

Ice Ribbons in January 2022

Rosemary Winnall

On the cold frosty morning of the 14th January 2022 I noticed something odd about my *Osteospermum* plants growing in a tub in our front garden. They seemed to have sprouted white feathery features along their stems (01 & 02). From a distance I thought that these might be the result of a strange fungal infection, but closer inspection showed that they were made of ice. I discovered that a few plant species are known to form these ice ribbons or ice flowers when the ground temperature is above freezing and the air temperature is below freezing. Apparently the sap continues to rise but as it reaches the cold aerial shoots it starts to freeze, expands and causes the stems to crack. Rising sap leaks out of the splits and changes to ice as it reaches the cold air, and if this continues for days, beautiful and intricate ice structures may develop (03 & 04). In North America plants such as Frostweed *Verbesina virginica* and Frostwort *Helianthemum canadense* are well known for this phenomenon.



01. Ice ribbons on *Osteospermum*, from a distance, looking like a strange fungal infection. Bewdley 15th January 2022.
Rosemary Winnall



02. Ice ribbons on *Osteospermum*. Bewdley 15th January 2022.
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03. Ice ribbons on *Osteospermum*. Rising sap leaks out of splits and changes to ice. Bewdley 15th January 2022. Rosemary Winnall.



04. Ice ribbons on *Osteospermum*. Bewdley 15th January 2022.
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Checking West Midlands weather data online for the winter of 2021/2022, I found that temperatures in late December 2021 were unseasonably high reaching 14°C and 15°C between 29th December and January 1st 2022. Temperatures dropped slowly over the next four days until under a clear night sky on the 5th and 6th January the temperature fell to minus 5°C resulting in the first frost of 2022. Over the following few days temperatures hovered between 2°C and 10°C until the night of the 11th when minus 3°C was recorded. In anticyclonic conditions over the next three days (until the evening of the 15th), sunny conditions boosted the temperature to 10°C in the daytime, whilst it fell to minus 3°C each night.

The ice ribbons were present on the 14th January and 15th January 2022. That evening the weather changed and the temperature overnight was 3°C and that was the end of cold nights for a while. It would be good to know if ice ribbons have been seen anywhere else in the county, and on what species. I shall definitely ensure that I have *Osteospermum* plants in my garden every winter!

Images

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