

DUNG BEETLES: WHERE DID ALL THE POO GO?

(7) Dung beetles possess super strength and super smell, they can navigate using the stars and they have saved an entire continent from



Fossilized Dung Balls, photo by Victoria Sánchez

an environmental disaster. With all of this on their résumé, they seem like good candidates for being the superhero of insects. What do you think life right now would be like without them? Did prehistoric organisms benefit from the dung beetles' superpowers too? The fossil record shows that dung beetles lived at least 30 million years ago. However, since dung beetles are invertebrates lacking a skeleton capable of fossilization, the proof we have of their existence comes from the huge tennis-sized dung ball fossils that prehistoric dung beetles left behind. These mega dung balls came from dung beetles that were cleaning up the poop of the megafauna (giant mammals) long before they were cleaning up our poop.

Article Questions

- 1) Besides poo, what other terms used in this article to mean the same thing?
manure(1), dung(1), excrement(1,4), feces(4), scat(5), poop(7)
- 2) Another term for dung eater is coprophage(1).
- 3) What problem did Australia have due to the introduction of so much livestock to their country? How did they solve this problem?
The livestock produced manure that was not being eaten by native dung beetles so the manure began to pile up.(4) Australia imported non-native dung beetles from South Africa and Europe that ate the livestock dung.(1)
- 4) Why do dung beetles prefer herbivore dung as opposed to carnivore dung?
Herbivore dung contains more nutrients than carnivore dung because the herbivore digestive system is less efficient than the carnivore digestive system at extracting the nutrients out of food, leaving much of it in the dung.(4)
- 5) What do dung beetle larvae eat and how do dung beetles ensure that their offspring have a good supply of this food?
Dung beetle larvae eat dung and they are ensured a good supply of this when the female dung beetle lays her eggs inside of the dung.(2)
- 6) What can the dung beetle do that no other organism on Earth can do?
They can navigate using the Milky Way.(3)
- 7) What world record does the dung beetle hold?
Pound for pound, it is the strongest animal on Earth.(6)
- 8) What evidence is there of prehistoric dung beetles?
The evidence comes from fossilized dung balls of megafauna.(7)