LETTERS TO THE EDITOR.

**** *Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

Dr. A. Graham Bell's Studies on the Deaf.

CALLING a statement a mistake does not make it one. Permit me to respond briefly to what are called my mistakes:—

1. The statement (p. 85) which Dr. Bell denies, was accompanied by reference to the authority for my quotation. It was taken from the *British Medical Journal* of May 11, 1889, a reputable English periodical, and has since been quoted in the *British Quarterly Review of Deaf Mute Education.* My responsibility ceases upon the production of such evidence. The misstatement cannot, by the wildest liberty of imagination, properly be called mine.

2. The so-called mistakes in the final paragraph (p. 119) can easily be detected, if they exist, for the official sources of information are given. The papers presented to the British House of Commons on deaf-mute matters contain a report from the United States, dated Oct. 5, 1886 (pp. 51–55).

In June, 1884, at a convention of oral teachers held in New York City, of which Dr. Bell was permanent chairman, F. H. Wines, Esq., the special census officer in charge of statistics of this character, said, "There must be in the United States, I think, not less than five thousand children, who are of proper age to attend school, who have never seen the inside of any institution" (*Official Report of Convention*, p. 5). Several months later, at the Gallaudet Centennial in Philadelphia, Dr. Bell used the following language: "In 1880, with all our magnificent institutions, and with all our beneficence, we still had fifteen thousand children of school age in the country; and in all our institutions and schools put together there were only a little over five thousand, and many of these were over the school age" (*Silent World*, Philadelphia; and *Dr. Bell's Speech at Gallaudet Conference of Principals*, p. 16). These two extracts and the "Report to the British House of Commons" are sufficient evidence of the correctness of my final paragraph (p. 119).

3. I am also condemned for not giving the statement of what the theory of a deaf-mute race is. It ought to be remembered that the article on "Scientific Testimony," reprinted in your columns, appeared originally in the *American Annals of the Deaf.* The readers of that journal are perfectly familiar with what the theory of a deaf-mute race is, and the statement of it there would be altogether unnecessary. It was Dr. Bell himself who first suggested the printing of this article in *Science;* and it is difficult to understand how he can now turn upon the writer, and condemn what he is himself responsible for, so far as the wider publicity of the article is concerned.

4. But the *gravamen* of my offence, "the climax of my numerous mistakes," as Dr. Bell terms it, is that I have attributed the theory of a deaf-mute race to him. It would certainly be inexcusable in a teacher of the Hartford school not to know that Rev. William Turner first suggested this theory, if such a teacher could be found. Does the doctor really believe that it is the culmination of my errors that I did not charge him with borrowing this theory? I have nowhere said he originated it. According to this rule, we must never speak of the Darwinian theory, for it is well known that it had already been suggested long before it had been elaborated by Darwin. Theories take the names of their most illustrious expounders. It was in this sense, without the least suspicion of an invidious suggestion, that I, in common with the press and the colloquial habit of the country, spoke of Professor Bell's theory of a deaf-mute race. I confess to a considerable degree of mortification in finding myself obliged to deal with matters of so trivial a character as the charges this letter contains; but, when the head and front of my offending turns upon so minute a point as the proper designation of a theory which has been presented to the public by Professor Bell, I may well feel some degree of satisfaction with the real question of which these side issues are mere cobwebs. I hope to be able in a few weeks to present a few thoughts on hereditary deafness; but I shall not again reply to charges of misstatements, unless I have been guilty of some inadvertence which does injustice.

Rev. W. G. JENKINS.

Hartford, Conn., Sept. 8.

I HAVE read the review of the "Facts and Opinions" respecting the deaf, published by Mr. A. Graham Bell, which appeared in your issue of Aug. 15. The reviewer, Mr. W. G. Jenkins of Hartford, quotes my opinion as to the cause of deafness, which is characteristic of many batrachians, which was, that it is due to disuse which follows the absence of sound in the subterranean and subaquatic region which they inhabit. The reviewer then goes on to point out that there is no analogy between such animals and the deaf-mutes among mankind, who live, like their fellowmen, in the midst of sounds.

Mr. Jenkins has overlooked the questions put by Mr. Bell, and hence has missed the significance of the answer, in my case at least. The first question was whether it was thought probable that a race of human deaf-mutes could be established. My reply was that I thought that such a race could be established. My reasons were, first, the analogy of the batrachians and other *Vertebrata;* and, second, the probability that by continuous intermarriage such a peculiarity could become established as congenital. I did not offer any opinion as to how the deafness might originate in mankind; for on this subject I had, and have now, no sufficient information. As to the question of the transmittal of such a character, your readers are referred to my essay on "Inheritance in Evolution," which appeared in the *American Naturalist* for December, 1889.

E. D. COPE.

Philadelphia, Sept. 5.

The "Barking Sands" of the Hawaiian Islands.

ABOUT a year ago *Nature* printed my letter from Cairo, giving a condensed account of an examination of the Mountain of the Bell (*Jebel Nagous*) on the Gulf of Suez, and of the acoustic phenomenon from which it is named. In continuation of my researches on sonorous sand, which are conducted jointly with Dr. Alexis A. Julien of New York, I have now visited the so called "barking sands" on the island of Kauai. These are mentioned in the works of several travellers (Bates, Frink, Bird, Nordhoff, and others), and have a world-wide fame as a natural curiosity; but the printed accounts are rather meagre in details, and show their authors to have been unacquainted with similar phenomena elsewhere.

On the south coast of Kauai, in the district of Mana, sand-dunes attaining a height of over one hundred feet extend for a mile or more nearly parallel to the sea, and cover hundreds of acres with the water worn and wind-blown fragments of shells and coral. The dunes are terminated on the west by bold cliffs (*Pali*) whose base is washed by the sea; at the east end the range terminates in a dune more symmetrical in shape than the majority, having on the land side the appearance of a broadened truncated cone. The sands on the top and on the landward slope of this dune (being about 100 yards from the sea) possess remarkable acoustic properties, likened to the bark of a dog. The dune has a maximum height of 108 feet, but the slope of sonorous sand is only 60 feet above the level field on which it is encroaching. At its steepest part, the angle being quite uniformly 31°, the sand has a notable mobility when perfectly dry; and on disturbing its equilibrium it rolls in wavelets down the incline, emitting at the same time a deep bass note of a tremulous character. My companion thought the sound resembled the hum of a buzz saw in a planing-mill. A vibration is sometimes perceived in the hands or feet of the person moving the sand. The magnitude of the sound is dependent upon the quantity of sand moved, and probably to a certain extent upon the temperature. The dryer the sand, the greater the amount possessing mobility, and the louder the sound. At the time of my visit the sand was dry to the depth of four or five inches. Its temperature three inches beneath the surface was 87° F., that of the air being 83° in the shade (4.30 P.M.).