**How did the Wessel Islands form?**

The Marchinbar Sandstone is a bauxite-capped outlier of sedimentary rock that reaches out to the Indo-Pacific Throughflow like a catcher’s mitt. Twenty thousand years ago, at the height of the last ice age, sea level was 150 metres lower than today and the sandstone would have been a barren, distant ridge to the few Pleistocene Australians making use of the land bridge that existed between Australia and New Guinea at the time. Melting of the polar ice caps flooded the land bridge, with sea level rising until around 6,000 years ago, when it more or less stabilized at its present height. The distant ridge of Marchinbar Sandstone was now a long line of rocky shoals and reefs that would become the Wessel Islands. Sphinx Head, the highest point, became the most prominent island of the chain.

The weight of the water bearing down on the continental shelf caused the small, isolated islands, rocky shoals and reefs to emerge from the sea, a phenomenon known as hydro-isostatic rebound. The islands, rocky shoals and reefs slowly began to connect as waves, currents and wind combined to form beach ridge plains, spits and barrier dunes. At some point, the transition from hazardous rocky shore to idyllic sandy beach environment was enough to entice Yolngu from the mainland. We are dating calcified beach deposits to determine when this change might have happened. Was it as recently as 1,000 years ago? This would approximate the time the Kilwan coins found on the Wessel Islands were minted. Could Yolngu and distant voyagers have arrived on the Wessels at the same time?

Intriguingly, the only stone tools we located on the Wessel Islands were two stone axe heads and a few quartzite flakes that marked a grave site, according to Terry Yumbulul. Elsewhere in Arnhem Land, including offshore islands, stone artefact scatters indicating campsites are commonplace. Why not on the Wessels especially when there is so much rock art and evidence of Yolngu attachment to these islands? The Warrimirri-Gulpa clans talk of a golden age of iron-making and iron tools. Perhaps the Warrimirri-Gulpa did source their tools and tool-making technology from outsiders rather than traditional Aboriginal exchange networks. We could have on the Wessel Islands a remarkable scenario where formation of the modern coast, Yolngu habitation and regular contact with seafaring outsiders begins at the same time. How else do we explain the rock art, with its emphasis on shipping and contact, and the paucity of more traditional Aboriginal site types?

It’s not surprising that Kilwan coins from 900 AD and Dutch coins from the 1700s would turn up in the catcher’s mitt. Few coastal geomorphologists would be startled to find them resting together in sand at the top of a beach. The coins have the same hydro-dynamic properties as shells. Wave action sorts shells stranding the larger ones on the beach crest. When shells that died hundreds or thousands of years apart are found mixed together in a single deposit, it is known as ‘time-averaging’. If the coins were shells, being together but unrelated in time, would not be unusual. Their co-occurrence begs the question, how did they get there? If by the same means as any transported shell, the coins came from offshore. Shipwrecks are implicated as the source of the coins.