

## Further examples of unusual periodicity in *Andrena* spp. (Hymenoptera)

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On 19 October 2018 a female *Andrena nitida* (Müller, 1876) (01) was observed under a deep drift of leaves of *Parrotia persica* (DC.) C.A. Mey in my garden in Little Comberton, Worcestershire (SO94). This followed a protracted spell of warm open weather with the ambient temperature in the garden reaching 24°C on 13 October and with notably warm nights. On 5 November 2018 a fresh female *Andrena chrysoceles* (Kirby, 1802) was observed crawling on the service garden at the same location where it is known to breed.



01. Female *Andrena nitida*, Little Comberton, Worcestershire, 19 October 2018.

Both of these bees were in good fresh condition and rather than representing improbable stragglers it is suggested that both responded to generally consistently high soil temperatures throughout the autumn which influenced their development. An early light frost on 7 October would have had little impact on the prevailing mildness; on 15 November ambient temperature in the built environment of Evesham town was 17°C at 2200 hrs GMT.

Reference may be made to Whitehead (2016) for further discussion of 'anomalous' periodicity of univoltine vernal andrenid bees and to the parallel observations of Carter (2016) and Young (2016). Whitehead (2016) referred to *Andrena cineraria* (L., 1758) apparently overwintering at depth in light cultivated soil. It is very easy to underestimate the ability of insects to identify survival niches and it may well be that this example of *A. nitida* felt that a deep pile of dry leaves was as good a place as any to try to survive until the next spell of acceptable weather. Such places are used routinely by many insects overwintering as adults.

It is important to chronicle all comparable examples of 'anomalous' periodicity of mining bees in the hope that some form of recognisable biogeographical pattern may eventually be applied to the behaviour and a proper review produced. Observations such as these could simply be a vanguard for changing periodicity whereby normally univoltine bees are being influenced by climate change and the attendant loss of clearly defined seasonality.

### Reference

Whitehead, P.F., 2016. *Andrena (Melandrena) nitida* (Müller, 1876) (Hym., Andrenidae) emerging during December 2016 at Little Comberton, Worcestershire. *Worcestershire Record* **41**:25-26 with appendices by Wendy Carter and Jean Young.

### Image

01. Female *Andrena nitida*, Little Comberton, Worcestershire, 19 October 2018.