# Joint Press Release by The Linnean Society of London and The Charles Darwin Trust 23rd May 2014

The theories of evolution by natural selection of Charles Darwin and Alfred Russell Wallace were first launched to scientists and others and became available for open debate when the texts of their written summaries were delivered jointly at the Linnean Society of London (LSL) in 1858. LSL and the Charles Darwin Trust (CDT) announced today at the LSL's Anniversary Meeting that they had agreed to bring together their collections of Darwin and Wallace through the formation of a new Trust, with the LSL as its sole Trustee. The joint collection will be held in Burlington House for educational and research purposes and will be known as the Darwin and Wallace Collection. LSL will also assume responsibility for continuing and further developing the *Darwin-Inspired Learning* activities which have been the long-term objective of CDT.

The successful research into the structure of the human genome carried out in Britain and the USA following the announcement in 1953 by Crick and Watson of their discovery of DNA had led by the 1980s to a much greater and wider understanding by both scientists and the general public of the importance of Darwin's work. Darwin had lived and worked at Down House for forty years after its purchase in 1842, employing its gardens and the surrounding Kent countryside as his open laboratory for observation, experimentation, and questioning and thinking about evolution, natural selection and biodiversity. Down House and its environment was critical to the way in which Darwin initially confirmed his theories and on the basis of which he subsequently checked that his theories applied worldwide.

During the 1990s Stephen Keynes, a great grandson of Charles Darwin, and Randal Keynes, his nephew, had been participants in the campaign to save Down House. They reached the conclusion that Darwin's approach to science and experimentation could provide a model for science teachers to follow and that Darwin's writings and research during the forty years he lived at Down House could provide an exciting subject and theme for teachers and their pupils.

Stephen founded CDT in January 1999, with the strong support of the LSL, the Royal Society, Cambridge University Library, and English Heritage, each of whom nominated a trustee for the initial Board. The Board has included Sir Patrick Bateson FRS, Professor Steve Jones FRS and Sir Paul Nurse, currently President of the Royal Society. Sir Paul eventually retired as a Trustee and became the fourth member of CDT's Science Advisory Council, joining Astronomer Royal, LordRees of Ludlow OM, FRS, Professor James Watson KBE(Hon), ForMemRS and Professor E.O. Wilson.

Professor Michael Reiss at the Institute of Education had previously provided advice to Stephen Keynes on the creation of Continuing Professional Development Courses for teachers of biology. In 2002 Karen Goldie-Morrison was appointed as CDT's Executive Director in order to establish a Team of part-time experts in science learning and to develop a programme of courses for each module of the science curriculum. By 2012, CDT's *Darwin- Inspired Learning Courses* had been developed for modules covering each age group up to 16, and they had been adapted for presentation on CDT's website. However, by then, further fundraising for completion of the over-16 module had become extremely difficult to secure and Karen Goldie-Morrison retired in March 2013.

It had long been apparent to Stephen Keynes that LSL's objectives in relation to science and research and its educational ambitions overlapped those of CDT and that its activities and their further development could be of interest to LSL. Moreover, Stephen's brother, Quentin Keynes, during his lifetime had built up an exceptional collection of manuscripts and publications, together with some notable Wallace items. Quentin had bequeathed his collection to CDT and on his death in 2003 it came to the Trust. A number of items of special value to scholars were placed on deposit at Cambridge University Library, but unfortunately the rest of the collection has not been accessible to the public since then, as CDT does not have premises where it can be shown. Stephen Keynes saw that if the major items of interest in this collection were now presented to LSL to join its own existing relevant collections, they could form together an important and accessible Darwin and Wallace

Collection for display to the public and for educational and research purposes at Burlington House. This is now being achieved.

Michael Reiss has offered to continue to provide advice in relation to LSL's educational activities, and other former members of CDT's education Team, led by Emma Newall, have also offered their expertise to be drawn upon by LSL. Led by Dr Carolyn Boulter, the CDT Team have already developed three units for A-Level teaching as part of a post-16 biology module and these prototype resources are now being taken forward by the LSL's own education Team and will be available for teachers early in 2015.

CDT will continue as a small Registered Charitable Trust with the responsibility for some retained assets which are on loan to other institutions. It will also pursue education and research projects, including an academic study on *Darwin-Inspired Learning* which will be published in the summer of 2014. CDT is sponsoring Emma Newall's Doctorate in science education which includes for publication a case study on CDT as an educational charity. Emma will continue her research, focusing on the teaching and learning of evolution and genetics.

**About The Linnean Society of London (LSL)**

**Who we are**

- **A Society** that embraces the entire sweep of the **natural world**, encompassing science, history and art
- **A Fellowship** that ranges from leading professional scientists to amateur naturalists, artists and historians
- **An historic institution** with a modern focus on biodiversity, evolution, taxonomy, science policy, conservation and sustainability.

