Interaction networks and trait evolution

Zürich, Switzerland | 1-4 July 2019



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43rd New Phytologist Symposium:

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Scope

Interactions are ubiquitous in nature and, to a large degree, shape the evolution of biological diversity. As a key example in many ecosystems, plants interact with a range of partners, ranging from mutualistic microbes, pollinators, and seed dispersers, to antagonistic herbivores and pathogens. A range of different traits, such as flowers, fruits and their signals, or the multitude of defence traits plants use to contain their enemies, are of key importance in these interactions.

Selection is a key process because it links extrinsic (ecological) factors that drive evolutionary change to the intrinsic (genetic) factors that ultimately define evolutionary trajectories. Mechanisms causing selection in nature are little understood and usually treated as a 'black box' in field studies. Selection in nature is almost universally shaped by a network of interacting organisms.

This diversity of interactions has only relatively recently been given appropriate consideration, in the form of network studies that observe and characterise the networks formed by interacting organisms in nature. Combining network studies with selection analysis and other evolutionary tools forms a sort of missing link between ecology and evolution; understanding how networks shape selection is an exciting prospect because it will make selection more predictable in nature, and close a major gap in our understanding of how ecology drives evolution.

Format

The symposium will take place over four days at the University of Zürich, in Zürich, Switzerland. There will be dedicated time for discussions, poster presentations, selected talks, a conference dinner and a field trip.

Confirmed speakers

Marcelo Aizen Universidad Nacional del Comahue, Argentina

Jordi Bascompte University of Zürich, Switzerland Judith Bronstein The University of Arizona, USA Diane Campbell University of California, Irvine, USA José María Gómez Reyes Estación Experimental de Zonas Áridas (EEZA-CSIC). Spain

Catherine Graham Swiss Federal Research Institute WSL, Switzerland

Pedro Jordano Estación Biológica de Doñana (EBD, CSIC), Spain

Toby Kiers Vrije Universiteit, Amsterdam, the Netherlands

Shoko Sakai Kyoto University, Japan Florian P. Schiestl University of Zürich, Switzerland Sharon Strauss University of California, Davis, USA John N. Thompson University of California, Santa

Anton Pauw Stellenbosch University, South Africa

Jason Tylianakis University of Canterbury, New Zealand

Miguel Verdú Centro de Investigaciones sobre Desertificación (CIDE, CSIC), Spain

Organising committee

Florian P. Schiestl Jordi Bascompte

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