



## **Fourteenth Ischia Summer School on the History of the Life Sciences Geographies of Life**

**27 June – 3 July 2015**

**[www.ischiasummerschool.org](http://www.ischiasummerschool.org)**

### *Theme Description*

Life's diversity is today an integral part of the various climates and locales our planet has to offer. Herodotus wrote of the stations of the earth's life forms, and since Aristotle the sea has attracted naturalists as a source of wonders that confound land-based classifications as well. Yet understandings of the spatial distribution of life have changed radically over time. In the ancient world, land and sea formed separate spheres in a structured cosmos of "natural places," each of which possessed its properly adapted inhabitants. For Aristotle, seals were "monsters," because they show all the main features of land animals, but live in the wrong place. Living beings could be in the right place or out of place, they could inhabit temperate and marginal (hot or cold) zones, but the patterns were not understood in terms of geographic distribution, measured against a grid of latitude and longitude.

Early modern voyages of exploration added this geographical dimension. Sea and land collapsed into one "terraqueous globe," and naturalists began to realize that identical climes could harbour very different fauna and flora. At the same time, the concept of species acquired temporal and spatial dimensionality, with species now understood as physical and physiological systems in their own right, rather than forms that matter could take on. Only in the nineteenth century, however, did the spatial distribution of organisms become the subject of a dedicated field of research, biogeography. Alexander von Humboldt's attempt to derive quantitative biogeographic "laws" led to the realization that the distribution of species did not simply follow the physical environment as its parameters varied with latitude, altitude, and geological conditions, but was the contingent result of migrations, displacements, and hybridisations. Evolutionism, that is, depended not only on the discovery of "deep time" (itself a spatial metaphor), but also on the temporalisation and dynamisation of spatial relations. The consolidation of nation states, as well as colonial and imperial projects, was the political correlate of this development, which was equally visible in the human sciences, with medical topographies feeding into epidemiology, and racial typologies into anthropology and demography.

From the late nineteenth century, when the sea also acquired layers of depth and a detailed topography, an international network of field stations dedicated, for example, to marine biological and high-altitude research facilitated *in situ* investigations of living organisms and the study of human bodies under extreme conditions. Colonial and imperial surveys, the promotion of agriculture and fisheries by nation states, epidemiology and population genetics, the integration of meteorology and hydrology into climatology, and finally, the use of radioactive isotopes and satellite data in tracking life on a global scale, have turned geographic space into an integral and essential component of contemporary understandings of life on earth. If the nineteenth century saw the dynamisation of geographic space, the twentieth century saw its experimentalisation, the turning of landscapes into 'labsapes', as Robert Kohler called them.

Historians have studied the geographic dimension of the life sciences from a diversity of perspectives, though usually with a focus on particular fields: natural history in the context of exploration and empire, biogeography, oceanography, ecology, epidemiology, demography and medical geography. This summer school adds perspectives from the spatial turn in the history of science, medicine and technology, including studies of transregional and global exchange networks, often taking inspiration from imperial studies, oceanic histories, and world history. It also takes account of spatially organized inscription devices, including the lists, catalogues, maps, statistical records, and databases that can synoptically present data gathered from various places.

It is timely to explore the changing relationship between humans and the spatially organized environment also because, confronted by problems of disease control, food security, conservation biology, and climate change, the biosciences themselves increasingly study life as a complex, spatially distributed phenomenon, be it on the micro-scale of biofilms and gut floras, or the macro-scale of the biosphere. This may represent a reawakening after a period when molecular biology dominated, or developments of research programmes what were always alternatives to the molecular paradigm, or the opening up of new spaces for research by the very molecularization of life. At the same time, human geographers have turned their attention to the life sciences as a phenomenon to be addressed with their own tools. Though such concepts as Friedrich Ratzel's *Lebensraum* have a long (and problematic) history, geographers have begun only recently to study the production of biological knowledge in its own right. Often taking spatial metaphors in the life sciences as a starting point – "boundary," with its prominent place in immunology, is a particular telling example – they are exploring the co-production of spatial relations through interactions between humans, both experts and laypeople, and other organisms. The summer school on "Geographies of Life" thus addresses a subject of urgent relevance to the evolving relations of humans with our natural and social environments, and will add historical depth to attempts to understand the roles of the life sciences in changing those relations.

We gratefully acknowledge the support of the Wellcome Trust, the Max Planck Institute for the History of Science (Berlin), the Stazione Zoologica Anton Dohrn (Naples), and the journal *History and Philosophy of the Life Sciences*.

## *Structure and Online Resources*

**Lectures** will last for up to 30 minutes, leaving at least 30 minutes for discussion.

**Seminars** will focus on pre-circulated texts (see **readings list** at <http://www.ischiasummerschool.org/readings>). Participants are allocated to individual seminar groups (see programme) in order to prepare the seminar in consultation with the seminar leader. You are encouraged to bring in the expertise from your own projects to shape the discussion. Often, this takes the form of preparing short informal contributions (2–5 mins) to kick off discussion, but more collective and interactive ways of engaging with the reading materials – like setting questions and/or exercises for group work – are more than welcome.

In order to access **reading materials** you need to log in to the summer school's website (you will have received login details from our web administrator). Once you have done so, a box with a link to a .zip archive of .pdf files (about 50MB in total) will be visible on the right hand side, or bottom, depending on the device you are using. Do note that there are online resources mentioned in the reading list that are *not* included in the .zip archive; and that, conversely, not all the pages contained in the reading materials need to be read. So do check against details in the readings list.

