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On the Growth of Plants in Closely Glazed Cases

In the early nineteenth century, live plant cuttings were commonly transported between continents in wooden boxes exposed to the elements on the decks of ships; unsurprisingly, it was rare for them to arrive in good health. The glass cases devised by Nathaniel Bagshaw Ward (1791–1868) were a revolutionary step forward in preserving botanical specimens. In this monograph, first published in 1842, Ward explores some of the most common causes of plant deaths in cities and aboard ships, including air quality and temperature. Most importantly, he emphasises the need for light. Although photosynthesis would not be chemically understood until later that century, Ward recognised that a glass case was infinitely preferable to an opaque one. His rapidly adopted invention would have far-reaching effects, allowing for the safe transportation of tea from China to the Himalayas, rubber from the Amazon and medicinal species from the Andes to India.

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CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Mexico City

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9781108061131

© in this compilation Cambridge University Press 2013

This edition first published 1842
This digitally printed version 2013

ISBN 978-1-108-06113-1 Paperback

This book reproduces the text of the original edition. The content and language reflect the beliefs, practices and terminology of their time, and have not been updated.

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BY
N. B. WARD, F.L.S.



LONDON :
JOHN VAN VOORST, PATERNOSTER ROW.
M.DCCC.XLII.

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Μηδὲν εἴσατο κακόν.

P R E F A C E .

MOST of the facts detailed in the following work have been long before the public. They have been published in several periodicals, and in a letter to Sir W. J. Hooker, which appeared in the 'Companion to the Botanical Magazine,' for May, 1836. This letter was subsequently printed separately for private distribution among the author's friends. The attention of the scientific world was likewise drawn to the subject at three several meetings of the British Association, and more particularly by an admirable paper written by the late Mr. Ellis of Edinburgh, and published in the 'Gardener's Magazine' for September, 1839. The simple yet comprehensive principle however upon which plants are grown in closed cases, does not appear to be clearly understood, and many misconceptions yet exist upon this point. The object of the present work therefore is to remove these erroneous notions, and thereby to enable those who wish to experiment upon the subject to do so without risk of disappointment. The author is fearful that in this

attempt he will be condemned by the learned for having entered into needless details, while to those who are wholly unacquainted with the leading principles of botanical science he may not have rendered his meaning sufficiently clear. He has, however, done his best, and can only say in the oft-quoted words of the poet—

“ si quid novisti rectius istis
Candidus imperti, si non,—his utere mecum.”

A grateful task remains. To the Messrs. Loddiges, who may most justly be styled ‘ Hortulanorum Principes,’ the thanks of the author are most especially due. From the very commencement of his enquiries their splendid stores were placed unreservedly at his disposal, and without their kind assistance it would have been difficult for him to have carried on his experiments. He begs likewise to record his obligations to Mr. Aiton, Sir W. J. Hooker, and Mr. Smith, of Kew; to his old friend Mr. Anderson, of the Chelsea Botanic Garden; to Dr. Lindley, of the Horticultural Society’s Garden; to Mr. Macnab of Edinburgh; Mr. Mackay of Dublin; Mr. Cameron of Birmingham; and to various other friends, for numerous specimens of interesting plants received from them at different times for the purposes of experiment.

*Wellclose Square,
March, 1842.*

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