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## TUNNEL VISION OF DINOSAUR'S FLIGHT

*From This is Bristol*

Wind tunnels are usually used to shape the aircraft and cars of the future but researchers at Bristol University have used one to find out more about a flying dinosaur that last took to the skies millions of years ago.

Kuehneosaurs are possibly the earliest flying animals, taking to the air about 50,000,000 years before archaeopteryx, the world's oldest bird and even before large dinosaurs roamed the Earth. These early flyers used extensions of their ribs to form large gliding surfaces on the side of the body.

Kuehneosaurs, up to 70 centimetres long, were first found in the 1950s in a cave system in the Mendip Hills. Their lateral 'wings' were always assumed to be some form of flying adaptation, but their aerodynamic capability had never been studied.

Student Koen Stein, who did the work while studying for an MSc in palaeobiology at Bristol University, has shown that of the two types found in Britain, one was a glider while the other, which had much shorter wings, was a parachutist.

Koen said, "We decided to build models and test them in the wind tunnel in the Department of the Aerospace Engineering at Bristol. Surprisingly, we found that one type called Kuehneosuchus was aerodynamically very stable. Jumping from a five metre tree, it could easily have crossed nine metres distance before landing on the ground. The other form, Kuehneosaurus was more of a parachutist than a glider."

Professor Michael Benton, a member of the research team and head of department in Bristol, said, "By collaborating with aerospace engineers we can be sure that model-making and calculations are more realistic."



*Kuehneosuchus and Kuehneosaurus (Stock photo)*

## SOMERSET'S FANTASTIC COASTLINE AS SEEN FROM SPACE!

*Hugh Prudden*

The arrival of Google Earth has brought new meaning to armchair voyaging. It can be downloaded to your computer in seconds with broadband. Type 'Watchet' in the search box and see the North Somerset landscape as viewed from space. Magnify by repeatedly clicking on the target area. The detail shown is stunning.

Two things have led to amazing detail of the structures on the foreshore. The satellite, by good fortune, observed at low tide and the tidal range in the Bristol Channel is quite considerable. Secondly, a lot of the formations consist of competent beds of limestone alternating with weak, easily eroded, mudstones. The faults and folds are clearly revealed.



*The North Somerset coastline just west of Watchet as seen on Google Earth showing the Watchet/Cothelstone Fault*

Some 1400 metres west of Watchet Harbour the dextral NNW trending Watchet-Cothelstone Fault is clearly shown. It is worth having the geological and topographical maps to hand. The E-W Helwell Bay Fault, so clearly seen in the Helwell Bay cliff face, is clearly shown crossing the foreshore.