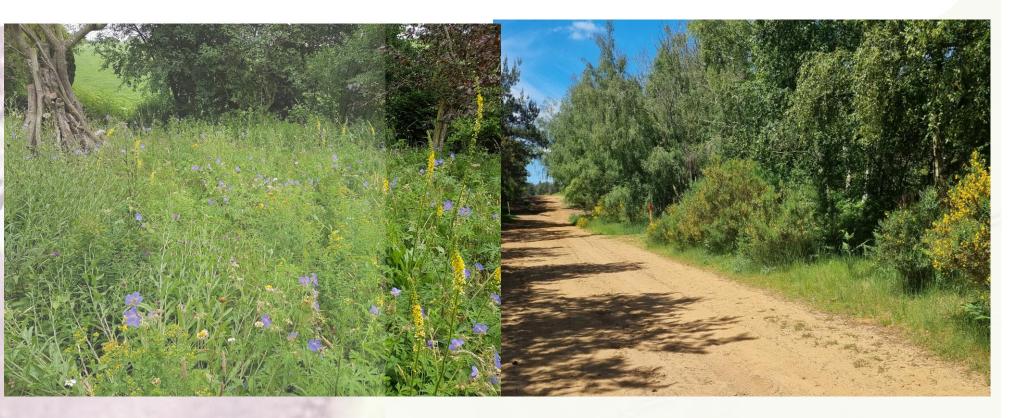
Quantifying the microplastics collected by solitary bees with pollen

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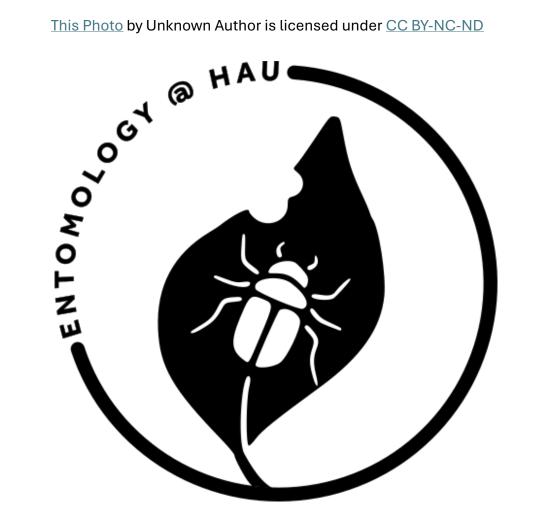




Many sources of microplastics have been identified in terrestrial ecosystems, including the use of agricultural fertilisers. It has been demonstrated that microplastics are collected by foraging honeybees. Solitary bees collect pollen using feathery hairs which are concentrated either on the hind tibia and propodeum, or underneath their metasoma. It is likely that electrostatic charges are also involved in attaching pollen. Microplastic pollution could have a significant impact on solitary bees as these features make it more likely that they will also collect environmental microplastics as they forage. Courtene-Jones (Plymouth University) confirmed the presence of microplastics in solitary bee pollen samples collected in 2021, although it is possible that there was some contamination in the sampling (pers.comm. 2024). The objectives of this research are:

1.To quantify solitary bee pollen loads for the presence of microplastics from fertilised and unfertilised land 2.To compare the amount of microplastics found in samples from ground-nesting *Andrena* with aerial nesting







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