

George C. Eickwort Student Research Award

This award is given in memory of George Eickwort and is designed to recognize exceptional research and scholarly activity by students in the field of social insect biology. The award consists of a certificate, an honorarium, and a one-year subscription to *Insectes Sociaux*. This year's Selection Committee consisted of Phil Starks, Andy Suarez, Heather Mattila, Ulrich Mueller and myself (Kenna MacKenzie). Many thanks to the committee members for their assistance making a difficult decision.

General Statement

As always, the nominees for Eickwort Student Award were outstanding and selecting one individual was very hard. We felt that our two top nominees both deserved recognition and that either individual was deserving of the award. Thus, we would like to recognize a runner-up - *James Waters, PhD (2012) from Arizona State University* in Tempe. The central focus for his PhD research was scaling of social organization and metabolism with group size in social insect colonies, using the California seed-harvester ant, *Pogonomyrmex californicus*, as his model subject. Studying under Jon Harrison, he used an integrative approach, combining frameworks from metabolic physiology and network analyses to demonstrate that social insect colonies show similar metabolic scaling relationships as whole organisms. In addition to his thesis work, he has been involved in other exciting collaborations and contributed broadly to ASU and the broader community, and has recently been awarded a James S. McDonnell Postdoctoral Fellowship for complexity research which he has taken to Princeton University. As one of his references put it "He is an exemplar of the breadth of impact social insect biologists can make to biology." Our congratulations, James!

The North American Section of the International Union for the Study of Social Insects is proud to announce that **Adrian Smith, PhD (2011) from Arizona State University** was selected as the recipient of the **2012 Eickwort Student Award**. Adrian was a student of Jürgen Liebig and Bert Hölldobler at ASU. For his graduate research, Adrian explored reproductive division of labor in the ant, *Aphaenogaster cockerelli*. Combining natural history, behavioral, chemical and genetic approaches, he elucidated proximate mechanisms underlying division of labor in this ant species. He was the first to identify the cuticular hydrocarbon signals involved in worker policing behaviors (egg eating and physical aggression) and demonstrate experimentally that these chemicals help maintain reproductive division of labor. He used genetic analyses to confirm the efficiency of reproductive regulation by *A. cockerelli*, showing that queens produce the great majority of males. As one of his references put it "Adrian has unraveled a totally new policing system in an evolutionary advanced ant species." The significance of his research findings was highlighted in the journal Nature and featured by numerous media outlets including National Geographic News and National Public Radio. He has published 10 scientific articles (seven as first author) in such journals as Behavioral Ecology, Current Biology and Naturwissenschaften. Adrian Smith is currently a Postdoctoral Fellow at the University of Illinois, Urbana-Champaign with Andy Saurez and Larry Hanks working on chemical signalling in *Odontomachus* ants and Cerambycid beetles.

Not only a gifted scholar in social insect biology, Adrian also is committed to outreach – sharing his fascination and enthusiasm with insects to both science and non-science undergraduates, as well as the general public. After holding several science teaching assistantships, he began teaching biology to undergraduate design students in The Design School at ASU which led him to develop and lead a new course titled *Biologically Inspired Design*. In addition, he was a co-organizer with Jennifer Fewell of an NSF conference on *Social Biomimicry: Insect Societies and Human Design*.

Adrian is noted “an exceptional graduate student... original and meticulous in his analytical and experimental work” and “a gifted young scientist...and knows to ask the right questions in his research” by one of his references. The Award Committee agrees and is very pleased to announce that Adrian Smith is the recipient of the 2012 Eickwort Student Award.