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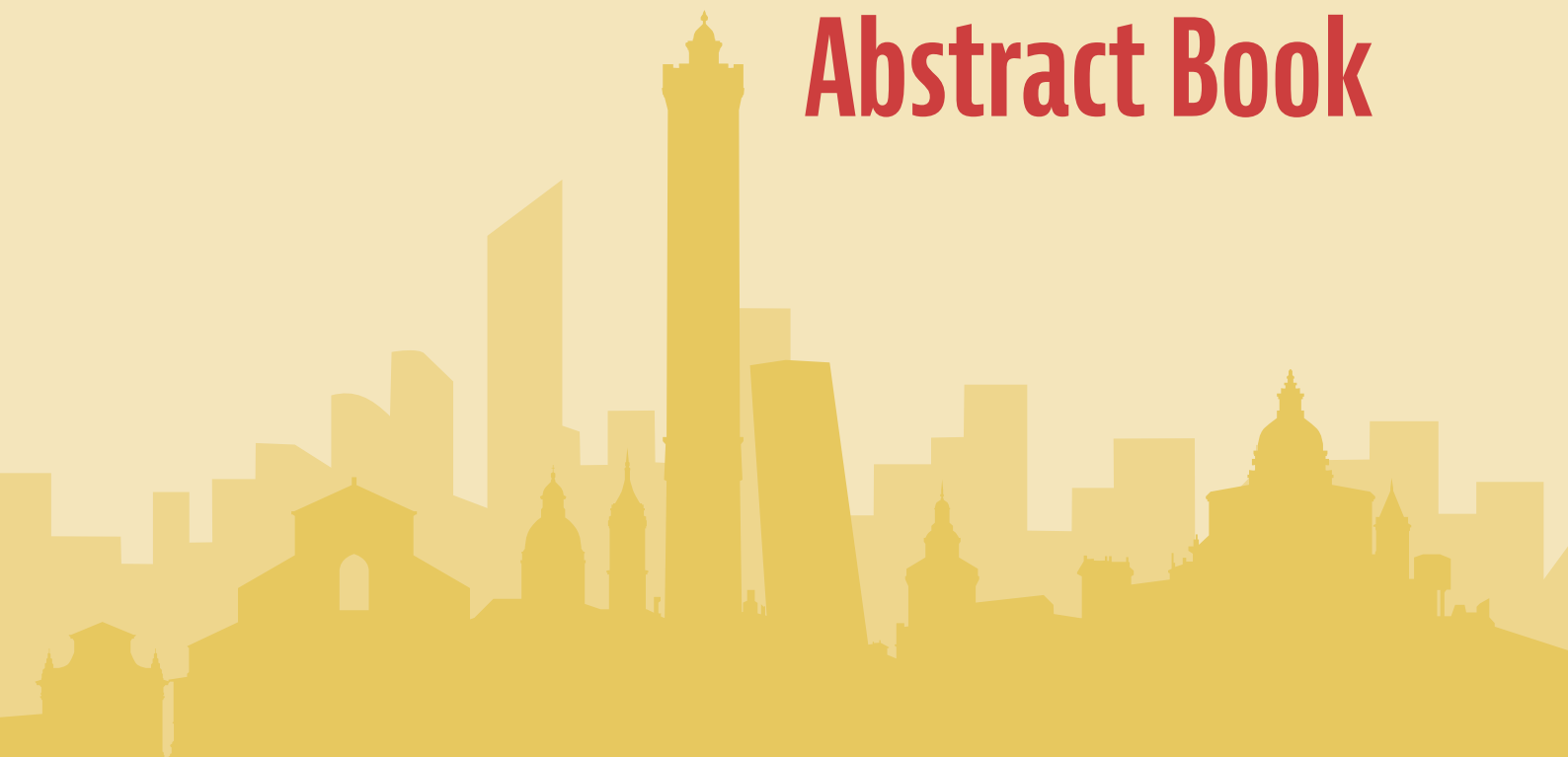
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Like foraging bees

We seek novelty, we need cooperation
and we profit from diversity

Abstract Book



NATURAL VEGETATION ENHANCES WILD BEE DIVERSITY IN VITICULTURAL AGROSYSTEMS

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Abstract

Background. Bees (Apoidea Anthophila) serve as fundamental bioindicators in temperate regions. Despite the prevalence of viticulture, vineyards are often overlooked in pollinator studies due to the autogamous nature of *Vitis vinifera*.

Objectives. This study investigated bee richness and abundance within vineyard agrosystems in the Province of Trento (Italy) to evaluate how landscape composition influences wild bee communities.

Methods. Within three core viticultural areas, two contrasting 500-meter radius landscape contexts were compared: vineyards surrounded by natural vegetation (NV) and vineyards dominated by monoculture (VV). Sampling was conducted monthly using pan traps throughout the bee flight season over three consecutive years (2023–2025).

Results. A total of 2,719 specimens belonging to 114 species were identified. Both abundance and species richness were significantly higher in NV sites (1,862 specimens, 102 species) compared to VV sites (857 specimens, 56 species). Our data confirmed a constant bee presence throughout the vegetative season, identifying both early-spring and summer-active species.

Conclusions. The results demonstrate that wild bees are highly sensitive to the presence of spontaneous vegetation within the vineyard matrix, which provides essential trophic resources and nesting sites. This study highlights that extensive viticulture integrated within a mosaic of natural habitats has a positive impact on bee communities and, consequently, on overall biodiversity. Furthermore, monitoring Apoidea offers a more granular and site-specific perspective on local biodiversity than observing *Apis mellifera* and its related parameters alone.