

Ashy Mining Bee *Andrena cineraria*

This picture shows a female Ashy Mining Bee emerging from her nest. Tell-tale signs are conical spoil heaps in compacted earth. The entrance is no wider than a small pencil and 10 to 20 cm beneath the ground the female will have provisioned a few individual cells with pollen and nectar, laid an egg, and then blocked that cell off. The female will only live for a few weeks. The eggs hatch a few days after being laid and the larvae grow and pupate within a few weeks but then hibernate, the next generation emerging the following spring, males emerging first.



Photo: Brigit Strawbridge

Although these are solitary bees, in that each female makes its own nest, they are sociable, with many nests close together often in dense aggregations. Firm, bare ground in flower beds and in sparsely vegetated field margins is favoured. The bee is common in gardens, parks, calcareous grassland, orchards and on the edges of cropped agricultural land.

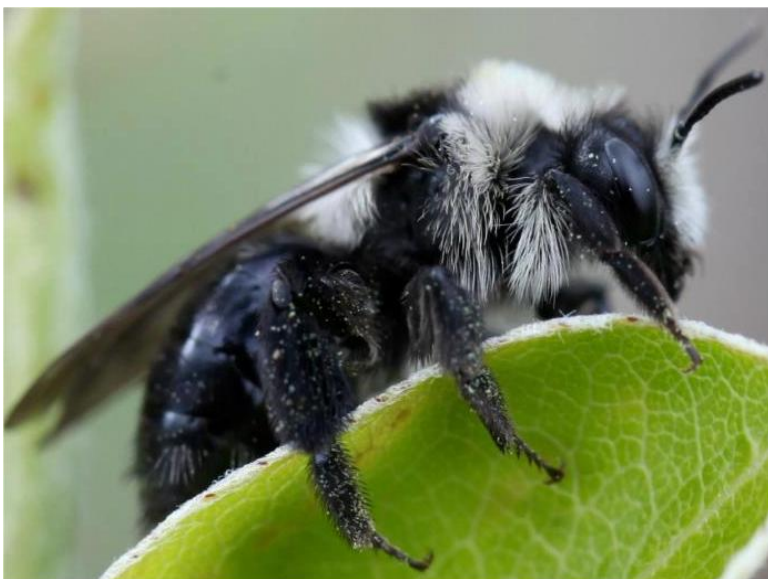


Photo: Brigit Strawbridge

They emerge in late March or April and are rarely seen later than June.

The female is one of our most distinctive spring-flying mining bees, black with two broad white or grey hair bands across the front and hind of the thorax. The abdomen is glossy with a blue-black hue. The male is less distinctive, slimmer, but also dark blue-black with abundant white hair.



Ashy Mining Bees are found from China, across Asia, from Finland to Spain and are widespread over much of England but are curiously absent from East Anglia and are rare in Lincolnshire. Their occurrence diminishes northwards and there are only a few reports from Scotland.

They are 'polylectic' meaning that they visit a large number of different plant species to collect pollen and nectar but it is an important pollinator of fruit trees, it's flight times from March to June, coinciding with fruit flowering.

Nomada lathburiana is a cuckoo-bee, cleptoparasitic on the Ashy Mining Bee. The *Nomada* female finds host cells that are still open and being provided with food, and lays an egg in the cell. The host Ashy Mining Bee lays her egg in the cell when provisioning is completed and seals the cell. The first stage larva of the *Nomada* cleptoparasite has large mandibles which are used to kill the host's egg or young larva, before



Photo: http://bit.ly/Aiwok_Nomada

feeding on the provisions. There are about 30 species of *Nomada* bees in Britain, most of them parasitizing the 70 to 80 *Adrena* species that are native to the British Isles.

Solitary bees have a rather small foraging range so local habitat structure appears to be of more importance than large-scale landscape structure. All requirements for sustaining viable populations must be within this range. Therefore, it is necessary to maintain and restore a dense network of habitat patches in landscapes to ensure long-term sustainability of wild bee diversity and their ecological function as pollinators.

One of Britain's rarest and most beautiful flowers, the Lady's Slipper Orchid, *Cypripedium calceolus*, is predominantly pollinated by the Ashy Mining Bee, *Adrena cineraria*, and other solitary bees of the *Adrena* genus. Its survival may be dependent on a thriving solitary bee population.