

Surface: Selective Observation of Data in a Subantarctic Landscape



Figure 1. Campbell Island Research Area.

This contribution to the Art and Light Project emerged from a science/art collaboration with Janice Lord, plant evolutionary biologist and senior lecturer in the Department of Botany at the University of Otago. A series of conversations, in which Janice outlined her research on the pollination of the megaherbs on Campbell Island, began our affiliation. A hut book entry led to Janice's nighttime fieldwork, which revealed the Campbell Island weta's "novel and unexpected" nocturnal contribution to biotic pollination of subantarctic megaherbs. This instance of chance observation, leading to valuable research, instigated the project and made me think about connections between science and the arts.

My first response to the subject matter was to create a series of images of the windswept Campbell Island landscape from Janice's photographs. Although sensorially deprived, without the feelings, the smell of earth or sound and movement of the actual setting, I worked solely from photographs, slowly processing my relationship to the environment. The work picked up again when close-up photographs provided a better sense of the textural details of the megaherbs. Refocusing my research, I cropped geographical features from the photographs and mapped a small area of the megaherb field, subdividing Campbell Island into "plots" (Figure 1). Cropping the photo was a way of considering the landscape as ground and values other than the picturesque. Sampling from within this plot, and having in mind the effects of light, I explored how I might represent this in paint.

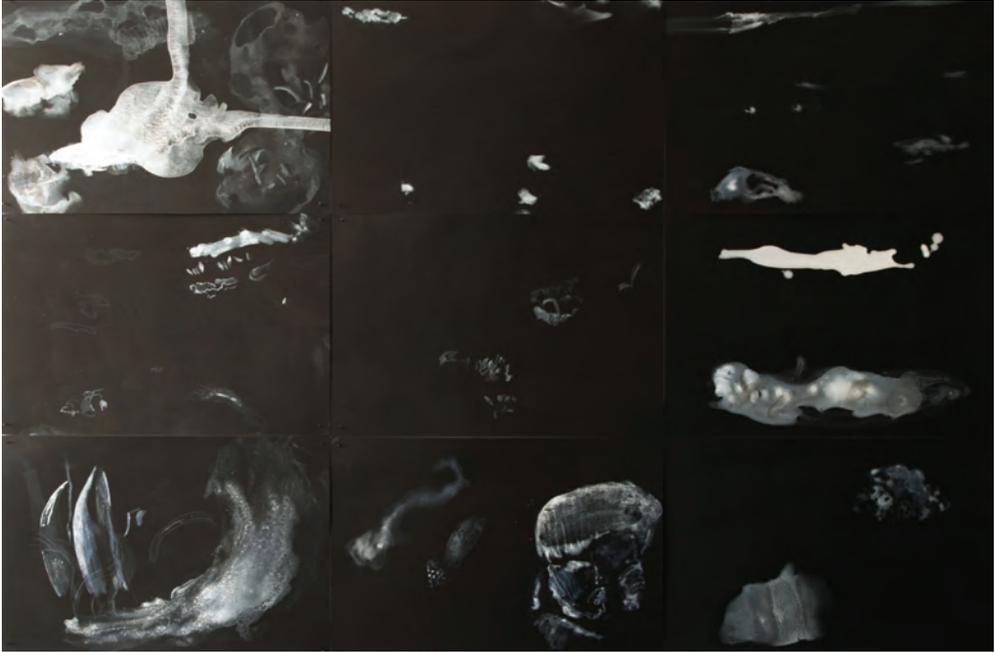


Figure 2. *Campbell Island 1*, 2015, acrylic and black gesso on paper, 945 mm x 1350 mm.

Working with white on black (Figure 2) to represent how the herbfield might appear at night, when the pollinators are out and about, I experimented with the fluid qualities of paint. Pouring and tilting the paper formed infinitesimally thin layers of paint and contrasted with drawn lines. In this manner, I extrapolated my sample data through painting.

Alongside the Art and Light Project, I worked on another project located within the Native Plants Collection at the Dunedin Botanic Garden. The methodology I was exploring within the Art and Light Project in turn influenced my work at the Botanic Garden. For the Botanic Garden project, in addition to setting up a sample grid, I photographed at night, on a long exposure lit with a torch. In this way, the action of shining a torch over selected parts of each plot created variations in light intensity, with partially lit areas and others concentrated into “pools” of light. This approach registered a different reading of the landscape, both revealing and obscuring the textured ground. The contrast between light and dark became the focus of the work. The resulting painting, *Surface*, is shown in Figure 3.

Scientists and artists can be said to “see” differently. The reliance on observation in both science and art is dependent, for example, on context and perceptual awareness. Theodore Schick relays the story of Karl Popper asking physics students to “take out pencil and paper, carefully observe and write down what you have observed.”¹ Without a context, direction or a thesis statement, the students did not know what to record. Should it be everything? Where to start? Scientific methodology provides a structured approach, focusing research within a body of scientific knowledge, with hypotheses tested against the observable, measurable world. Over time, there have developed differing focuses and conventions regarding how the world is observed and recorded within both art and science.



Figure 3. *Surface*, 2015, acrylic, white chalk and black gesso on paper, 2550mm x 2400mm.

The history of botanical art provides an example of how observation is selective, being reliant on the eyes and context of the observer. Prior to methodology and direct observation being valued in science, early-fifteenth-century plant illustrations were “rudimentary stylised”² depictions of real plants. In the eighteenth century, the development of a structure of plant identification—taxonomy—privileged text over images and, as a result, images were regarded as of lesser value. In contemporary botanical art, hand-drawn illustrations are preferred to photographs as a resource for identification, as they “show more detail with more precision than any photograph.”³ Certain details of plants necessary for identification are not easily photographed.

Interfaces and boundaries between discourses provide opportunities for reinterpretation. Reflecting on her collaboration with artists for the Art and Light Project, Janice Lord spoke about how the experience made her re-examine what she did and stimulated her to think in different ways. Both science and art rely on empirical research. Both fields of practice involve meticulous fieldwork.

As Elizabeth Potter states in *Feminism and Philosophy of Science: An Introduction*, “the use of contextual values in science and bias can be both legitimate and value laden research but can still be good science.”⁴

The subjective depictions I worked on were based on a sampling of the Campbell Island landscape and are antithetical to botanical drawing. The final work attempts to capture something in paint extrapolated from my initial mapping of the ground in an attempt to show my connection to what I am seeing.

Sue Pearce is in her first year as a Masters of Fine Arts candidate at the Dunedin School of Art. Within her drawing practice, she works with the chaotic movement and fluidity of paint to represent textural surfaces alluding to her relationship to the ground.

Janice Lord is a curator of the Otago Herbarium housed in the Department of Botany at the University of Otago and a plant evolutionary biologist with interests in plant reproductive strategies and traditional uses of plants by Māori.

1. Schick, Theodore and Lewis Vaughn, *How to Think About Weird Things: Critical Thinking for a New Age* (New York, San Francisco & Toronto: McGraw Hill, 2005) 179.
2. Saunders, Gill, *Picturing Plants. An Analytical History of Botanical Illustration* (Berkeley, Los Angeles: University of California Press, 1995) 9.
3. Douglas Holland “Picturing Plants Through History” in Catherine Howell, ed., *Flora Mirabilis. How Plants have Shaped World Knowledge, Health, Wealth and Beauty. An Illustrated Timeline*, (Washington: National Geographic Society: 2009) 12-13.
4. Elizabeth Potter, *Feminism and Philosophy of Science: An Introduction* (Abingdon: Routledge, 2006).