

before Mr. Murray was at perfect liberty to advocate his views in the proper place, before a scientific body.

But the challenge of Prof. Huxley has brought to my knowledge a new bit of circumstantial evidence to the same effect, which is highly significant. Among the investigators of the Pacific corals no man has done better work than Dr. Guppy, Surgeon of H.M.S. *Lark*. Since my article was written, his volumes on the Solomon Group of islands have been published. The geological volume is an admirable memoir. It is the record of observations as patient, detailed, and conscientious as have ever been made on the great geological problem which is at issue. After his return home he was advised by Mr. Murray to offer a paper on his researches to the Geological Society of London. He did so in the spring of 1885. But his paper was refused—much to Dr. Guppy's disappointment. It was not orthodox. His facts effectually removed some difficulties in the way of Mr. Murray's theory—facts which in more than a corresponding degree were adverse to the theory of Darwin. As a consequence the Royal Society of Edinburgh has had the honour of receiving and publishing Dr. Guppy's most interesting memoir. As a Scotchman I am proud of this contrast. I make no accusation of wilful unfairness against the authorities of the Geological Society of London, of which my critic Prof. Bonney was, I believe, at that time the President. They did not consciously discourage truth. On the contrary, they probably smelt heresy. But if their minds had been free from this prepossession—if they had been alive to the breadth and sweep of the questions at issue, and open to receive with welcome the crucial evidence bearing upon them which is contained in Dr. Guppy's paper—the rejection of it would have been impossible.

As regards Darwin's own state of mind upon the subject, I can only say that my information was as good as that in the possession of Prof. Huxley. I am not struck by the perfect candour of his reference to Darwin's letter to Prof. Semper in October 1879. If he had quoted the very next sentence to that which he does quote, a very different impression would have been left on the reader's mind. But I attach no importance to this point. I prefer to believe that Darwin's mind was open to conviction, and to hope that others will follow his example.

ARGYLL.

### The Theories of the Origin of Coral Reefs and Islands.

I WAS pleased to see Prof. Bonney's article on the Duke of Argyll's strictures on scientific men ("A Conspiracy of Silence," *NATURE*, November 10, p. 25). It is to be hoped that the rhetoric and methods of Parliamentary debate will not become common in scientific controversy. The Duke is, however, not the first who has tried to show "that if Darwin had lived he would with his well-known candour have been the first to admit the truth of Murray's theory," &c., &c. This I submit is a species of rhetoric which is out of place in scientific discussion.

It so happens that shortly after the appearance of Mr. Murray's paper "On the Structure and Origin of Coral Reefs and Islands," in *NATURE*, August 12, 1880 (p. 351), I had occasion to write to Dr. Darwin, and in my letter the following passage occurs, which I only quote to make Darwin's answer intelligible:—

"September 21, 1880.

"I think the theory Mr. Murray sets forth—that the cones or peaks, on which he considers atolls have been formed, have been levelled up by pelagic deposits, and thus brought within the limits of reef-building coral growth—a very far-fetched idea."

To which Darwin with his usual acumen replies:—

"Beckenham, September 22, 1880.

"I am not a fair judge, but I agree with you exactly that Murray's view is far-fetched. It is astonishing that there should be rapid dissolution of carbonate of lime at great depths and

near the surface, but not at intermediate depths where he places his mountain peaks.

"Dear Sir, yours faithfully,  
"CH. DARWIN."

As so far there appears to have been no *written* expression of Darwin's views published, this quotation may be of value.

T. MELLARD READE.

Park Corner, Blundellsands, November 11.

### Earthquake at the Bahamas.

I AM instructed by the Meteorological Council to inclose copies of reports from the Resident Justice and Light-keepers of Inagua, Bahamas, relating to an earthquake on September 23 last, which you may think worthy of a place in *NATURE*.

ROBERT H. SCOTT,  
*Secretary.*

Meteorological Office,  
116 Victoria Street, London, S.W.  
November 11.

*The Resident Justice at Inagua to the Colonial Secretary, Nassau.  
In re Earthquake at Inagua.*

*Resident Justice's Office, Inagua,  
September 27, 1887.*

I HAVE to report that this island was visited by a severe shock of earthquake at 7 a.m. of the 23rd instant; the effect on the light tower, the keeper reports, was terrific, two nuts on the iron stanchion of the smoke-stack were broken, and several cylinders. A portion of the stone wall around the Residency, and other private property, were thrown down in Mathew Town.

At 8.10 p.m. another shock was felt, no damage at the township; at the light station the cylinder on the lamp was broken, and the keepers were compelled to extinguish the light to prevent conflagration. A new cylinder having been placed in position, the light was again lit in about six or eight minutes after the accident.

At midnight another shock was felt, and the light-keeper reported next morning several cracks in mortar inside of the light tower; the light continued good.

Since the 23rd instant several light shocks have been felt, which keeps the people in a state of alarm.

We have had no arrival from Hayti and neighbouring islands, and it is feared that some of them have greatly suffered.

(Signed) G. R. MCGREGOR,  
*Resident Justice.*

The Hon. Robt. Butler, Acting Colonial Secretary.

*Principal and Assistant Light-keepers, Inagua, to the Inspector of Lighthouses, Nassau.*

*Inagua Light Station,  
September 29, 1887.*

SIR,—I beg most respectfully to report for your information that this station and island was visited by several severe shocks of earthquakes on the 23rd, 24th, 25th, and 26th instants. The shock on the former date was felt at 7 a.m., which shook the tower and dwelling severely. Two nuts forming a part of fastening of iron rods in the upper part of lantern supporting upper barrel and smoke-pipe were wrenched off and smashed several cylinders.

The second shock, at 8.10 p.m., shook the tower very much, and smashed the cylinder on lamp. The light was then extinguished to prevent fire, which last about eight minutes [*sic*], when the light was again exhibited and kept burning bright and clear until daylight. There was another shock felt during the night, but not so severe. I noticed several cracks on the walls in the tower, which may be the mortar only. The latest shock was on the morning of the 26th at 1.3.

I am glad to say that the lamp and machinery are in good working order, but there will be slight repairs required.

The latest shock felt was at midnight of the 27th.

I also inclose the head of nut, the length of which is seven-eighths of an inch on inside.

I have, &c.,  
(Signed) BYRON N. JONES,  
*Principal;*

CORNELIUS S. E. LOTMAN,  
*Assistant.*

The Inspector of Lighthouses.