Royal Entomological Society

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Antenna

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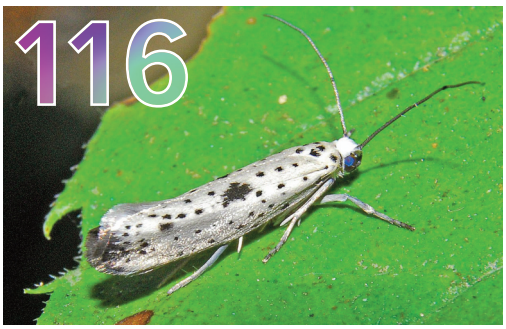

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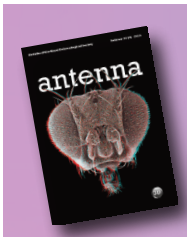

Antenna

Index and online copies

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Cover Picture: *Episyrphus balteatus* - Hoverfly homing in by Zach Haynes.

A triumph for pollinator conservation in the Doon Valley, India

Solitary bees, often overshadowed by their social counterparts, are crucial pollinators, conservation of which can significantly impact ecological health and agricultural productivity. To mark World Bee Day 2024, solitary bee nests were installed at the Graphic Era University campus, underscoring the university's commitment to conservation of biodiversity and the sustenance of pollinators of the Shiwalik landscape in the Doon valley.

Understanding the importance of solitary bees

Solitary bees, unlike honey bees and bumblebees, do not live in colonies. Each female operates

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independently, building and provisioning her own nest. Species such as mason bees and leafcutter bees are known to pollinate plants more effectively than honey bees, often visiting more flowers per day. Their role in the ecosystem is paramount, contributing to the pollination of both wild plants and agricultural crops. Despite their efficiency, solitary bees are often neglected in conservation efforts. Habitat loss, pesticide use and climate change have significantly impacted their populations. Recognising their importance and the threats they face, Graphic Era University took a bold step on World Bee Day to install solitary bee nests across its campus.

The solitary bee nest initiative

The initiative began with a collaborative effort from the university's Department of Biotechnology, the Campus Biodiversity Monitoring Team, and enthusiastic students who had heard a series of talks and watched a documentary film. These aimed to educate students and faculty members about the significance of solitary bees and the specific requirements for their nesting habitats. Participants learned that solitary bees prefer nesting in small cavities, which can be provided by specially designed bee boxes or natural materials such as bamboo reeds and drilled wooden blocks.

On World Bee Day, the campus buzzed with activity as students and faculty members gathered to install the bee nests. The installation sites were chosen to ensure they met the habitat preferences of solitary bees. Locations included areas rich in flowering plants, as well as sheltered spots that offer protection from the elements. The boxes, crafted with precision and care, were mounted at various heights to accommodate different species of solitary bee. They were strategically placed

near academic buildings, gardens and along walking paths to maximise visibility and engagement from the campus community. This hands-on experience not only fostered a sense of ownership and responsibility among participants but also provided valuable practical knowledge about pollinator conservation.

Educational workshops and community engagement

The installation was accompanied by educational workshops aimed at raising awareness about the importance of solitary bees and how to support their conservation. Students and faculty participated in hands-on sessions where they learned about the different species of solitary bee, their nesting behaviours and the ecological benefits they provide. A procession with informative placards/signage and bee-saving slogans advocating their conservation efforts was led by the monitoring team in the campus vicinity.

Monitoring and maintenance

To ensure the success of the initiative, the university established a monitoring system. Biodiversity students were tasked with regularly inspecting the nests, documenting the species that occupied them, and recording their nesting success. These data will contribute to ongoing research and conservation strategies, providing valuable insights into the solitary bee populations on campus.

Impact on campus and beyond

The solitary bee nest installation is already showing promising results. Initial observations indicate that several bee species have begun to explore and utilise the new nests. The presence of these pollinators is expected to enhance the pollination of campus flora, thereby boosting local biodiversity and supporting the health of the university's green spaces. This project also provides a living laboratory for ongoing research on pollinator behaviour, nesting preferences, and the impact of environmental changes on solitary bee populations. The university plans to expand the project in the coming years by installing more bee boxes and integrating pollinator-friendly practices into campus landscaping. Future initiatives include the creation of wildflower meadows, reducing pesticide use and promoting community involvement in pollinator conservation.

Beyond the immediate ecological benefits, the initiative has fostered a sense of environmental stewardship within the university community. Students and staff have become more engaged with biodiversity issues, taking pride in their role in conservation efforts. This heightened awareness extends beyond the campus, as participants share their knowledge and experiences with the broader community, advocating for solitary bee conservation in their own neighbourhoods.

A beacon of hope for pollinator conservation

Graphic Era University's solitary bee nest installation serves as a model for other institutions and communities. By taking a proactive approach to pollinator conservation, the university has demonstrated that meaningful environmental impact can be achieved through well-planned, collaborative efforts. The initiative highlights the importance of integrating education, community involvement and scientific research in conservation projects.

The solitary bee nest installation on World Bee Day at Graphic Era University stands as a testament to the power of collective action and the importance of preserving our natural world. As solitary bees quietly go about their essential work, the university's initiative ensures that they have a safe haven in which to thrive. This project not only supports the health of local ecosystems but also inspires a new generation of environmental stewards dedicated to protecting our planet's invaluable pollinators.

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Learn the latest in insect science and advance your work at ESA's Annual Meeting, **Entomology 2024**. This event offers a unique platform to present innovative ideas, techniques, and technologies within and beyond entomology while networking with colleagues and sharing your research. Held in Phoenix, AZ, known for its natural wonders and vibrant downtown, the meeting fosters scientific and professional growth. The theme, **"Empowering Tomorrow With Insect Science,"** will explore using AI and modern technology to address global challenges like biodiversity loss, food shortages, and insect-borne diseases.

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