

Dino tracks found by Edinburgh student on Skye reveal new info

DINOSAUR footprints found on Scotland's "Jurassic island" by a University of Edinburgh student have revealed for the first time how the carnivorous ancestors of Tyrannosaurus rex mingled with herbivorous sauropods.

The tracks on the Isle of Skye show that the massive meat-eating apex predators and lumbering plant-eating dinosaurs drank together from shallow freshwater lagoons on the island 167 million years ago.

The 131 footprints found so far at Prince Charles's Point on the Trotternish Peninsula make the site one of the largest of its kind in Scotland.

The dominance of three-toed footprints from carnivorous cousins and ancestors of T. rex make the site one of the rarest in the world.

The discovery has given scientists invaluable insights into the environmental preferences and behaviours of dinosaurs from the Middle Jurassic period, around 180 million to 160 million years ago.

The location is "rich with footprints from jeep-sized

megalosaurs", whose 45cm long feet and walking gait indicate a hip-height of around 1.8m.

Alongside these are the large, flat, circular foot impressions of plant-eating sauropods made by a long-necked dinosaur thought to have been up to 20 metres in length and "two or three times the size of an elephant" walking at around half the speed of a human.

Analysis of the multi-directional tracks and walking gaits indicate that these dinosaurs milled around the margins of the "bustling lagoon", similar to how animals congregate around watering holes today.

The footprints suggest that, regardless of dominance, the meat-eating theropods – two-footed carnivores – and plant-eating sauropods – four-legged herbivores – habitually spent time in lagoons as opposed to exposed drier mudflats.

The first three footprints were discovered five years ago by University of Edinburgh student Tone Blakesley and colleagues.

Subsequent footprint discoveries made the site one of the most extensive dinosaur track sites in Scotland, with scientists expecting to find more.

The research team took thousands of overlapping photographs of the entire site with a drone.

Using specialist software, they then reconstructed digital 3D models of the footprints via a method called photogrammetry.

The research, published in PLOS One, was funded by the Leverhulme Trust and National Geographic Society.

Research lead Blakesley, a Masters in Palaeontology and Geobiology graduate from the School of GeoSciences, University of Edinburgh, said: "Thanks to our research we now know that large megalosaurs and sauropods once roamed across a shallowly submerged lagoon margin, set in the heart of this vast river

delta spanning as far as the eye could see.

“When you look at these (footprints) today it’s just amazing to think that they are 167 million years old because they just look like they’ve been made yesterday.

“Although we will never get to see the dinosaurs that left these footprints, what we do have is a valuable record of their existence in Scotland during the Middle Jurassic.”

He added: “The footprints at Prince Charles’s Point provide a fascinating insight into the behaviours and environmental distributions of meat-eating theropods and plant-eating, long-necked sauropods during an important time in their evolution.

“On Skye, these dinosaurs clearly preferred shallowly submerged lagoonal environments over subaerially exposed mudflats.”

Skye is known as the “Jurassic Island” or “Dinosaur Isle” due to its rich heritage of fossil sites. Skye is the only place in Scotland from which dinosaurs have been found, and is particularly famous for discoveries from the Middle Jurassic period.

The remote bay takes its name from Bonnie Prince Charlie, who sought shelter on the shoreline on 21 June 1746 while being pursued by British troops following his defeat at the battle of Culloden.

Steve Brusatte, Personal Chair of Palaeontology and Evolution from the School of GeoSciences, University of Edinburgh, said: “Prince Charles’s Point is a place where Scottish history and prehistory blend together. It’s astounding to think that when Bonnie Prince Charlie was running for his life, he might have been sprinting in the footsteps of dinosaurs.”

Dugald Ross, curator at the Staffin Museum, who was present when the first three footprints were discovered, said: “It

gives me a lot of satisfaction that these footprints have been found so close by. It has really awakened the attention of not just academics but also local people.”

