classical memoir on the fertilisation of New Zealand flowering-plants (Thomson, 79), treating specially of *Utricularia*, and noting the female flower of *Bulbinella Gibbsii*, which he suggested might be cleistogamic.

The same year as Petrie's paper appeared a description of certain Stewart Island plants collected by the Rev. Mr. Stack, and sent to the Christchurch Botanic Garden (see Armstrong, 1 and 2). Amongst these were *Stilbocarpa Lyallii*, *Senecio Stewartiae*, and *Myosotis albida*.

At about this time the late Mr. Charles Traill, who had come to reside on the island of Ulva, in Paterson Inlet, where he was establishing an interesting garden, and proving at the same time the extreme mildness of the winter climate, was interesting himself in the botany of the island, and personally, and with the aid of the Maoris, making extensive collections of the plants, which he sent to the late Mr. T. Kirk, F.L.S. His collections were of great extent and importance, and were recorded by Kirk in the "Students' Flora" (62) and the "Forest Flora" (58) of New Zealand. Mr. Traill continued assiduously his self-imposed task until his death in 1898. He was assisted also by his brothers, Messrs. Walter and Arthur Traill, both of whom have helped considerably to advance the knowledge of Stewart Island botany. In December, 1881, Mr. P. Goyen, F.L.S., and Mr. W. S. Hamilton ascended Mount Rakiahua (a by no means easy task), discovering, amongst other plants, *Raoulia Goyeni* and *Aciphylla Traillii*.

Mr. Petrie's pioneer paper was followed by two (55, 56) by Mr. T. Kirk, published in 1885, which were the outcome of two visits he made—one in January, 1882, and the second in the same month of 1884. On the last occasion he made the first ascent which had been accomplished of Mount Anglem, accompanied by Mr. Arthur Traill, Mr. von Tunzelman (then schoolmaster at the Neck), and two others. There was then no track* up the mountain, and the ascent was consequently extremely arduous, on account of the great density of the subalpine scrub, which was so thick that a retriever dog was unable to proceed. The party fixed a camp the first day near the manuka zone, and next day made the ascent; but, unfortunately, Mr. Kirk only reached the moraine below the final peak, bad weather having come on and time being precious. Messrs. Traill and von Tunzelman pressed on, however, and gained the summit, collecting a remarkable number of plants there and *en route* considering the haste and bad weather.

The return journey was made by another route, the creek from the moraine being chosen, but this proved worse than the ascent, and the party had to spend the night in the forest. It is probable that on this return journey Mr. Kirk collected *Archeria Traversii*, which has not been again found on Stewart Island.

Later on, in the early "nineties," Mr. Kirk paid two more visits to the island, staying at one time about two months. He again received much help from the Messrs. Traill, and also from Mr. Walker, who had the sheep-run at the head of Paterson Inlet. During these visits Kirk explored a good deal of the island, ascending Mount Rakiahua, reaching Mason Bay, and exploring the Pegasus district, where, accompanied by Mr. Walter Traill, he reached the summit of Smith's Lookout and the highest of the Frazer Peaks. Unfortunately, he published no general account of his important explorations, but his collection was partly recorded in the "Students' Flora," and partly by Cheeseman in the "Manual of the New Zealand Flora" (15). Kirk was also assisted by Mrs. Arthur Traill, who procured for him a number of species from Ruapuke; and by Mr. W. Pearson, then the Commissioner of Crown Lands for Southland. Professor H. B. Kirk visited Stewart Island and Ruapuke more than once, and collected certain species for his father, Mr. T. Kirk.

Mr. R. Brown, of Christchurch, spent a number of weeks in Stewart Island in 1890–91, studying the moss flora. His explorations were chiefly at the head of Paterson Inlet and Mason Bay, where he resided for some time with Mr. Walker. He ascended the Thomson Range, I presume by himself—no light task for a man approaching eighty years of age. He also went overland to Port Pegasus from Mason Bay by way of the Central Range of mountains, taking several days for the journey, and running short of food. His results *re* the mosses collected he published in the "Transactions of the New Zealand Institute" (Brown, 7–11). Mr. W. Bell, an enthusiastic collector of mosses, also visited Stewart Island in the early "nineties," or thereabouts, and his discoveries were in part recorded by Mr. T. W. Naylor Beckett in the "Transactions of the New Zealand Institute" (4, 5).

My own connection with Stewart Island botany (apart from cultivating certain plants sent to me by Mr. Brown, and several visits to Dog and Centre Islands and to the coast of Ruapuke), began in June, 1903, when, waiting with the G.s.s. "Hinemoa" for fine weather on the way to the Snares, I had two days ashore, and reached the open ground of the Remarkables, where I had an opportunity to study the winter aspect of the mountain vegetation, and also the winter climate on a typical day of heavy wind, rain, and sleety snow.

In January and February, 1907, I paid a second visit to Stewart Island, in order to specially study the vegetation for my volume of "Die Vegetation der Erde." I had the very good fortune to be accompanied by Messrs. R. M. Laing, M.A., B.Sc., F. G. Gibbs, M.A., and J. Crosby-Smith, F.L.S., who most generously assisted my work in every way possible. The whole party ascended to the summit of Mount Anglem, spending three days on various parts of the mountain. Mr. Laing and I, accompanied by Mr. J. W. Murdoch, spent several days at Mason Bay, and the last named and myself went on an expedition to the Rakiahua Valley, from whence as a base we examined the vegetation of Mount Rakiahua, Table Hill, the low forest, and the boggy plain.

* Even yet there is no track right to the summit, and a good deal of scrub has to be negotiated. Care should be exercised by those climbing the mountain to fix the exact position of where the track ends, so as to save much labour on the return.