

## THE CORAL CAYS OF JAMAICA.

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(From an article by J.A. STEERS published in *The Geographical Journal*, London, January 1940, page 30).

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In July 1939, an expedition organised under the auspices of Cambridge University, left for Jamaica to study certain aspects of the flora and fauna of that island as well as the physiography of its surrounding sand cays. The Royal Geographical Society of London also lent its help which enabled a surveyor to join the expedition.

The January 1940 issue of *The Geographical Journal* published the report of Mr. J.A. STEERS on these cay formations, which in some ways recall the cays found in Australia on the Great Barrier Reefs of Queensland.

The expedition studied more particularly the Portland Bight cays and the Morant cays which are situated some 60 miles south-east of Kingston.

In a general way, these formations are covered by vegetation, from grasses and creeping plants to dense woodland. One of the most curious characteristics is the beach-rock by which the cays are sometimes surrounded. This beach-rock is a conglomerate of sand or coarse shingle cemented by carbonate of lime into a hard rock, the formation of which no comprehensive theory has yet explained.

On the strip of beach subject to wave action and which forms a "promenade", this border of petrified rock is found. It is quite wide but its vertical range is seldom more than 3 feet, and usually less.

*Halimeda* sand is particularly abundant on all the islands examined, and in many cases forms a large proportion of the material of which they are built. Coral colonies are also found but they do not form such massive reefs as, for example, those in Queensland.

Cays are unstable structures, much modified or even completely obliterated by storms and hurricanes.

The expedition took particular care in mapping out those cays to which it is difficult to accede owing to dense vegetation, and for the study of which it is necessary to evolve special methods as described in the Appendix reproduced below.

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### Appendix :

#### THE SURVEY METHODS EMPLOYED ON THE CAYS.

by

J. A. LOFTHOUSE.

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With the assistance of two of the schooner's crew, it was possible to develop a method of survey which offers many advantages for this type of work. Fifteen islands were mapped by running a close traverse round them, measured with a 100-foot chain, and by taking bearings with a tripod prismatic compass. A plane-table was used, and both traverse and detail plotted while on the ground. When dealing with boundaries as indefinite as those met with on sand cays, the use of a detail book entails a risk of loose ends and discrepancies which might not be discovered until too late. In all this work we were limited for time. A further advantage of plotting the map in the field was that with increasing practice it became possible to sketch in most of the detail accurately without pacing many offsets.

Statistics of this method collected for the fifteen cays on which it was employed yielded the following mean averages :