



Coin du Mire in Peros Banhos and (inset) Resurgent Island on the Great Chagos Bank.

Uplifted islands in Chagos

Most Chagos islands are low-lying, sandy cays. Although underpinned by rock, they rise only 1–2 metres above high tide level. A few islands are different. They lack sandy beaches but are ringed by cliff 3–5 metres high. All are small, and occur alongside the low coral cays.

Coin du Mire, in Peros Banhos atoll, rises vertically to about 4–5 metres, with near-horizontal rock strata. It has low grasses, but no trees or bushes. Resurgent Island in the Three Bothers is similar, rising about 3 metres above high tide. When Moresby prepared his charts in 1837 it was apparently not named, or possibly mislocated. Both islands are heavily pounded during the Southeast Trades, so landing on them can be accomplished only by swimming through breakers on calm days. Both support almost no soil and only low vegetation, but both have colonies of ground nesting Masked Boobies, adding significantly to the bird diversity of the archipelago. North Brother is larger with dense stands of trees, and is ringed by 3–5m cliffs, while Nelsons Island has apparently uplifted rock at each end, and both are extremely rich in bird life too.

Causes of the uplift and different structure are not known, and may differ between islands. Chagos is perhaps the most intense source of seismic activity in the Indian Ocean, apart from defined plate boundaries¹, so possibly tectonic jolts have caused sections of reef to be uplifted and, in the case of Resurgent Island at least, this may have occurred relatively recently. Alternatively, they may be remnants of reef made in earlier times: 125,000 years ago sea level was about 8 metres higher than today, and 6,500 years ago it was 1–3m higher². Throughout these 'high stands' reefs grew to the existing surface. When sea level then dropped, reefs became emerged, so raised islands may be remnants of those reefs. Though the raised islands are few, they add greatly to the variety of island form.

¹ Henstock, Timothy J. and Minshull, Timothy A. 2004. Localized rifting at Chagos Bank in the India-Capricorn plate boundary zone. *Geology*, 32, 237-240.

² Eisenhauer, A., Heiss, G.A., Sheppard, C.R.C., Dullo, W-C. 1999. Reef and island formation and late Holocene sea-level changes in the Chagos islands. In: Sheppard, C.R.C. and Seaward, M.R.D. (eds.). *Ecology of the Chagos Archipelago*. Occasional Publications of the Linnean Society of London. Vol 2. pp 21-34.

The **Chagos Conservation Trust** is a charity (Registered in the UK No. 1031561), whose aims are to promote conservation, scientific and historical research, and to advance education concerning the archipelago. The Trust is a non political association.

If you would like to know more visit www.chagos-trust.org or contact the Secretary at simonhughes@hughes-mccormack.co.uk