

New species of dinosaur discovered on Isle of Wight

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Artists impression of the dinosaur's final moments. Credit: Trudie Wilson

A new study by Palaeontologists at the University of Southampton suggests four bones recently found on the Isle of Wight belong to new

species of theropod dinosaur, the group that includes Tyrannosaurus rex and modern-day birds.

The dinosaur lived in the Cretaceous period 115 million years ago and is estimated to have been up to four metres long.

The bones were discovered on the foreshore at Shanklin last year and are from the neck, back and tail of the new dinosaur, which has been named Vectaerovenator inopinatus.

The name refers to the large air spaces in some of the bones, one of the traits that helped the scientists identify its theropod origins. These air sacs, also seen in modern birds, were extensions of the lung, and it is likely they helped fuel an efficient breathing system while also making the skeleton lighter.

The fossils were found over a period of weeks in 2019 in three separate discoveries, two by individuals and one by a family group, who all handed in their finds to the nearby Dinosaur Isle Museum at Sandown.

The scientific study has confirmed the fossils are very likely to be from the same individual dinosaur, with the exact location and timing of the finds adding to this belief.

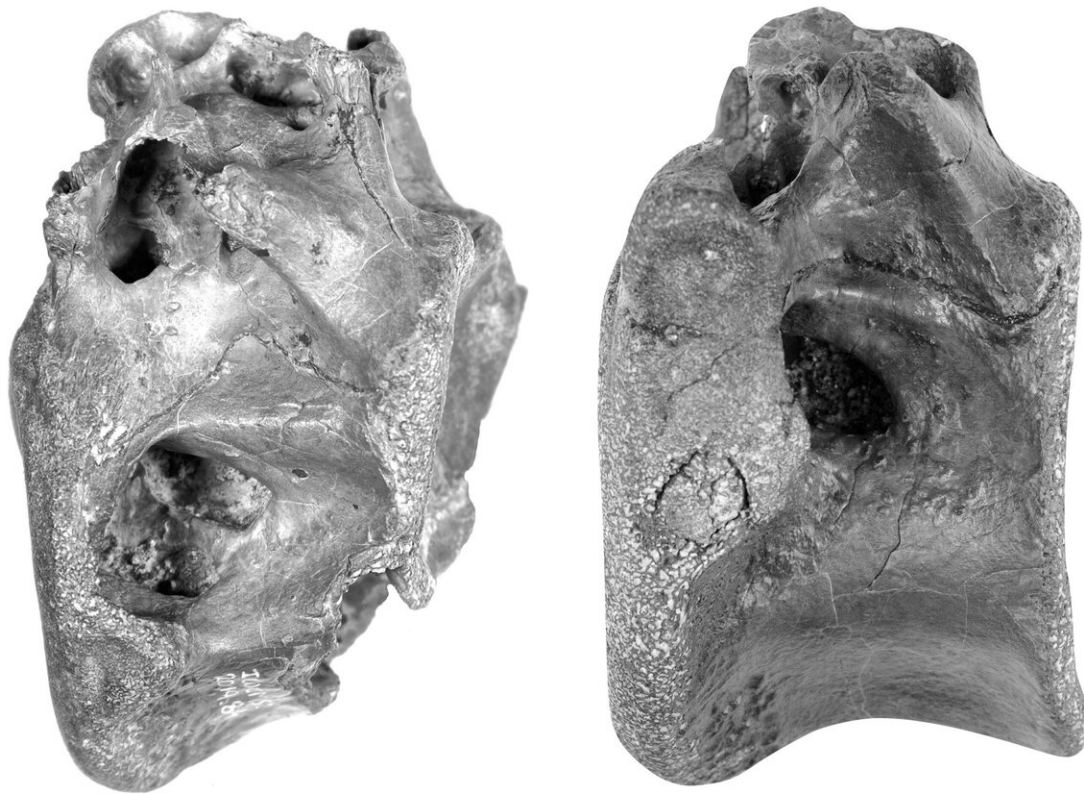


Image of two of the bones. For further images, please contact the University of Southampton. Credit: University of Southampton

Robin Ward, a regular fossil hunter from Stratford-upon-Avon, was with his family visiting the Isle of Wight when they made their discovery. He said: "The joy of finding the bones we discovered was absolutely fantastic. I thought they were special and so took them along when we visited Dinosaur Isle Museum. They immediately knew these were something rare and asked if we could donate them to the museum to be fully researched."

James Lockyer, from Spalding, Lincolnshire was also visiting the Island

when he found another of the bones. Also a regular fossil hunter, he said: "It looked different from marine reptile vertebrae I have come across in the past. I was searching a spot at Shanklin and had been told and read that I wouldn't find much there. However, I always make sure I search the areas others do not, and on this occasion it paid off."

Paul Farrell, from Ryde, Isle of Wight, added: "I was walking along the beach, kicking stones and came across what looked like a bone from a dinosaur. I was really shocked to find out it could be a new species."

