Dr. Pickering found a new route of descent into the crater, and one that he deemed the most easily accomplished. This was on the south-east side, near the sulphur-bank.

While in the crater on the black ledge at night, there is often a deceptive appearance of a rising storm, from the darkness produced by the overhanging cloud.

The old crevices have been found to be the only ones that give out steam.

Though volcanic action is and has been so rife in this group of islands, and so many appearances of it are to be seen on the surface, both in the crater shape, and also that of lava crevices and jets, yet there are but few that ought to claim the name of volcanoes. Those that attract most attention are Mauna Loa, Kilauea, and Hualalai, as being in present action, and the great crater of Haleakala. These have already been described sufficiently in the foregoing pages.

Cone-craters, or hills of scoriaceous lava, are found throughout the group, sometimes on the sides of the larger mountains, at others isolated near the coast. Many of these are composed of fragments of lava and sand. They are likewise to be seen in the terminal craters of Mauna Loa and Haleakala, and do not appear to have ever discharged any fluid lava, but seem to owe their shape to the successive discharges of the loose materials. They are frequently in a lineal direction, as will be observed by inspecting the map of Hawaii; but this will give little idea of their number. If reports be true relative to Hualalai, hundreds may be seen from its summit, like excrescences on its sides.

One of the most striking features of this island is the difference in the formation of the two great mountains, whose height so nearly corresponds. The form of Mauna Loa is unique, and has been increasing, from the overflow of its terminal or pit-crater, and may perhaps be entirely formed by the boiling over of this, for upon reflection this would not seem impossible, but, indeed, quite probable; and one is irresistibly drawn to this conclusion on ascending it.

The extent of the lava stream flowing over the surface is very great, and has been supplied by most copious springs; the recent flow, for instance, covered an area of twenty square miles with a thickness of twelve feet on an average. The height of Mauna Kea has been increasing from the effects of the cone-craters, of which there are now nine on the surface of its flat top: thus while one gives out a molten mass, the other sends forth scoria.

The pit-craters are also represented on the map. They have not been the seat of volcanic action, yet from their extraordinary forma-