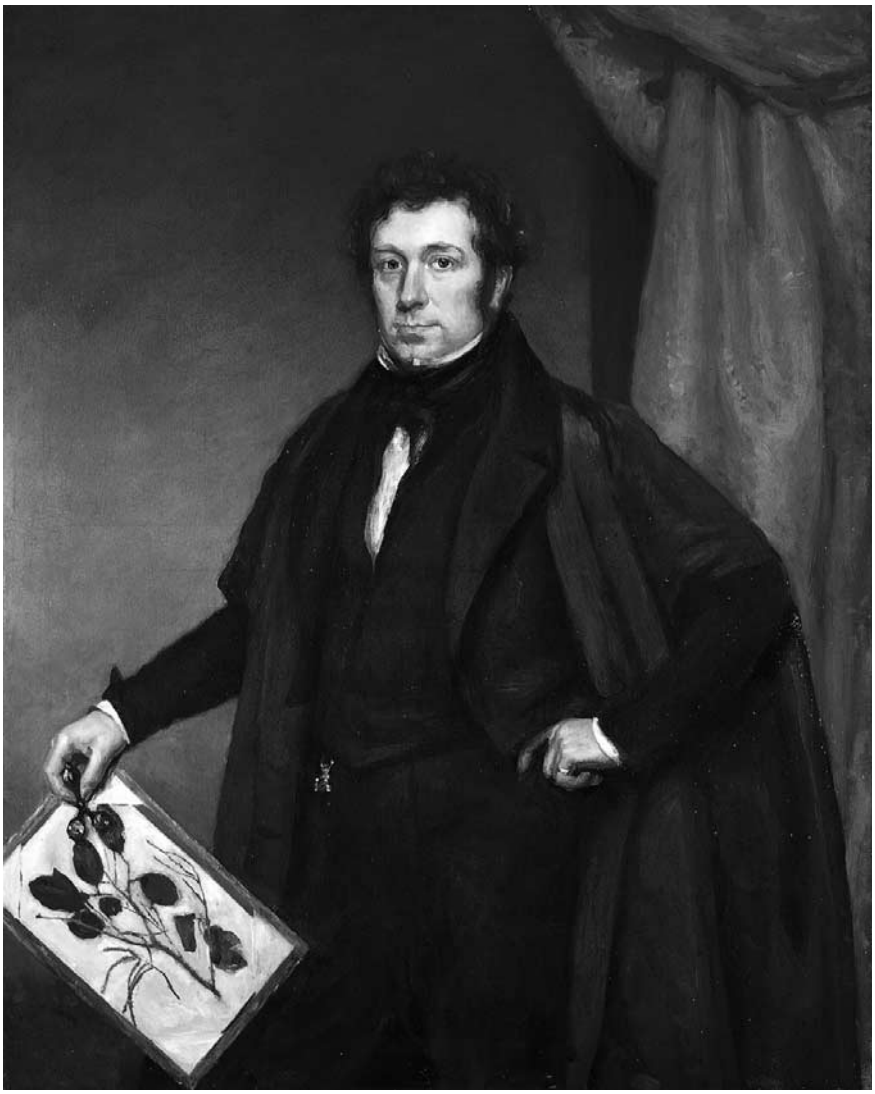
Darwin's Mentor

JOHN STEVENS HENSLOW, 1796–1861

John Stevens Henslow is known for his formative influence on Charles Darwin, who described their meeting as the one circumstance 'which influenced my career more than any other'. As Professor of Botany at Cambridge University, Henslow was Darwin's teacher and eventual life-long friend, but what of the man himself? In this new biography, much previously unpublished material has been carefully sifted and selected to produce a rounded picture of a remarkable and unusually likable academic. The time in 1829–31 when Darwin 'walked with Henslow' in and around Cambridge was followed directly by Darwin's voyage around the world. The gradually changing relationship between teacher and pupil over the course of time is revealed through their correspondence, illuminating a remarkable friendship which persisted, in spite of Darwin's eventual atheism and Henslow's never-failing liberal Christian belief, to the end of Henslow's life.



John Stevens Henslow: The young Professor of Botany. (Artist unknown.)

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JOHN STEVENS HENSLOW 1796–1861

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With respect to a biography of Henslow, I cannot help feeling rather doubtful, on the principle that a biography could not do him justice. His letters were generally written in a hurry & I fear he did not keep any Journal or Diary. If there were any vivid materials to describe his life as Parish-priest, & manner of managing the poor it would be very good.

