SECRET GARDENS: REVEALING THE ENCHANTING UNSEEN THROUGH SCANNING ELECTRON MICROSCOPY

K. Privat[1], R. Kuchel[1] and N. Lacey[2]

[1]*Electron Microscope Unit, UNSW Sydney, Sydney, Australia*
[2]*Community Gardens Australia, Nowra* NSW*, Australia*

Community Gardens provide valuable settings for connecting people with science, nature and one another, yet many of the microscopic processes underlying gardening remain invisible. Our project aimed to bridge art, gardening and science by creating engaging microscopy-based outreach materials for the national Community Gardens Australia network. Samples of pollen, insects, soil and plant material were collected from four community gardens and the UNSW Kensington campus. More than 70 samples were prepared and imaged for the project. The resulting micrographs revealed the hidden structures and biological detail associated with everyday gardening materials (e.g., Fig 1). Images were provided to CGA for use in educational activities, decorative presentations, and web and social media content. The project provided opportunities for direct engagement with community gardeners through a presentation and interactive booth at the 2026 Community Growing Conference (Fig 2). A dandelion pollen micrograph was selected as a finalist in the 2025 UNSW Clancy the Lion Art Competition and was subsequently included in planned national microscopy outreach materials (Fig 3). By making microscopic structures visible, this initiative increased opportunities for public engagement with science, fostered a new and ongoing relationship between academic microscopists and a public institution, and encouraged deeper appreciation of the biological systems that support gardening.

Figure 1 (right). A selection of micrographs from the project including details of pollen, seeds, insects and leaves.

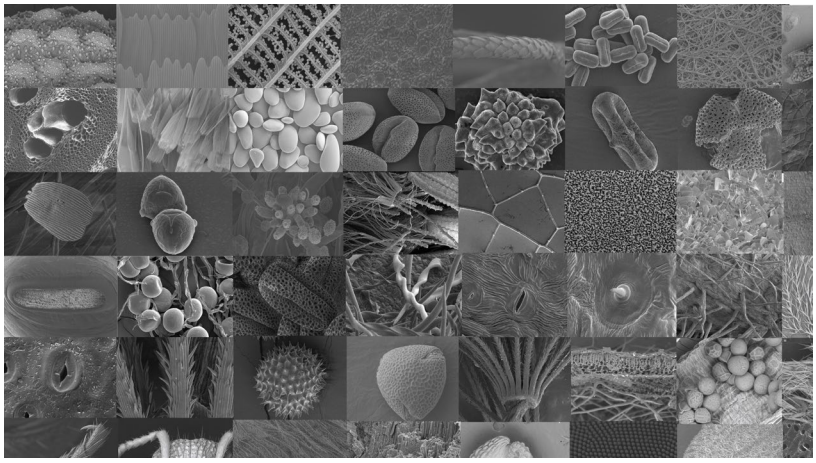


Figure 2 (below). CGA President Naomi Lacey (left), event MC Costa Georgiadis (centre) and co-author Karen (right) at our interactive SEM booth at the 2026 NSW Community Growing Conference.



Figure 3 (right). The dandelion pollen SEM micrograph on display for UNSW Community Day as a part of the Clancy the Lion art competition.

