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Department of Biological Sciences



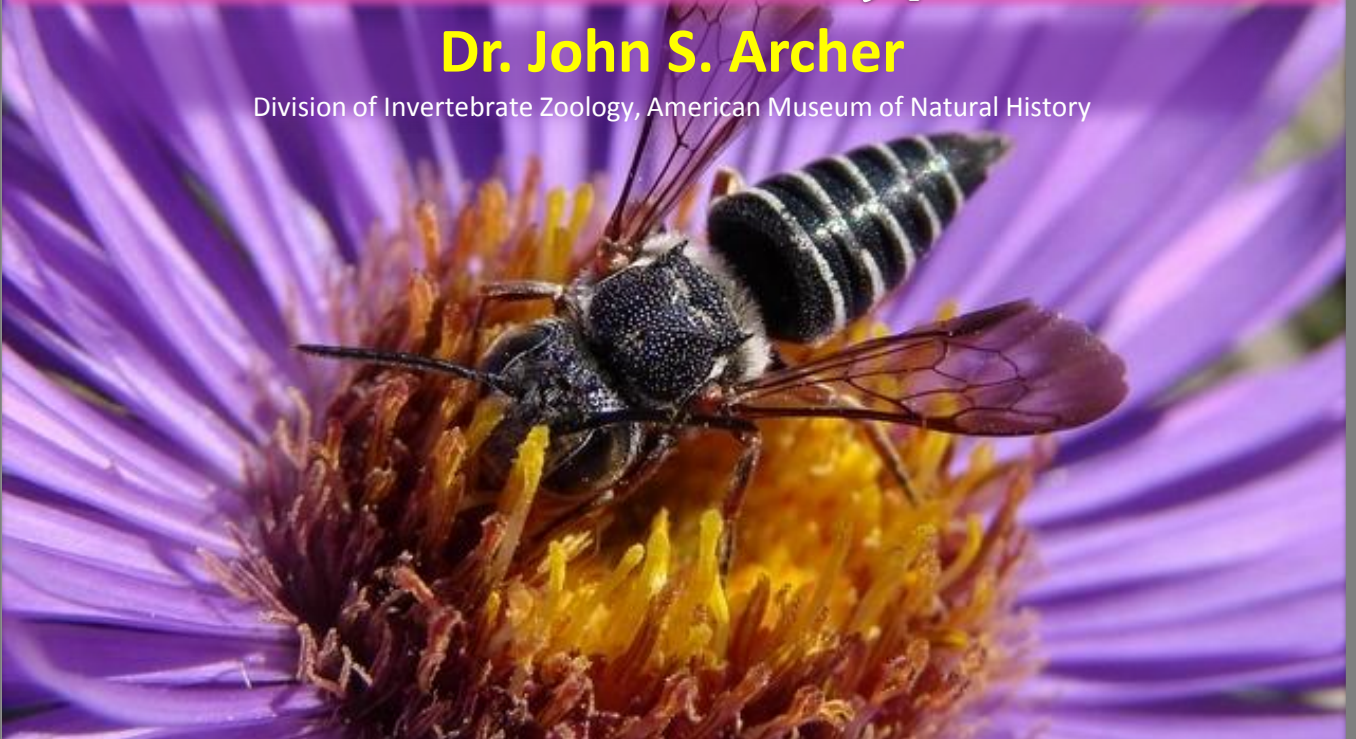
Monday, 30 April 2012 | 4pm | DBS Conference Room 1

Hosted by Professor Rudolf Meier

Exploring global diversity and status of bee pollinators using specimen databases linked to web-based biodiversity portals

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Bees are the most important pollinators in most ecosystems so it is essential to understand their diversity and response to global change.

Given well-publicized declines in honey bees and other pollinators, comprehensive and accessible data on bees have been recognized as an urgent research priority. This talk will focus on 1) assembly of taxonomic and ecological data for bees through collaborative web-based specimen databasing across many institutions and development of linked web-based biodiversity portals and 2) analyses of these data to investigate the response of bee species and communities to phenomena such as global warming and urbanization. The incredible diversity of bees (>20,000 species are known, far more than birds and mammals combined) will be introduced and illustrated with images of species found in Singapore. The speaker will describe his fieldwork in diverse ecosystems including tropical rainforests, deserts, and cities, and the resulting new species and life history data discovered and described. Then the collaborative specimen databasing project will be presented, including methods of data capture and of web integration and display on Discover Life and other linked biodiversity portals. Research outcomes from the database to be discussed include quantitative analyses of the response of bees to climate change, of statistical changes in bee faunas including declines of sensitive native species and increases in invasive species, and of the landscape ecology of crop pollinators. Finally, long-term uses of the assembled data by scientists, policy-makers, and the public will be considered.