I am never very sanguine on literary projects. I cannot help fearing his Life might turn out flat. There can hardly be marked incidents to describe. — I sincerely hope that I take a wrong & gloomy view; but I cannot help fearing. I would rather see no life than one that would interest very few. It will be a pleasure & duty in me to consider what I recollect; but at present I can think of scarcely anything. The equability & perfection of Henslows whole character, I shd think would make it very difficult for anyone to pourtray him.

Charles Darwin to Joseph Hooker, 24 May 1861

To Lorna

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Illustrations

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Foreword

by Professor Patrick Bateson,
Provost of King's College, Cambridge

John Henslow had a remarkable effect on British scientific life. He was opposed to the ineffectual traditional methods of teaching Natural Science. An anti-traditionalist, he established a tradition of rational enquiry which persists to this day and permeates the teaching and research of his old University here at Cambridge. Henslow was an inspirational teacher and formed strong bonds with his pupils. One of his favourites, Charles Darwin, became a friend for life. Darwin repeatedly referred to the strong effect that Henslow had on him. Meeting Henslow, said Darwin, was the one circumstance 'which influenced my career more than any other'. That was quite a tribute from a man who did so much through his writings to influence the careers of a host of biologists ever since.

As part of his campaign to vitalise the scientific life of Cambridge, Henslow was co-founder of the Cambridge Philosophical Society. The Society continues to this day to hold regular meetings. These are not about philosophy in the modern sense but about all aspects of natural science. Given its own origins, it was only right that the Society should have given Max Walters and Anne Stow a grant to help them carry out research for this book about Henslow.

Although John Henslow is regarded as a botanist, just as Charles Darwin is usually regarded as a zoologist, they both had a grand view of natural science which was lost in the growth of specialised approaches that occurred in the following 150 years. Information has been gathered at accelerating speed about genes, cells, organisms and communities. The language spoken in any one of these many fiefdoms is simply not understood by those working in the others. Fortunately, the walls erected between these territories by the sheer pace of discovery are starting to crumble. This is because unifying principles of biology have started to emerge and they apply to both plants and animals. Molecular biology has startled everyone by showing how alike are organisms of all kinds in their biochemical and genetic machinery: animal genes can be transferred to plants and vice-versa. We have the astonishing picture of tobacco plants glowing in the dark when they are desiccated as a result of the introduction of a gene from a firefly. While some people find these

developments frightening, I find them exhilarating. It has become sensible to refer to myself simply as a biologist. Something of both Henslow's and Dawin's big picture has returned and it is a testament to their long-lasting influence that it has done so.

Another monument to Henslow's influence on those around him is the wonderful Botanic Garden in Cambridge. The old Botanic Garden at Cambridge was close to the centre and was little more than a 'physic' garden, like the one at Chelsea, although Henslow and Darwin paced around it together many times so it cannot have been all that small. Henslow persuaded Cambridge University to buy a much more extensive tract of land about a mile from the centre of the City so that a botanic garden of real service to teaching and the scientific community could be laid out. Henslow's conception is now a mature and remarkable collection of varied botanical habitats.

When my wife and I lived nearby and were just starting a family, I used to walk round and round the Cambridge Botanic Garden on Sundays in an attempt to get my elder daughter to fall asleep in her push chair. But she was as fascinated as I was by the sheer richness and variety of the place. We never tired of it. Max Walters lived in the middle of the garden at the time – one of the perks of being Director of the Botanic Garden. He and his wife Lorna kept a donkey which was a zoological deviation for my daughter and myself in this extraordinary collection of botanical treasures. Max presided over this wonderful garden for many years and, just because it owes so much to Henslow, he has repaid the debt by writing this excellent book.

Patrick Bateson

Preface by S.M.W.

Almost exactly twenty years ago, whilst I was Director of the University Botanic Garden in Cambridge, much of my spare time in between teaching and administration was going into preparing a little book entitled *The Shaping of Cambridge Botany*, with an explanatory sub-title 'A short history of whole-plant botany in Cambridge from the time of Ray into the present century'. Although I greatly enjoyed the challenge of putting on record how much I appreciated what great botanists of earlier generations had done, I also discovered the limitations of my own tastes and abilities. In particular, I came to understand how important the rôles of librarian and archivist are, and indeed how the work I was attempting was only possible because such excellent people existed. Nothing in my own scientific training had supplied any expertise of this sort. Indeed, until the age of forty I found all history dull and irrelevant – an attitude I now find quite incomprehensible!

