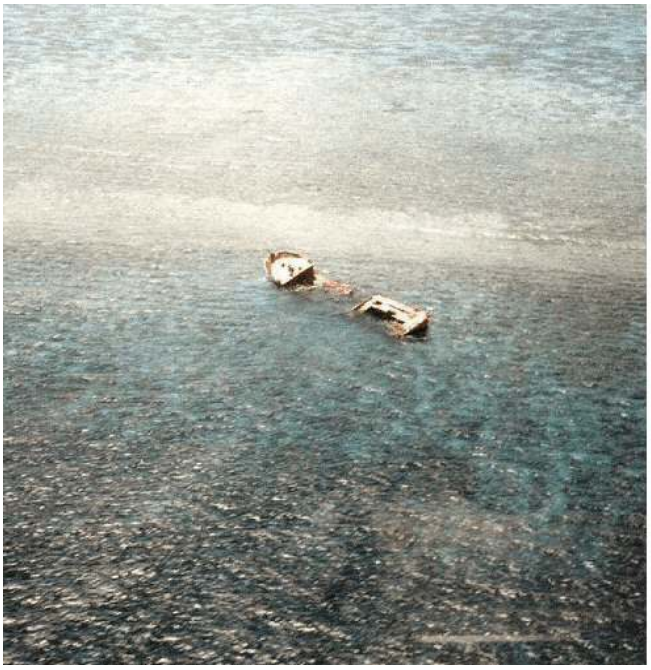

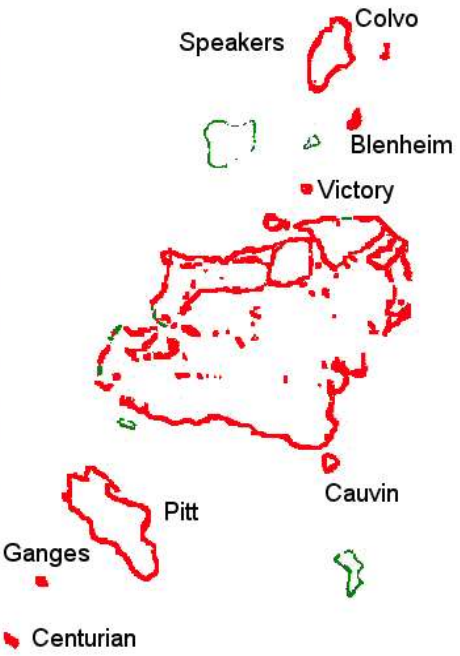

Left The rim of Blenheim Reef is awash only at low tides. This 1980s photograph is of a Taiwanese trawler wrecked in 1974. As it breaks up, now only the stern becomes exposed at low tide.
Right Green shows islanded atolls and islands on Great Chagos Bank, red shows submerged banks and atolls. ('Colvo.' is Colvocoresses Reef)

Submerged atolls and banks of Chagos

There are far more submerged reefs and atolls in Chagos than there are atolls with islands on their rims. Even excluding the vast Great Chagos Bank which has islands on only its western and northern sides, the number of submerged atolls and banks substantially exceeds the number which support islands. These submerged atolls today may be awash or even dry at low tide, as with Blenheim reef, or submerged to a few or many metres, as with Speakers, Victory, Cauvin or Pitt.

Some of these may have supported islands in the recent or distant past. To quote Darwin (who did not visit Chagos himself): *"Blenheim reef, in the Chagos group, consists of a water-washed annular reef, thirteen miles in circumference, surrounding a lagoon ten fathoms deep: on its surface there were a few worn patches of conglomerate coral-rock, of about the size of hovels; and these Captain Moresby considered as being, without doubt, the last remnants of islets; so that here an atoll has been converted into an atoll-formed reef."*[1]

Today there are no remnants of islets on Blenheim, and the most elevated parts of the atoll are its reef flats and solid algal ridges, which dry at low spring tides. Yet Blenheim's seaward reef slopes and lagoon are richly thriving with coral. Of those submerged reefs so far examined, surfaces of most parts are as thickly carpeted with corals as are the islanded atolls, though some bare expanses can be found.

Reasons for these structures being submerged are unclear. Underlying the reasons is likely to be the general subsidence by which atolls are formed, and, in some places, an unexplained inability of the rich coral growth to reach the surface. A general subsidence has long been known: *"… in the Chagos group, it is known that some of the islets are disappearing. The natives attribute these effects to variations in the currents of the sea. For my own part I cannot avoid suspecting that there must be some further cause, which gives rise to such a cycle of change in the action of the currents of the great and open ocean".*[1]

There are intriguing additional possibilities for localised disappearances too. Darwin again: *"Captain Moresby informs me that [earthquakes] are frequent, though not very strong, in the Chagos group … One of the islands in [Peros Banhos] was formerly covered by a bed of mould, which, after an earthquake, disappeared and was believed by the residents to have been washed by the rain through the broken masses of underlying rock; the island was thus rendered unproductive".*[1]

Whatever the reasons, which today are being enhanced by sea level rise due to climate change, the submerged banks are the most extensive part of the rich marine life of Chagos.

[1] Darwin, Charles. 1842. *On the Structure and Distribution of Coral Reefs.* Smith Elder and Co, London.

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