

# Opening the Wardian case:

## experiments in plant transportation

by Richard Clough

On July 8, 1833 the schooner *Persian* left London with two plant cases on board on what the designer of the cases, Dr. Nathaniel Bagshaw Ward, described as ‘an experimental voyage to New Holland’, to test what the ship’s captain, Charles Mallard, referred to as ‘a simple but beautiful discovery’.

Ward’s observations on the growth of plants in enclosed glass containers, begun in 1829, and his development of the cases that made it possible to grow delicate plants in the polluted atmosphere of industrial cities are well known. Also well known, although Ward’s contribution is often overlooked, are the revolutionary changes brought about worldwide by the sudden acceleration in the pace of plant distribution made possible by the use of the plant cases he had developed. Less well documented is the experiment that demonstrated the effectiveness of these cases for the transport of plants and seeds by sea, even on the longest voyages then being made.

Ward realized that many of the causes of failure on board ship, the effects of salt spray on plants carried on deck, the lack of light when they were stored below, the scarcity of water on long voyages, both for the plants and for the removal of salt, the damage caused by both humans and animals, as well as the frequent lack of skill in managing plants by those responsible for them, could be overcome by employing properly designed, enclosed glazed cases.

He sought the assistance of a fellow member of the Linnean Society, Charles Mallard, who was both a master mariner and a keen naturalist. Mallard, a retired Royal Navy lieutenant, had visited Australia in 1829, when, as captain of the *Prince Regent*, he had sailed to Sydney. Currently master of the *Persian*, a four-gun, 400-ton barque, he was planning a return trip, one that was to give Ward an opportunity to test his ideas.

George Loddiges, who had assisted Ward in his earlier experiments, stocked the cases for the trial in the nursery he ran in Hackney with his brother Conrad. The two cases were planted with ferns, grasses and mosses, the names of the plants not being recorded. These were placed on the poop, where they were to remain throughout the voyage. Also on board, as well as the regular cargo, were cabin and steerage passengers. The voyage to Hobart, including a call at Portsmouth, took 128 days, during which time the plants were neither watered nor attended to otherwise.

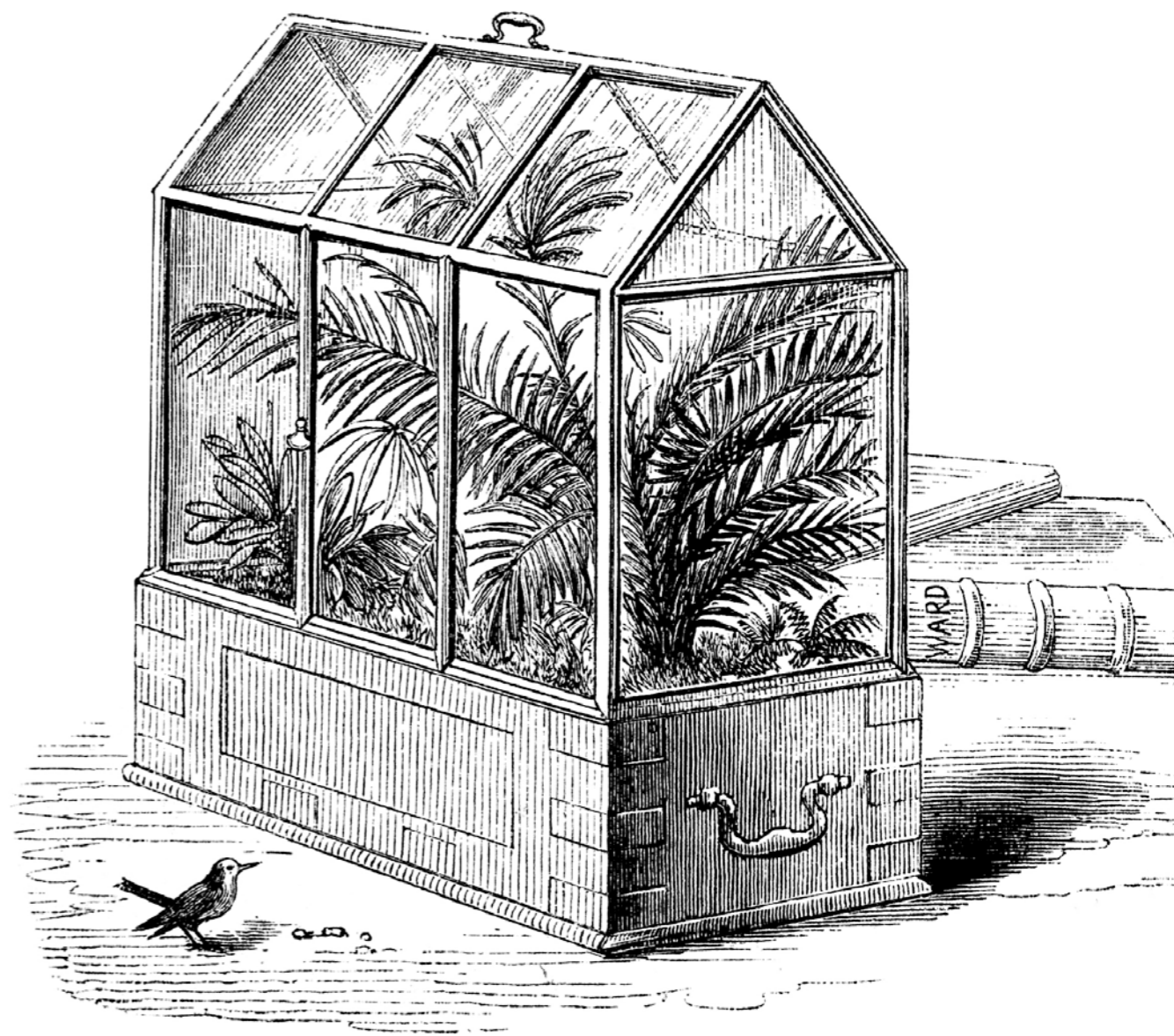
From Hobart, Mallard wrote to Ward to congratulate him on the success of the trial, reporting that ‘the plants (with the exception of two or three ferns which appear to have

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faded) are all alive and well’, and that they had ‘grown a great deal, particularly the grasses, which have been attempting to push the top of the box off’.

Leaving Hobart on December 22, the *Persian* reached Sydney on New Year’s Day 1834. 18 days later, Mallard wrote to Ward saying, ‘the plants contained in the two glazed cases were landed at the Botanical Garden’ and that they had ‘since been transplanted by Mr McLean, who has charge of the garden in the absence of Mr Cunningham (gone to New Zealand botanizing) and all doing well’. He concluded his letter saying, ‘I cannot but feel some little degree of pride and pleasure in having been the instrument selected to put to the proof so important a discovery to the botanical world’.

Ward knew Allan Cunningham in London and would probably have discussed this trial with him as the cases were being sent to the garden where his brother Richard



ABOVE: Line illustration of a Wardian case.

Image by courtesy of the Archives, Royal Botanic Gardens Melbourne