

twenty feet. It has a shallow lagoon, into which there are two entrances; some hummocks of coral reef-rock stand eight feet out of water.

*Namuka* and most of the *Hapaii* cluster, are stated by Cook to have abrupt limestone shores, ten to twenty feet in height. *Namuka* has a lagoon or salt lake at centre, one and a half miles broad; and there is a coral rock in one part twenty-five feet high. It is described by Williams (p. 296).

*Vavau*, the northern of the group, according to Williams (p. 427), is a cluster of elevated islands of coral limestone, thirty to one hundred feet in height, having precipitous cliffs, with many excavations along the coast.

*Pylstaart's Island*, south of Tongatabu, is a small rocky islet without coral. *Tafua* and *Proby* are volcanic cones, and the former is still active.

*Savage Island*, a little to the east of the Tonga Group, resembles *Vavau* in its coral constitution and cavernous cliffs. It is elevated, according to Williams (pp. 275, 276), *one hundred feet*.

*Beveridge Reef*, a hundred miles south-east of *Savage*, is low coral.

*e. Samoan or Navigator Islands*.—No satisfactory evidences of elevation were detected about these islands.

*f. Atolls, north of Samoa*.

On account of the high tides (four to six feet), the sea may give a height of twelve to sixteen feet to the land.

*Swain's*, near latitude 11° S., is fifteen to eighteen feet above the sea where highest, and the beach is ten to twelve feet high. It is a small island, with a depression at centre, but no lagoon. Probably an elevation of *two or three feet*.

*Fakaafo*, ninety miles to the north, is fifteen feet high. The coral reef-rock is raised in some places three feet above the present level of the platform. Elevation at least *three feet*.

*Nikunono*, or Duke of Clarence, near *Fakaafo*, was seen only from shipboard.

*Oatafu*, or Duke of York's, is in some parts fourteen feet