JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/ Conference Title:	13th Congress of the European Society for Evolutionary Biology
Travel Dates:	20th August – 25th August 2011
Location:	Tübingen, Germany
Group member(s):	Matthew Hartfield
Aims:	1) Present a talk on my PhD research "Interference amongst new mutations, finite structured populations, and selection for sex" 2) Attend conference talks and poster presentations 3) Interact with other evolutionary biologists to discuss research

OUTCOME (not less than 300 words):-

After receiving a generous award from the James Rennie Bequest, I was able to attend the 13th Congress of the European Society for Evolutionary Biology (ESEB), which this year was held in the picturesque medieval university town of Tübingen. The ESEB meetings provides one of the biggest gatherings of evolutionary biologists in Europe, with around 2000 delegates from all around the globe discussing their work over four frantic days. As such the conference proved an invaluable opportunity for this young scientist to interact with the scientific community at large.

Due to the generality of the congress, talks were divided over nine parallel sessions each day. This meant that a large range of topics could be covered, but conversely also made it tricky to decide which symposia to attend, as a large number of intriguing talks tended to overlap! Each session covered one of thirty issues of interest to evolutionary biologists, with themes ranging from the effects of climate change on evolution, natural and sexual selection affecting speciation, to the study of fossils. As such there was always a wide range of fascinating subjects to choose from, all providing reports from the cutting-edge of science.

Each day kick-started with a series of plenary talks, starting with Michael Siva-Jothy providing illuminating insights into the evolutionary responses to traumatic insemination in bedbugs. Not all plenaries were research-focused, however; the scientific philosopher Michael Ruse instigated an unusual discussion into the logical ideas underpinning evolutionary research. One highlight was the John Maynard Smith Prize talk, which this year was awarded to Rowan Barrett of Harvard University. By investigating populations of sticklebacks in the wild and the lab, he was able to disentangle what environmental conditions stimulated the evolution of their characteristic armour-plated bodies.

On the third day I presented my work as part of the 'Adaptation in Large Populations' symposium, which aimed to unite theoretical and empirical research into illuminating some of the mechanisms that drive evolution in the wild. I always enjoy presenting my scientific work to a wider audience; this meeting was no exception, especially as it went smoothly and provided lots of stimulating discussion in the bar afterwards! I also felt honoured to be chosen to present my talk as part of a series of other insightful contributions. The symposium was headlined with invited talks from Nick Barton, who discussed how spatial populations affect the dynamics of selective sweeps, and Joachim Hermisson provided an introduction on how to model and detect genetic adaptation, which might have arisen from existing genetic variation (as opposed to arising from a new mutation).

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Every evening after the symposiums finished, the focus of the meeting switched to the large poster sessions. The congress organizers went to great lengths to encourage attendees to seek out new ideas; this was aided by giving every poster presenter a bottle of wine to share with interested delegates. Some personal highlights for me included a poster by Ben Evans on measuring deleterious mutation accumulation in experimental populations of *S. pneumoniae*, which is an important mechanism that could drive clonal species to extinction, and Robin van Velzen introduced the baffling enigma as to why diversification rates in two related genera of butterfly are greatly different.

After the long days there was necessary time for relaxation, and for taking in the classic scenery of the university town. Unlike other large meetings, there were plenty of opportunities for potentially nervous PhD students to fit in, with events including a tour of the town and the opportunity to meet a 'silverback' for dinner. The latter did not mean that students met a great ape, but was instead the name given to eminent scientists, who were placed in a unique position to dispense their wisdom to younger researchers. On the final day attendees were treated to a final banquet dinner, held in the beautiful grounds of the Bebenhausen monastery. The stunning architecture provided a suitably grandiose backdrop with which to finish the congress.

Attending the 13th ESEB meeting was a fantastic opportunity for myself to mingle amongst the European evolutionary community, and to discuss new ideas with some of the most distinguished people in the field of evolution. The intellectual community provided a stimulating and friendly environment with which to explain science with like-minded people, and as such I never felt overwhelmed, which can easily happen at other large conferences. As such I am grateful to the James Rennie Bequest for providing funding that helped me to travel.

View of Tübingen from the Neckarbrücke