

## Diverse bee communities in destructed landscapes

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Anthropogenic change often comes with negative consequences for wildlife. Our study is giving one of the rare examples where the opposite is the case. We looked at the case of old sand mines where specific soil layers were extracted in the past and large open, sandy areas with little vegetation remain. In those destructed landscapes, we found large and species rich communities of wild bees.

In a two-year field study, we examined the bee communities of three old sand mines and of meadows at adjacent roadsides in Maryland, USA. Pan traps were used to sample bees every two to three weeks between April and September.

We found a higher bee abundance and species richness in the sand mines compared to the roadsides. Furthermore, these factors seemed to be influenced by ground cover. Increasing ground cover was negatively correlated with bee abundance and species richness. Overall, the ground of sand mines was less covered by vegetation than the ground of roadsides. Concurrently, the proportion of ground nesting bees differed between the two habitat types. Sand mines had higher levels of ground nesters. Additionally, their bee communities included more uncommon or rare bee species.

Despite a barren look, old sand mines seem to be of high value for wild bees, hosting an abundant and diverse bee community. Ground cover and thus nesting opportunities seem to play an important role for this outcome.

## **Einfluss des Neonicotinoids Clothianidin auf das Sammelverhalten und die antennale Sensitivität der Mauerbiene *Osmia bicornis***

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In den vergangenen Jahren ist ein massiver Rückgang an Honigbienen und Wildbienen zu verzeichnen. Bei der letzteren Gruppe sind vor allem begrenzte Nahrungsressourcen sowie der Verlust und die Zerstörung potentieller Nisthabitate maßgeblich dafür verantwortlich. Weiterhin stehen auch Pestizide, speziell Neonicotinoide, im Verdacht, die Abundanz und Diversität von Wildbienen zu verringern (Ollerton et al. 2014). Als wichtigsten Bestäuber von

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