



The Climate Connection

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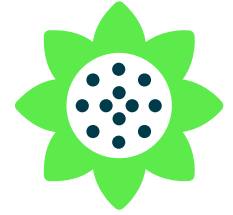
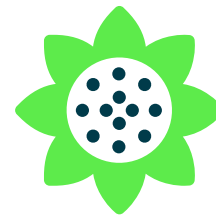
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Green careers guide

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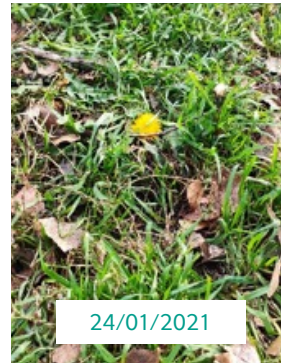


Winter dandelions

The only thing that connects me to climate and climatology is the sporadic monitoring of the weather forecast, but we live in times when the indifferent observation of the changes around us is tantamount to a crime. That is why I decided to describe a personal experience related in some way to the climate change visible to all of us.

One of the brightest and most beautiful views of early spring are the fields of dandelions, shining like the sun or air-silver in their flight to new territories. In fact, this weed (because it is so defined by farmers) bears the menacing Latin name *Taraxacum officinale* and has a habit of rapidly conquering and colonizing new territories, to the delight of artists and bees [1]. We use the dandelion for salad and a variety of drinks - from the poetic dandelion wine, through lemon syrup, literally called “May honey” in Silesia to the not so poetic Belgian drink called Pissenlit¹.

Imagine how optimistic it is to see the showy yellow flowers, among the lush green grass, in the space between the blocks. Therefore, as not to torment your imagination - just look at these two original photos, which do not claim beauty, but only documentary accuracy. Not the joy of the reviving nature, nor even the plastic bag (which I removed for aesthetic reasons), but the dates are the most striking in these photos. The dates are 29.12.2020 and 24.01.2021.

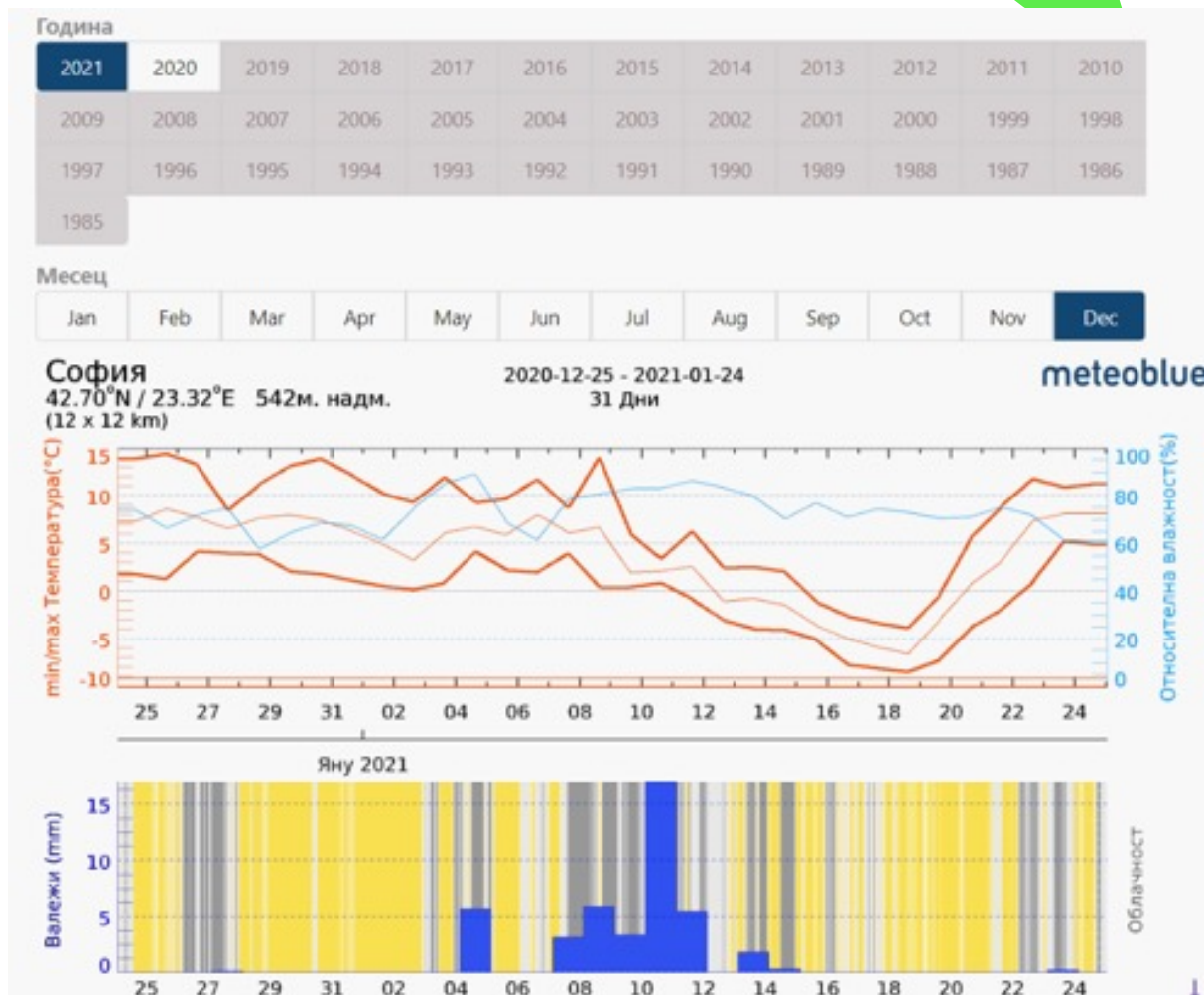


When I looked for information about the flowering period, it turned out that there are two peaks: spring and autumn, but I didn't find any mention of a winter peak. The required conditions are an average daily temperature of 16° C and a day length of between 10 and 13 hours [3]. In the northern hemisphere, it occurs in March-May in Britain, April-May in North America, June in Norway and Siberia. A secondary peak occurs in autumn (September-October) at an average temperature of 21°C and a day duration of 12-13 hours [3]. October - yes, let's even include the beginning of November ... But how to explain the December and January dandelions?

It turns out that flowering is controlled by two mechanisms - at low temperatures in response to rising temperatures (thermonasty), and at high temperatures in response to rising photoperiod (photonasty) [4]. We can only guess which of the two mechanisms worked, but the minimum temperature required for photonasty is 13°C [4]. And what was the weather like in December and early January? We can recall this graph showing the average daily temperatures and lighting for the period we are interested in. Well, isn't it pleasant, clear, sunny and, with the exception of the occasional cooling from January 14 to 22, isn't it spring?

1. Piss en lit (French) - literally “pee in bed” is the name of a Belgian ale containing dandelion extract, probably related to the diuretic properties of the herb [2].





Temperature, precipitation and cloudiness data extracted from the Meteoblue archive². Temperature and relative humidity are shown, as well as clouds (gray background) or clear skies (yellow background). The darker the gray background, the denser the clouds.

How much more will we enjoy the plants that have not bloomed in time, the warm gusts of wind, and the lack of snow on the streets? How much time is left before it becomes “extreme”, leaving millions without shelter and food and without hope of help?

The name of the dandelion is believed to come from the Arabic word tarakhshagog, meaning bitter herb, or from the Greek verb ταρασσω (disturb). Isn't it time to be disturbed, so that the winter dandelion wine doesn't turn out to be too bitter?

References

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2. The data is available at <https://www.meteoblue.com/bg/>