The **discussion forum** (<http://www.ischiasummerschool.org/forum/>) is meant for announcements and to facilitate discussion. The Forum is publically visible, but only Ischia participants can post new discussion topics. You have all been allocated to seminar groups, and we suggest that you create a discussion topic for each of these groups in order to prepare the seminars. You also have the possibility to 'subscribe' to the 2015 Announcements category in order to receive emails notifying you of new postings to the forum. We encourage you to present yourself and your work under the '2015 Participants' topic, even if just providing a link to your homepage. There is guidance on how to use the forum, and a FAQ page, which may solve your questions; otherwise contact the web administrator.

*Programme*

**Saturday, June 27**

16:30 – 20:00 Registration and welcoming reception at Villa Dohrn

20:30 Dinner at Villa Ciccio

**Sunday, June 28**

09:00 – 09:45 Welcome and introductions

09:45 – 10:30 **Introduction to the theme, Geographies of Life (Janet Browne)**

10:30 – 11:30 **Session 1 (Lecture Juan Pimentel)**  
Geographies of novelty and difference: Life before life in the early modern Iberian World

11:30 – 12:00 Coffee

12:00 – 13:00 **Session 2 (Seminar Juan Pimentel)**  
A Peruvian tableau of natural history (1799): Some visual devices to display diversity  
Oana Baboi, José Beltrán, Dorit Brixius and Sebastian Kroupa

13:00 – 16:00 Lunch

16:00 – 17:00 **Session 3 (Lecture Sujit Sivasundaram)**  
From the winds of the Bay of Bengal: Science, empire and self

17:00 – 17:30 Coffee

17:30 – 18:30 **Session 4 (Seminar Sujit Sivasundaram)**  
Coral islands and indigenous and exogenous histories of the Pacific Ocean  
Catarina Madruga, Daniel Simpson and Alistair Sponsel

18:30 – 19:30 **Open Discussion**

20:30 Dinner at Villa Ciccio

## **Monday, June 29**

- 09:00 – 09:30    **Session 5 (Intervention Staffan Müller-Wille)**  
Linnaeus: A flat world with four corners
- 09:30 – 10:30    **Session 6 (Lecture Nils Güttler)**  
Mapping plant life: From Humboldt to early ecology
- 10:30 – 11:00    Coffee
- 11:00 – 12:00    **Session 7 (Seminar Nils Güttler)**  
Distribution mapping: Scales and approaches  
Yildirim Duygu, Kaan Üçsu and Robert-Jan Wille
- 12:00 – 16:00    Lunch and time for activities
- 16:00 – 17:00    **Session 8 (Lecture Raf de Bont)**  
Resident science: Field stations and their environment, 1870–1930
- 17:00 – 17:30    Coffee
- 17:30 – 18:30    **Session 9 (Seminar Raf de Bont)**  
Emplacing field science  
Fausto Campos, Luísa Reis Castro, Adreissa Pérez-Michel and  
Katharina Steiner
- 18:30 – 19:30    **Open Discussion**
- 20:30             Dinner at Villa Ciccio

## **Tuesday, June 30**

### **NAPLES DAY**

Morning: Visit to the Stazione Zoologica (exact timetable tba)

Afternoon: Free time in Naples

**Wednesday, July 1**

- 09:00 – 09:30 **Session 10 (Intervention Janet Browne)**  
Title tbc
- 09:30 – 10:30 **Session 11 (Lecture Lynn Nyhart)**  
Practicing scales: Animal geography and ecology, c. 1900
- 10:30 – 11:00 Coffee
- 11:00 – 12:00 **Session 12 (Seminar Lynn Nyhart)**  
How to read review literature; or, Exercises in cosmopolitanism  
Elena Canadelli, Felix Lüttge and Kathryn Schoefert,
- 12:00 – 16:00 Lunch and time for activities
- 16:00 – 17:00 **Session 13 (Lecture Joe Cain)**  
Synthesis period in evolutionary studies
- 17:00 – 17:30 Coffee
- 17:30 – 18:30 **Session 14 (Seminar Joe Cain)**  
Geographies of evolutionary studies, 1930s and 1940s  
Petter Hellström, Brian Tyrrell and Marta Velasco
- 18:30 – 19:30 **Open Discussion**
- 20:30 Dinner at a local restaurant

## Thursday, July 2

- 09:00 – 10:00 **Session 15 (Lecture Angela Creager)**  
The atom and the ecosystem
- 10:00 – 11:00 **Session 16 (Seminar Angela Creager)**  
Radiotracers, nutrient cycling and the ecology of pollution  
Leah Aronowsky, Melissa Charenko and Laura Martin
- 11:00 – 11:30 Coffee
- 11:30 – 12:30 **Session 17 (Lecture Helen Rozwadowski)**  
The three-dimensional ocean: Can categories of ocean space  
frame histories of the life sciences?
- 12:30 – 15:30 Lunch
- 15:30 – 16:30 **Session 18 (Seminar Helen Rozwadowski)**  
The history of the life sciences in the three-dimensional ocean  
Antony Adler, Susana García and Erika Jones
- 16:30 – 17:00 Coffee
- 17:00 – 18:00 **Final Discussion (Chair: Nick Hopwood)**
- 20:30 Dinner at Villa Ciccio

## Friday, July 3

Departure

Ciao – Arrivederci

Janet Browne  
Christiane Groeben  
Nick Hopwood  
Staffan Müller-Wille