

Gentle bilby had 'killer' ancestor

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Exceptional fossil - 20 million years old

(PhysOrg.com) -- The gentle rabbit-like bilby - Australia's stand-in for the Easter bunny - had an ancient relative that was a far more fearsome little beast, a new study has found.

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Although modern bilbies are mild-mannered creatures that eat mainly plants and insects, one <u>ancestor</u> 20 million years ago had the stout <u>skull</u>, muscular jaws and flesh-tearing teeth of a small but formidable predator,



according to a paper to be in the <u>Journal of Vertebrate Paleontology</u>.

The finding is based on an almost complete skull of the fossil marsupial, which has been named Galadi speciosus, discovered a team of University of New South Wales scientists at the Riversleigh World Heritage Area fossil site in northern Queensland.

"The preservation of the skull is exceptional - almost as good as for a modern animal - and this gives us a lot of information about Galadi's anatomy, relationships and probable lifestyle,' says Dr Kenny Travouillon, of the UNSW School of Biological, Earth and Environmental Sciences, who is lead author of the study.

"Features of the skull and teeth of Galadi show that it is a member of the same group of small marsupials including the modern bilby and bandicoots: they are found only in Australia and New Guinea and mostly weigh less than five kilograms."

Co-author Dr Robin Beck, from the American Museum of Natural History, points out that while Galadi probably weighed only about one kilogram, it appears to have been specialised to hunt for vertebrate prey.

"Compared to modern bandicoots, Galadi has a short snout and very robust skull, with big areas for the attachment of <u>jaw muscles</u>: it's the pitbull of the bandicoot world," says Dr Beck.

"In terms of overall skull shape, it's more like living carnivorous marsupials - such as quolls - which feed mainly on lizards, birds and small mammals, so we think Galadi probably had a similar diet."

Today, bilbies are found in Australia's western deserts, but Galadi and other members of its marsupial group appear to have been the dominant small predators in the rainforests that covered northern Australia 20



million years ago. Today, that niche is filled by a different marsupial group, the dasyurids, which include quolls, marsupial "mice" and the Tasmanian devil.

"We're looking at Riversleigh and other Australian fossil sites to work out exactly when and why this replacement occurred," says Dr Yamila Gurovich, another UNSW co-author of the study.

Provided by University of New South Wales

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