

Bringing Mushrooms Alive

**Malcolm Howie Watercolours
in the State Botanical Collection**
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Mushrooms spring up with autumn rain, expand, shed their spores, and decay; all in a matter of weeks. Dried, they are valuable as herbarium specimens for scientific study such as DNA extraction or examination of spores under the microscope. However, dried mushrooms lack the pizzazz of the fresh, and most look rather similar, with details of form and surface texture difficult to discern, and the often glorious colours usually becoming fairly drab.

Herbarium collections of fungi such as mushrooms are ideally accompanied by detailed notes on form and colour, but a good photograph or illustration can include much useful information. In the 19th and for much of the 20th century the main mode of capture of mushroom morphology was watercolour painting. The State Botanical Collection at Royal Botanic Gardens Melbourne holds watercolour paintings of fungi by a number of collector/artists from the 19th century, including Flora Campbell, Henry Tisdall and Marie Wehl, and a very interesting set of around 120 sheets of fungi paintings created by Malcolm Howie in the 1930s.

Malcolm Howie (1900-1936) was a commercial and natural history artist who was the brother-in-law of Jim Willis, longtime staff member of the National Herbarium of Victoria. Jim was well known as a botanist, but from his early days he also had a strong interest in fungi. Howie suffered from Spinal Muscular Atrophy, a debilitating disease that meant that from age 16 he was unable to walk, and towards the end of his life he was only able to paint with movements of his wrist. Howie depicted around 200 different species of fungi at life size in his paintings, most created between 1931 and 1935. His paintings are precise in form and colour and jump off the page as accurate depictions of their subjects. The quality of his fungi paintings was appreciated by Ethel McLennan at the School of Botany, University of Melbourne, who commissioned copies, totalling around 80 sheets, which are still held by the School of Botany. Howie's original paintings were donated to the State Botanical Collection by the Willis family after the death of Jim Willis.

All the Howie paintings have annotations in Jim Willis's distinctive handwriting with a date and the name of the fungus, and sometimes also with a locality. Fungi paintings by Howie were reproduced in a comprehensive article by Willis in the *Victorian Naturalist* of 1934 entitled 'The Agaricaceae or gilled fungi'. This work was republished as the booklet *Victorian Fungi* in 1941 and remained in print through several editions; the latest in 1963 entitled *Victorian Toadstools and Mushrooms*. Most of the paintings are reproduced in black and white, but there is a colour plate of Plums and Custard *Tricholomopsis rutilans* and two composite colour plates, depicting 22 species, at less than life size.

Today, there are several excellent Australian fungi field guides featuring numerous colour photographs. However, from its publication to the 1980s, *Victorian Fungi* was the only illustrated identification guide to local fungi. Both paintings and text were based on careful observation through first-hand experience of the species. The paintings were clearly recognisable and the text captured the essential characters of each fungus. Howie's paintings, even in black and white or at a reduced scale, were integral to the success of Willis's fungi guide, and some distinctive species such as Green Skinhead *Cortinarius austrovenetus* were illustrated in colour for the first time.

Artists painting fungi often pick out features interesting to their eye – such as when painting old or distorted fruit-bodies which may be shrivelled or infected with other fungi. While artistic, such images are less useful from the scientific perspective of documenting the usual characters of a species and enabling identification. Howie's paintings clearly show collaboration between artist and scientist. This is especially seen in the



selection of material (neither too young nor too old) and in the accurate depiction of important details such as the attachment of the lamellae (gills) to the apex of the stipe, often shown in cross-section. We can assume that Willis provided (and probably collected in the first place) most of the specimens, and provided guidance on interpretation of the key features.

The ultimate combination of science and art is to preserve both the original specimen and the watercolour. Jim Willis made numerous collections of fungi that are housed today in the National Herbarium of Victoria. However, unfortunately, few of the original specimens appear to have been kept once Howie's paintings were completed. In reverse, for some of the paintings there is no specimen collected by Willis of that species at any time. Therefore, the paintings remain a valuable resource in interpreting the concept that Willis had of different species of Victorian fungi, and the range of species that he encountered in the early years of his mycological interest.

Further to their scientific value, Howie's striking paintings bring fungi alive. The power of the images was underlined during the recent *From the Forest to the Foreshore* exhibition, mounted by the Friends. A number of Howie's paintings were on display and evoked much interest – even to the point of quite a few people attending the exhibition making enquiries about purchasing them.

Mycologists find it regrettable that the most commonly depicted fungus is the red and white-spotted Fly Agaric *Amanita muscaria*, so often seen in children's books and on kitsch objects. This admittedly rather striking and beautiful mushroom is in fact a weed in Australia, introduced with exotic trees. The paintings of Malcolm Howie greatly assist in bringing an appreciation of the

wide range of forms of our native fungi to a non-scientific audience. There is much beauty of form and colour and much weirdness. Reaction to the paintings commences a dialogue which has potential to include discussion of the fundamental difference of fungi from plants and hopefully stimulate questions about what all these fungi do in nature (they are highly interconnected with plants and animals in many vital roles).

It is to be hoped that in time Howie's paintings in their full glory will become available for wider viewing, such as through the Gardens website. For the moment, five paintings feature in a set of cards recently produced by the Friends of Royal Botanic Gardens Melbourne: Beech Orange *Cyttaria gunnii*, Elegant Blue Webcap *Cortinarius rotundisporus*, the vivid Purple Emperor *Cortinarius archeri*, Austral Parasol *Macrolepiota clelandii* with its chocolate chip cookie pileus, and the bizarre Anemone Stinkhorn *Aseroe rubra*. Rather poignantly, the painting of the latter species was completed in the last weeks of Malcolm Howie's life, in January 1936, from material collected on the Bogong High Plains.

The cards are available from the Friends' office. They sell in packs of five assorted blank cards at \$10 for members, or \$12 for non-members, PLUS postage of \$2.50 per pack.

From left to right: Beech Orange - *Cyttaria gunnii*; Elegant Blue Webcap - *Cortinarius rotundisporus*; Purple Emperor - *Cortinarius archeri*; Austral Parasol - *Macrolepiota clelandii*; and Anemone Stinkhorn - *Aseroe rubra*.

Watercolours by Malcolm Howie.

