Three species recorded for the first time and more than 600 species of wild bees known from Germany

Press release: Introduction of the Journal "Anthophila" with the new Checklist of Wild Bees in Germany

The Competence Center for Wild Bees (non-profit organization) publishes the journal **Anthophila** for the first time. The scientific journal covers a wide variety of topics related to wild bees, for example taxonomy, distribution, and ecology. Additionally, the journal will address issues related to the assessment of threats, conservation measures, and monitoring of wild bee species and their populations. The first issue of **Anthophila** also includes the new checklist of German bee species and three first records of bee species in Germany.

For conservation of biodiversity, it is crucial to consider wild bees as essential pollinators of both cultivated and wild plants. However, to effectively protect these species, an overview of which species are currently present or have historically existed, is essential. Together with colleagues from all over Germany, the bee experts at the Competence Center have compiled field data and checked specimens from various collections. As a result, the new checklist comprehensively documents all wild bee species ever reported within the boundaries of the Federal Republic of Germany, totaling 604 currently or formerly native species (excluding the honeybee). Continuously updated checklists for all federal states will be available on the website of the Competence Center for Wild Bees.

Since the release of the last checklist in 2015[1], 22 new species have been added. Taxonomic changes have led to the discovery of new or cryptic species. Furthermore, some thermophilic species, newly documented in Germany, have benefited from climate change in recent years. On the other hand, 37 species have gone extinct nationwide, 270 species are on the Red List and 42 species on the Early Warning List of German bees. Only about one-third of wild bee species are considered to be non-endangered throughout Germany. However, even among previously widespread and common bee species, particularly mining bees, populations have significantly declined in recent years[2] and formerly abundant species are now candidates for the Red List. Furthermore, even extensive conservation measures cannot always rescue wild bee species as illustrated by the Black Mud Bee (*Megachile parietina*) in the Nördlinger Ries[2, 3], that represented an isolated relict population now extinct.

One of the main causes for the critical situation of a large number of bee populations is the ongoing reduction of landscape complexity and the extreme lack of flowers in our landscape. For instance, herbs that depend on wild bee pollination are noticeably declining, while grasses that are pollinated by wind have considerable advantages in seed production, leading to grass dominated sites and declining number of flowers and pollinators.

The Competence Center for Wild Bees is committed to advancing wild bee conservation and expanding the knowledge about bees. The stakeholders of the Competence Center actively engage in various bee conservation and research projects and have played a significant role in resolutions aimed at wild bee protection[4]. Ultimately, the journal **Anthophila** will publish current contributions to enhance our understanding of wild bees.

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1 www.wildbienenzentrum.de/wp-content/uploads/2023/09/Scheuchl-Schwenninger-2016-Checkliste-Wildbienen-Deutschland.pdf; retrieved: 16.09.2023

2 www.wildbienenzentrum.de/wp-content/uploads/2023/09/Schwenninger-Scheuchl-2016-Rueckgang-von-Wildbienen-moegliche-Ursachen-und-Gegenmassnahmen.pdf; retrieved: 16.09.2023

3 See backside of Anthophila 1/2023

4 www.wildbienenzentrum.de/wp-content/uploads/2023/09/Neun-Punkte-Plan-gegen-das-Insektensterben-2018.pdf and www.wildbienenzentrum.de/wp-content/uploads/2023/09/Resolution_Insektenschutz_2016.pdf; retrieved: 16.09.2023