNR recently I paused to examine the sides of a sand dune, on the edge of the pine forest which covers a substantial part of the site.

I was immediately struck by the fact that an extraordinarily high proportion of the *Hypnum cupressiforme* covering the dune surface appeared to be infested with tiny yellow dots in the leaf axils. In some cases virtually the whole leaf appeared to be covered, whilst in other cases the individual dots were visibly separate, although clustered in places.



△ A portion of *Hypnum cupressiforme* showing the accumulation of yellow 'eggs' in the leaf axils, particularly those on the older parts of the stem.  
R. Stevenson

Suspecting this to be an occurrence of some interest I took a photograph (see below) and collected a representative sample.

On getting home I stripped off some leaves to examine my finds under the microscope. As I suspected that the yellow 'dots' were probably invertebrate eggs of some sort I was surprised when they mainly floated free of the leaf surface. I was even more surprised to see that, rather than being yellow and egg like, they looked more like little grubs, with a rounded black head and tail. Between these two extremities they appeared to be white, and to have a structure consisting of rather rounded cells.

Intrigued, I took some photographs and sent them to Dr Tony Irwin at the Castle Museum in Norwich. Tony has an encyclopaedic knowledge of invertebrates of all sorts, so I was confident he would be able to identify my strange little beasties, at least down to generic level.

He was able to offer an identification: pine pollen!

*(I shall ignore the boos of laughter from the assembled readers. My excuse is I'm not a trained botanist!)*

Presumably the pollen gets washed into the leaf axils, as a result of surface sheetwash during rainstorms. Given the nature of our summer this year this has presumably happened rather a lot, hence making the accumulations rather more conspicuous than they might otherwise be. There might still be some association with invertebrates, however, since a variety of sites on the net claim that pine pollen is highly nutritious (boosting testosterone levels, amongst other things), so little beasties could conceivably go rooting about in the leaf axils, searching the pollen out as a possible food source.

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