**What we do**

- **Publish** three academic journals and other quality publications
- **Host meetings**, conferences and events for scientists and the general public, including free lunchtime and evening talks
- **Produce free education resources** from primary school to tertiary level and beyond
- **Award grants and medals** for excellence in biological research
- **Collaborate and communicate** with the scientific community, government and international organisations to address issues facing the natural world

**What we have**

- **A world renowned library and collection**s of plant and animal specimens, books, letters, portraits and art including items collected by some of history's most famous scientists
- **A network of specialists**: biologists, botanists, zoologists, microbiologists, mycologists

**Where we came from**

- **Founded in 1788,** we are the oldest existing society of natural history, and are based in the cultural centre of Burlington House, Piccadilly, London
- Named after the great Swedish naturalist, **Carl Linnaeus** who created the binomial naming system (genus and species) for biological classification now used throughout the world. Linnaeus is known as the father of modern natural history and the **prince of botanists**
- At the heart of many scientific and cultural developments relating to our understanding of the natural world, most notably, **Charles Darwin's and Alfred Russell Wallace's epoch-making papers on evolution by natural selection** were first read at a meeting of the Society

The Linnean Society is proud of its past, but is equally enthusiastic about its future and is keen to embrace naturalists of all descriptions

# FURTHER INFORMATION ABOUT THE EDUCATIONAL TARGETS OF THE PART-TIME TEAM OF EXPERTS IN SCIENCE EDUCATION WHICH WAS FORMED BY THE CHARLES DARWIN TRUST (CDT)

**CDT's purpose was to employ Charles Darwin, the person, scientist and Victorian gentleman, his house, gardens and the little-changed countryside at Downe* as an inspiration for teaching and learning about science and the natural world.**

**AIMS OF THE TRUST:**

- To use *Darwin-Inspired Learning* to promote excellence in the teaching of science
- To promote a real understanding of the natural world to ensure the survival of biodiversity and life on earth
- To enhance the understanding of Darwin's historical and contemporary significance
- To improve and extend science literacy and the understanding of science.

The Trust bases its materials for teaching and its Continuing Professional Development (CPD) courses on research into Darwin's own writings and those of his contemporaries and collaborators and on current scholarship. Taking as its context Darwin's life, work and influence, the Trust has developed an inspiring approach to teaching and learning in science and has called this ***Darwin-Inspired Learning***.

***DARWIN-INSPIRED LEARNING*:**

**1.** It stimulates a sense of place and direct engagement with the natural world, which was so well provided for Darwin by the environments of Downe* and other locations where he worked, and which demonstrate the value of employing local environments that are accessible to students and their teachers

**2.** Importance is placed on:

- Active learning through direct experiences and questioning, solving problems, and dialogue between teachers and pupils, and between pupils themselves
- Teaching that engages critical and creative thinking about how scientists work

**3.** It encourages interdisciplinary studies with Darwin as the context between science, literature, writing, history, religious studies, geography, horticulture, dance and drama, design and technology, numeracy, music and art.

This is achieved through:

- Using Darwin's ways of working and investigating
- Using Darwin's 'big ideas' about how nature works
- Understanding how science and scientists use Darwin's ideas in their work today
- Using stories about Darwin, the places where he worked and the things that he studied
- Working with expert groups in the arts and humanities
- Programmes for pupils and teachers.

*Note: the original spelling of the village was Down – hence Down House. In the mid-nineteenth century when the spelling of the village's name was changed to Downe, Charles Darwin refused to alter the name of his home – thus Down House at Downe.

This approach produces:

- young people who are engaged with the natural world as critical, imaginative investigators, who find science exciting, who have the ability to communicate their findings to others and who want to continue their studies
- teachers inspired by *Darwin-Inspired Learning* to become more effective and reflective
- a new generation of teachers and young people who are proud of the heritage that Charles Darwin gave to the world and who understand its significance.

## WHY IS CDT's *DARWIN-INSPIRED LEARNING* NEEDED?

The Team's teaching has been built on the basis of CDT's objective of achieving a passion for science in education and learning, employing observation, his experiments, his stories, his ways of working, and his questions. *Darwin-Inspired Learning* is the pedagogy of inquiry developed by our Team to support both teachers and students, to encourage engagement with the natural world and to stimulate an interest in the wider study of biology. The Linnean Society's education objectives are aligned with those of the Trust and it is a logical successor for taking on *Darwin–Inspired Learning* and for using the Trust's tried and tested approach to learning.

A key focus of the Trust has been to restore science learning experience outside the classroom, as exclusive employment of classroom work can have had a detrimental effect on children's physical and mental well-being. Experiencing nature out-of-doors can stimulate pupils' interest in biology and support them while they are developing a better understanding of biodiversity, ecosystems and conservation. As a result, they may be encouraged to take up careers in this area: this could be an important outcome, particularly in the face of shortages of naturalists and of taxonomists, in particular.

A government report in 2006 high-lighted the overall benefits for pupils when given the experience of learning outside their classrooms:

> *Out of the classroom experiences are often the most memorable learning experiences, help us to make sense of the world around us by making links between feelings and learning. They stay with us into adulthood and affect our behaviour, lifestyle and work. They influence our values and the decisions we make. They allow us to transfer learning experienced outside to the classroom and vice versa.*
>
> (The Learning Outside the Classroom Manifesto, DfES 2006)

CDT has recognised that some teachers find it difficult for a variety of reasons to take their classes out of doors. So CDT's courses seek to help teachers overcome existing barriers through working with them and with their pupils in a safe but exciting and thought-provoking way and to encourage student's direct engagement with the natural world. CDT provides resources that meet the requirements of the national curriculum, GCSE and post-16 courses. Many examination specifications expect pupils to carry out independent studies for which they have to collect and analyse data. Field-work study in the natural world over a prolonged period and in great breadth and depth, allows students the opportunity to investigate and bring together data just as Darwin did.

In summary, many teachers need support in developing:

- access for their schools to appropriate sites
- their own enthusiasm for the study of nature to enable them to pass this on to their students
- the skills to achieve their pupil's out of doors learning
- the breadth of their biological subject knowledge

**CDT's Team of *Darwin-Inspired Science Learning* Experts includes:**

Dr Carolyn Boulter, Dr Sue Johnson, Emma Newall, Dr Dawn Sanders, Dr Jane Maloney and Kim Biddulph