Identifying an ancient Taranaki bird

New Zealand is a biodiversity hotspot with around one quarter of the approximately 360 extant seabird species known worldwide breeding in New Zealand and around 10% of these species endemic. However, the sparse fossil record for most seabird lineages has made it difficult to constrain when and how this biodiversity hotspot first developed. Newly discovered fossils from a coastal Taranaki location are revealing the modern origins of seabird lineages that are important to New Zealand and the rest of the world.

My study will analyse a previously unidentified seabird from Pliocene aged (~3 Ma) Tangahoe Formation in coastal Taranaki that is housed in Canterbury Museum. I will work with Senior Curator Professor Paul Scofield from Canterbury Museum to analyse the mystery bird.

Skulls are often important for identifying ancient seabirds but for this ancient Taranaki bird only wing bones remain. For my study I will develop and apply an identification method based on advanced 3D shape analyses to help reveal the identity of this ancient bird.

I will apply this method to the ancient Taranaki bird to discover which group of birds has been present in New Zealand for at least 3 million years. In so doing, my study will provide new information about the deep time history of the New Zealand seabird biodiversity hotspot.

Fossil block. Image: Canterbury Museum, Christchurch

DMS recipient - Emma Holvast