

Beetlemania: The joy of dung

May 9 2011, By Cath Harris



The dung beetle *Phanaeus endymion*

Darren Mann likes nothing better than getting his hands dirty. He's at his happiest in the field with magnifying glass and notebook, delving into a fresh pile of poo. He is an insect expert and a specialist in dung beetles, some of nature's best recyclers. "They're an amazing group of insects," he tells us. "My life revolves around my girlfriend and insects. I work 10 to 12 hours a day and half the weekend, and when I'm not working I'm out collecting."

Darren is Assistant Curator for Entomology at Oxford University's Museum of Natural History [OUMNH]. He has just returned from Borneo where he and Dr. Eleanor Slade of the Department of Zoology and Oxford's WildCRU are involved in an innovative project to study the effects of logging on the various benefits provided by rainforests. Under the Stability of Altered Forest Ecosystems project [SAFE], whose sponsors include Borneo's Sabah Forestry Department and the UK's Royal Society, fragments of forest are being left in an area to be felled

for palm oil. Dung beetles will be an indicator of the profusion of larger species in the rainforest areas that remain.

"Dung beetles are quite sensitive to habitat change and because they feed on dung they can be used as a surrogate for mammal abundance," Darren explains. "They're now one of the most popular groups used in ecological studies. We have the pre-logging data from Borneo and hope to go back to record any changes. It's such a cool project and a wonderful opportunity to track change over time."

There are more than 5,000 species of dung beetles inhabiting every continent bar Antarctica. Most belong to the sub-family Scarabaeinae and within that group, can be distinguished by their differing breeding behaviours: dwellers live in dung; rollers roll dung balls elsewhere; and tunnelers bury dung in situ. Females lay their eggs in the dung, which becomes food for emerging larvae. Some females must cling to dung balls as they are wheeled away from the main dung pile.

Dung beetles perform many useful roles, returning goodness to soil, dispersing seeds excreted by mammals and saving farmers huge sums by clearing fields of livestock manure. They were successfully imported into Australia between 1969 and 1984 because native beetles couldn't cope with the volumes of dung produced by introduced cattle.

Beetles are caught by setting small traps baited with faeces. They are removed for identification which can mean finding new species. Darren is credited with discovering several insect species new to science and has a dung beetle, *Copris manni*, named after him. He has published many papers and collected specimens in several countries including Costa Rica, Pakistan, Turkey and Namibia.

When he came to the Museum of Natural History in 1997 to interview for the post of collections' technician he was so convinced he'd be

overlooked for the job that he treated his first visit as a chance to marvel at some of the site's five million preserved insects. His passion won over the interview panel and he has won several promotions since. Darren is now responsible for insect collections some of which are centuries old. Currently he is providing specialist help to the charity Buglife, which is trying to establish the locations of Britain's four remaining oil beetles. He is also updating the UK guide that first inspired him as a schoolboy in 1986, *Dung Beetles and Chafers* by L Jessop. "Reading it was like an epiphany, one of those life-changing moments. I've been hooked on [dung beetles](#) ever since."

Darren says he was 'a really, really bad student' at school because so little interested him. "I didn't see the point in going because they weren't teaching me about insects." He forgot to attend an A level exam because he was too busy collecting. "I found a *Rhynchites cavifrons*, a really beautiful weevil," he recalls. He subsequently missed lectures, and turned down the chance of degree studies at Plymouth Poly, but years later still won a place on a postgraduate diploma in insect taxonomy at the University of Wales.

Darren's favourite beetle is tattooed on his chest. It is *Coprophanaeus lancifer*, the giant Amazonian carrion scarab beetle. The exoskeleton of a specimen looks down from a shelf above Darren's desk. 'I was asked at my Oxford interview whether I'd have the same passion for entomology in 10 years time. I do. I can stare at a beetle in a microscope for four hours and not get bored but I've never read a novel from start to finish; I'd much rather sit in a field and watch a bee pollinate a flower.

"I have to do natural history wherever I am. I don't understand how people can't do natural history or go out for a walk and not try to identify what they see.' Mounted police officers in Richmond Park did understand and once pulled up alongside Darren as he was busy 'dung beetling away.'"

He remembers the incident well: "I explained what I was doing and they burst out laughing. When I'm out collecting, some people look at me in disgust but most just think I'm a bit of a weirdo. I'm perfectly at ease sticking my hands in a pile of dung and I've never been ill. I think I'm pretty well inoculated against anything that's in there."

More information: www.safeproject.net/

Provided by Oxford University

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