

westwards (see fig. 99). At the margin of this lower tract a small low secondary cliff has been formed by the waves. Steep slopes of débris lead to the settlement above from the cliffs, here and there broken into ledges and deep gullies, by which ascent to the summit is easy. At the landing-place the beach is formed of black volcanic sand, but elsewhere in the neighbourhood, of coarse basaltic boulders.

The cliffs have a scanty covering of green, derived mainly from grasses, sedges, mosses, and ferns, with darker patches of the peculiar trees of the island (*Phyllica nitida*), and the Crowberry (*Empetrum nigrum*, var. *rubrum*); these dark patches become more and more marked towards the summit. Conspicuous patches of bright green are formed under the cliffs at the foot of the water-courses by a Dock (*Rumex frutescens*). Further, dotted about amongst the other herbage, are rounded tufts of pale bluish-green, consisting of the tall reed-like Tussock Grass (*Spartina arundinacea*), which is peculiar to the Tristan da Cunha group, St. Paul and Amsterdam Islands. On nearer inspection the damp foot of the cliff is found to be covered with Mosses and Liverworts, which latter form, in favourable situations, continuous green sheets covering the earth beneath the grass. Many Ferns were collected; *Asplenium obtusatum*, growing in the clefts of the rocks, just as does our home *Asplenium marinum*, and *Lomaria alpina* growing abundantly under the cliffs.<sup>1</sup> The *Lomaria* plants, where situated on stony slopes, and comparatively starved, were all provided with fertile fronds, whilst when growing in rich vegetable mould, they were commonly without fructification. The commonest flowering plants under the cliffs are Wild Celery (*Apium australe*)—a plant abundant here, in Tierra del Fuego, and in the Falkland Islands,—the Crowberry (*Empetrum nigrum*, var. *rubrum*), the common Sow-thistle (*Sonchus oleraceus*), a cosmopolitan weed,—and a plant with strongly scented leaves (*Chenopodium tomentosum*), called “tea” by the islanders, and used as such, a decoction of the leaves being drunk with milk and sugar. Creeping amongst the damp moss is the narrow-leaved plant with small bright red berries (*Nertera depressa*), so common in English conservatories.

The streams running down the cliffs, which vary from violent dashing cascades in rain time, to narrow rills fed only by the melting of the snow above in dry weather, were small at the time of the ship's visit; the water soaks into the banks of sand at the foot of the cliffs and on the shores, and is mostly lost, but in some places reappears in the shape of shallow freshwater ponds close to the sea beach. The water of the streams had a temperature of 50°, whilst that of the ponds was higher, 54°. The temperature of the lower regions of the island is no doubt constantly reduced by the descent of the cold water from the snow far above; in the gully above the settlement, shrubs of *Phyllica nitida* commence at about 400 feet elevation. The trees in this locality have all been cut down for firewood, but there is still plenty of wood on the island. *Phyllica nitida* is a species found in the Tristan da Cunha group, Gough Island, and in the far-off island of Amsterdam, 3000 miles distant; as well as in Bourbon, Mauritius, and perhaps Mada-

<sup>1</sup> For detailed list, see Bot. Chall. Exp., part iii. pp. 162-170, 1884.