A particular part of the story presented in *The Shaping of Cambridge Botany* concerned the vision of the fourth of our Professors of Botany, John Stevens Henslow, as to the kind of Botanic Garden he thought worthy of a great scientific University, and how, with some difficulty, this vision was translated into reality in a series of developments which began with Henslow persuading the University in 1831 to buy the land on which our excellent Botanic Garden stands. The book was published as part of the celebration of the sesquicentenary of that important step, which we held in the summer of 1981. Writing the chapter on Henslow and his 'New Botanic Garden', I soon realised that a new biography of this remarkable man was much needed, and I naïvely thought that someone else would undertake this task, in which I would be happy to play perhaps some minor rôle.

Early retirement in 1983 brought opportunities to study and write, and interest in Charles Darwin, Henslow's most famous pupil, grew more and more strongly in Cambridge through the 80s, but no potential Henslow biographer appeared. Rehabilitating after a very successful heart by-pass operation in the early 1990s I began to think the unthinkable: perhaps I should write the biography myself. So it was that one day some six years ago I found myself in the office of the Cambridge Philosophical Society enquiring about some trivial matter. Judith Winton-Thomas, the Society's

Secretary, was there, and there was Anne Stow also. From their conversation I learned that Anne had just retired from her post as Librarian of the University's Science Periodicals Library. I asked Anne what she was going to turn her talents to in retirement and received the entirely reasonable reply that she hadn't decided. I then said, half-jokingly, 'Would you like to help me to write a biography of Henslow?' She said Yes, she thought she would. This book is a witness to the success of our cooperation.

Preface by E.A.S.

When Max Walters suggested that I could help him with a new biography of Henslow I was familiar with the well-known Maguire portrait hanging in the Henslow Room at the Scientific Periodicals Library. My stock explanation to visitors 'He was one of the three founders of the Cambridge Philosophical Society, responsible for the move of the Botanic Garden from the New Museums Site to Trumpington Road, and encouraged Darwin to accept the post of naturalist on the Beagle' had no depth of knowledge. But I had always been intrigued by the kindly, intelligent face in the print. This collaboration has enabled me to 'walk' with Henslow from his childhood home in Rochester, through Cambridge to my native county of Suffolk. Although no collection of his papers exists I have been able to read many of his letters in other collections and these more than anything have revealed the man, his devotion to his family, his humour, his enthusiasm for new interests, his attention to the minutest detail and his inevitable frustration at the lack of time to encompass all he wanted to do. It has been a fascinating journey.

Joint Preface and Acknowledgements

It is often said that, just as 'good wine needs no bush', introductory explanations and apologies from the author(s) can be dispensed with, and a book must speak for itself. We have felt unmoved by such considerations, if only because it seemed important to put on record the nature of our collaboration, which has been satisfying to both authors and will, we hope, prove so to the reader.

Foremost among the list of individuals and organisations to which we are indebted must come the Cambridge Philosophical Society. As S.M.W. records in his Preface, the idea of our collaboration actually arose in the Society's offices, and both of us had already our own areas of interest in Henslow: E.A.S. as Librarian of a prestigious and historic Library that was in origin that of the Philosophical Society of which Henslow was a founder-member, and S.M.W. as Director of 'Henslow's Botanic Garden'. Our application to the Society for a grant to help in the preparation of the book was generously accepted at a meeting on 16 May 1994 at which our cause was strongly supported by the then President, Professor Patrick Bateson, who has kindly supplied the Foreword to our book.

Armed with this support, we approached Cambridge University Press as potential publishers, and were rewarded with a contract in 1996. Initially only black and white illustrations were envisaged, but with the further help of a grant from the Botanic Garden, it has been possible to include some coloured plates. We are most grateful to the present Director, Professor John Parker, himself a Henslow enthusiast, for making this extra grant.

When we began we had little idea of the size of the relevant 'new' or unpublished material, though, of course, some of it, especially the Darwin correspondence, was already more or less familiar and accessible. It gradually became apparent that much more material was available than we at first thought. A chance conversation with Neil and Anna Hitchin in 1996 after Sunday morning service in Grantchester Church introduced us via the Hitchins to the American Henslow(e) descendants, in particular Paul Akerheim and Peter Henslowe, from whom we have received valuable information and the use of family portraits. From Mrs Maria Henslow, widow of Major John Henslow, who was present with her husband at the

1981 Botanic Garden celebrations, we have also had access to unpublished manuscript notebooks and diaries belonging to the family. Through the good offices of Professor Michael Akam, Director of the Museum of Zoology, we were introduced to Canon Anthony Barnard, of Lichfield, who has provided us with much information about the links between the Henslows and the Barnards. Similarly we owe much to Mr Roger Vaughan, who has made available to us his great knowledge of Henslow's brother-in-law and biographer Leonard Jenyns, and to Mr Roger Jenyns of Bottisham Hall, who has kindly given us access to material in the Jenyns house.

