

Oribotics

Matt Gardiner

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Mechaniflorum quinquiplicatum M.Gardiner et sp. nov
Genus et species insignis floribus mechanicus, a speciebus nobis bene distincta [this species is remarkable and distinguished from all other known species by virtue of its mechanical flowers].

There is no register of the facts relating to these plants and their place in the scientific description of the world. The 'natural history' of Matt Gardiner's oribotic flowers has yet to be written. The prehistory of the species might be found in the tradition of art imitating nature, and also in practices of botanical study, such as the analytical precision of botanical drawing. More specifically, their prehistory is located in contemporary origami and in contemporary robotics. These modes of practice both emanate from the study of natural systems. Gardiner's own field of 'oribotics' hybridises computer-controlled mechanics with a simple, paper model. This is partly a strategy for collaborative experimentation, and it is also a strategy for pursuing the relevance of one type of expert logic to another. This process of enquiry defines the oribotic flowers as specimens.

Oribotics consisted of five, self-folding origami flowers. Each was driven by a tiny electric motor that formed a mechanical stem. The pinwheel design of these blooms created five, stiff petals: activated via a touch screen, these petals could fan out or retract, with a whirl of small gears. On the screen, the robotic flowers were displayed as diagrams of the origami model. When selected by the viewer, the linear image of the flower was propelled into motion along with its three-dimensional counterpart. Selection also triggered video imagery of a real flower opening or closing, footage that appeared simultaneously on the screen, and as a projection onto the surfaces of the robotic bloom.

In this kind of botanical art, the evidence of the artist's hand must lie predominantly in the design and construction of the model, and in the intricacies of its operation, programming and installation. Gardiner's hand hovered at a number of technological removes from these specimens and their representation. Despite

the sculptural appeal of the life-sized, oribotic flowers 'living' in a synthetic lawn, the hand of the viewer was also obliged to hover and interact at a distance. The touch screen in particular, and the setting overall, produced a formal, contemplative relationship with this botanical collection.

Of course, the gallery is the unnatural environment that makes such flowers possible. These plants had yet to be plucked and tested under conditions beyond the controlled intimacy of the exhibition space. Particularly in their resting state, they pointed to nature as a finite, tireless order of permutations and combinations. Even so – like the synthetic grass – sound, lighting and projection amplified the peculiar activity of the oribotic flowers. These theatrical elements seemed to thicken and texturize the surrounding air.

In collaboration with Gardiner, composer David Young created an isometric musical score for paper, rocks and sand, wooden ratchets and chimes. Performed by percussionist Eugene Ughetti and mixed by Peter Humble, the soundscape evoked the infinitesimal frictions and collisions of organic processes. Literally opening into this background, the oribotic flowers could become symbolic of an un-revealed ecosystem. In the darkened gallery, the video imagery further altered the perception of the mechanical plants. Poised in their open state, and saturated with the colours of the real flowers, the oribotics suggested a future forest of various, automated life forms. But in their strange luminosity, their slow spiralling movement, and simple structure, there were moments when they might equally have pertained to a sultry, primeval wilderness.

Projected from above, a red poppy casts its hue over a robotic bloom once more — is that the flower which Gardiner's assemblage has been, or is it the flower that it will become?

More on this ingenious work can be seen at <www.oribotics.net>

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