

23°·3 C. at the beginning of December, while the sea-water beyond the stream showed only 16°·9 C. Under north latitude 40—41° the water is, according to Humboldt, at 22°·5 C. within, and 17°·5 C. without the stream.”¹

The Gulf-stream off the coast of North America has been most carefully examined by the officers of the United States Coast Survey, at first under the superintendence of Professor Bache, and latterly under the direction of the present able head of the bureau, Professor Pierce. In 1860 Professor Bache published an account of the general result.² Fourteen sections through the Gulf-stream had been carefully surveyed at intervals of about 100 miles along the coast—the first almost within the Gulf of Mexico, from Fortingas to Havana, and the last off Cape Cod, lat. 41° N., where the stream loses all parallelism with the American coast and trends to the eastward. These sections fully illustrate the leading phenomena during this earlier part of its course of this wonderful current, which Professor Bache well characterizes as “the great hydrographic feature of the United States.”

Opposite Fortingas, passing along the Cuban coast, the stream is unbroken and the current feeble; the temperature at the surface is about 26°·7 C. Issuing from the Strait of Bemini the current is turned nearly directly northwards by the form of the land;

¹ Professor Buff, *op. cit.* p. 199.

² Lecture on the Gulf-stream, prepared at the request of the American Association for the Advancement of Science, by A. D. Bache, Superintendent U.S. Coast Survey. From the *American Journal of Science and Arts*, vol. xxx. November 1860.