Many other people have helped us with particular aspects of our work. In the alphabetically arranged list that follows we have briefly indicated the kind of help provided.

David Allen has provided much helpful information from his expert knowledge of the history of natural history.

David Briggs has read and commented helpfully on the drafts of some chapters.

Janet Browne has helped with questions arising from her book entitled *Charles Darwin: Voyaging*, and kindly made available material from the unpublished second volume of her Darwin biography.

Alec Bull has helped us with the Henslow lists of Hitcham plants.

Betty Bury has freely given us information on Henslow from her work on editing Romilly's Diaries.

Nigel Cooper has helped with the theological background to Henslow's life.

Gigi Crompton, who is preparing a *Historical Flora of Cambridgeshire*, has exchanged with us information on Henslow's records in Cambridgeshire.

Brian Dolan has answered questions arising from his PhD thesis concerning E.D. Clarke.

Katherine Edgar has discussed her study of E.D. Clarke.

Rosemary and David Gardiner introduced us to Thomas Underwood and the relevant correspondence containing Henslow references.

Keith Goodway, whose early interest in the history of Cambridge botany enabled us to find 'lost' documents in the Library of the Department of Plant Sciences in Cambridge.

Scilla Hall has given us archival information from the Libraries of Corpus Christi and Peterhouse Colleges in Cambridge.

Rachel and Robin Hamilton, who live by Hitcham Church, introduced us to Hitcham residents interested in Henslow and parish history.

Michael Hickey, botanical artist, whose career began in 'Henslow's Garden', has contributed the illustrations beginning the three Parts of our book, and also told us of Youmans' books.

David Hunt has provided expert advice on the nomenclature of 'Henslow's Cactus'.

Anne James, who typed very promptly and efficiently the first drafts of much of the text.

David Kohn, who is assessing new manuscript evidences of Darwin's early interest in botany, has discussed his work with us.

Elizabeth Leedham-Green has been very helpful on matters of Cambridge University history.

Duncan McKie has supplied information on Clarke's Oriental Plane tree in Jesus College.

Clodomiro Marticorena has answered questions about Darwin's seeds from Chile grown by Henslow.

Edward Martin has helped with Henslow's archaeological interests.

Gina Murrell has helped with many questions about Henslow specimens in the Cambridge University Herbarium.

John Pickles, co-editor with Betty Bury, has helped with Romilly Diaries references.

Duncan Porter, Director of the Darwin Correspondence Project in the Cambridge University Library, has freely helped with Darwin references.

Richard Preece has helped with Henslow's studies of Snails and other Mollusca.

Chris Preston has helped with Henslow's bryophyte records.

Oliver Rackham, expert on woodland ecology, shared with us his knowledge on a field trip to the site of Hitcham Great Wood.

Fritz Rehbock, author of *The Philosophical Naturalists*, discussed with us Henslow and his contemporaries.

Michael Roberts has helped us with the relationship between science and theology in the thought of Henslow and his contemporaries.

Jim Secord has shared with us his knowledge of Lyell in particular.

Richard Stow has transferred e-mail images into usable portraits.
Hugh Torrens was most helpful in preventing our ignorance of Sedgwick and the early geological controversies from being transferred to the book.
David Turner, Churchwarden of Hitcham and local historian, has given us much valuable help with Henslow's parish history.
Richard West, 12th Professor of Botany in Cambridge (retired), has provided the information we needed on 'celts' and the Hoxne remains studied by Henslow in his later years.

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Two people deserve our very special thanks. Caroline Burkitt who has taken the often messy, handwritten text produced by S.M.W. and turned it, through many drafts, into an impeccable typescript; and S.M.W.'s wife Lorna, who has provided with cheerful equanimity innumerable helpings of tea and home-made cakes, and will have compiled when our book is published the sort of index that all good books need.

It is inevitable that we shall find too late that we have omitted to thank some people who have significantly helped in preparing the book. We can only ask to be forgiven, and assure them that we have appreciated their help.

A final word of thanks to the staff at Cambridge University Press, in particular Maria Murphy, Stephanie Thelwell and Jane Bulleid, who have been tolerant and positive even through delays and postponements. We hope they finally feel it was worth the effort.

E.A. Stow
S.M. Walters
30.9.2000