After studying the four vertebrae, paleontologists from the University of Southampton confirmed that the bones are likely to belong to a genus of dinosaur previously unknown to science. Their findings will be published in the journal *Papers in Palaeontology*, in a paper co-authored by those who discovered the fossils.

Chris Barker, a Ph.D. student at the university who led the study, said: "We were struck by just how hollow this animal was—it's riddled with air spaces. Parts of its skeleton must have been rather delicate.

"The record of theropod dinosaurs from the 'mid' Cretaceous period in Europe isn't that great, so it's been really exciting to be able to increase our understanding of the diversity of dinosaur species from this time.



Still images of the vertebrae. Credit: University of Southampton

"You don't usually find [dinosaurs](#) in the deposits at Shanklin as they were laid down in a marine habitat. You're much more likely to find fossil oysters or drift wood, so this is a rare find indeed."

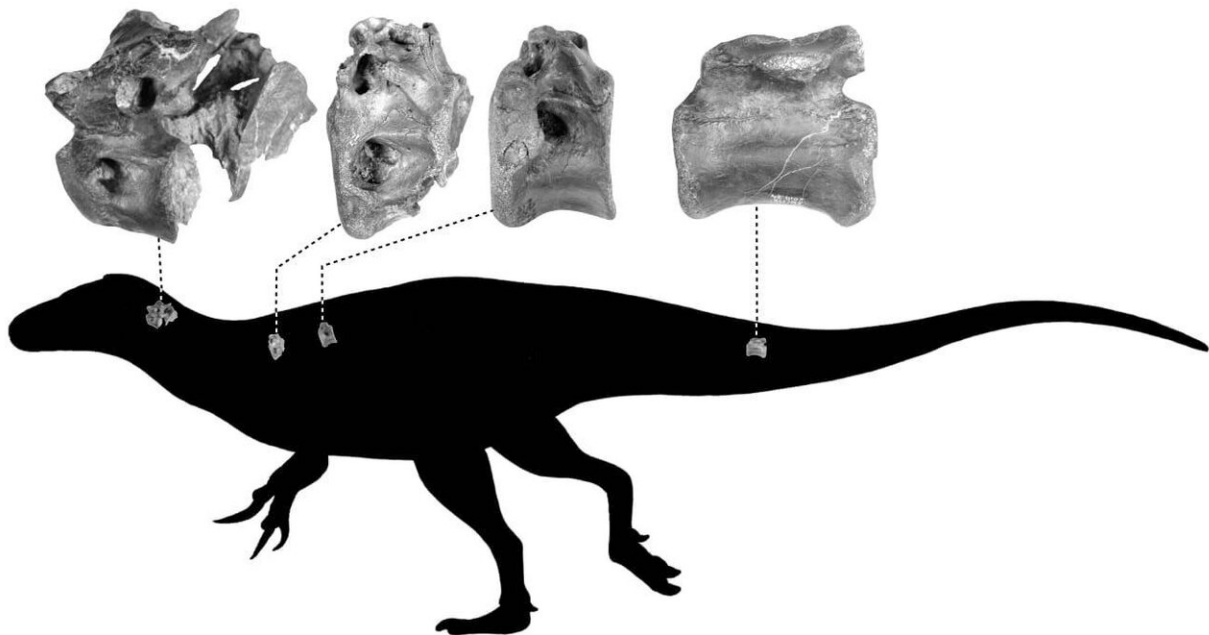
It is likely that the Vectaerovenator lived in an area just north of where its remains were found, with the carcass having washed out into the shallow sea nearby.

Chris Barker added: "Although we have enough material to be able to

determine the general type of dinosaur, we'd ideally like to find more to refine our analysis. We are very grateful for the donation of these fossils to science and for the important role that citizen science can play in palaeontology."

The Isle of Wight is renowned as one of the top locations for dinosaur remains in Europe, and the new Vectaerovenator fossils will now go on display at the Dinosaur Isle Museum at Sandown, which houses an internationally important collection.

Museum curator, Dr. Martin Munt, said: "This remarkable discovery of connected fossils by three different individuals and groups will add to the extensive collection we have and it's great we can now confirm their significance and put them on display for the public to marvel at.



Silhouette of a theropod indicating where the bones are from. Credit: Darren Naish

"We continue to undertake public field trips from the museum and would encourage anyone who finds unusual fossils to bring them in so we can take a closer look. However, fossil hunters should remember to stick to the foreshore, and avoid going near the cliffs which are among the most unstable on the Island."

Isle of Wight Council Cabinet member for environment and heritage, Councillor John Hobart, said: "This is yet another terrific [fossil](#) find on the Island which sheds light on our prehistoric past—all the more so that it is an entirely new species. It will add to the many amazing items on display at the museum."

The paper 'A highly pneumatic 'mid Cretaceous' theropod from the British Lower Greensand' by Chris Barker and those who discovered the fossils will be published in *Papers in Palaeontology*.

Provided by University of Southampton

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