

Royal Holloway Travel Award Report

Waheed Arshad (School of Biological Sciences)



In my NERC-funded PhD project, I investigate aspects of diaspore heteromorphism, which is the production of two or more distinct types of fruits or seeds by a single plant. Part of my research involves exploring the fruit and seed dispersal strategies of *Aethionema arabicum* (“stone-cross”), a basal member of the cabbage (Brassicaceae) family.

I was delighted to have been awarded the RHUL Travel Award last March, to present my work at The 9th International Plant Biomechanics Conference in Montréal, Canada. Plant biomechanics is the study of plant structures and functions by making use of concepts and methods from mechanics; this interdisciplinary research field is not new, but dates back to studies of wood and the impressive stature of trees in the 1700s. It is underpinned by the fact that mechanical forces are an inseparable feature of plant interactions with their environment.

The five-day conference was held at McGill University, the oldest university in Montréal and one of just three English-language universities in Québec. The diverse scientific programme covered sessions in:

- cell-wall and tissue mechanics
- mechano- and gravi-sensing
- ecological and evolutionary biomechanics
- applied biomechanics and biomimetics
- pattern formation and morphogenesis.



My talk on the “Dispersal biomechanics and adaptation mechanisms in the dimorphic fruits and seeds of *Aethionema arabicum*” was accepted and chosen for the “Ecological and Evolutionary Biomechanics” session.

The 9th International Plant Biomechanics Conference was the perfect platform to share my recent findings, due to be published shortly. I was able to think about new strategies to approach my experimental design, and contemplate the bigger picture in the context of plant biology. Presenting at such a prestigious and internationally-recognised meeting also allowed me to further develop my communication skills, and receive valuable input about my work. I formed useful contacts across various biomechanics labs in Europe, some of whom I will re-

encounter at future meetings. I was also thrilled to meet the eminent leaders in the field, names of which I was only familiar from high-impact papers and textbook references.

As with all successful conferences, the excursive element was an important one! The excursion was to the Montréal Botanical Garden (Jardin Botanique de Montréal), founded in 1936 by Frère Marie-Victorin, one of Canada's renowned botanists. The garden comprises 75 hectares (190 acres) and is considered one of the most important botanical gardens in the world. Particular highlights included the thematic greenhouses, the Japanese Garden, and the 40-hectare arboretum with its unique collection of trees and shrubs.



To conclude, receiving the RHUL Travel Award provided a strong platform from which I could showcase quality research from the School of Biological Sciences. I am extremely grateful for the grant, and I urge any current Royal Holloway student who is seeking research-related travel support to apply for the Award next year.

