the lode is nearly thrice the size it is in the slate about 15 yards away; but whether it will maintain its present size, or increase it at a greater depth where the granite will assume the crystalline condition, or pinch, can only be ascertained by future operations. At the present depth the granite begins to assume the crystalline character; large, rounded blocks, which have escaped decomposition by exfoliation, having been brought to the surface. The quartz at this depth, for the shaft has been sunk on the vein, is from 10in. to 12in. wide, and a recent mortar crushing in Launceston gave the satisfactory yield of $4\frac{1}{2}$ ounces of Gold to the ton. The Gold is plainly visible in nearly every piece of quartz, and I never crushed a piece without obtaining an excellent prospect.

Comparatively little prospecting has been done in this district; not more than nine 10-acre sections have been applied for, and consequently comparatively little is known of the extent of the auriferous country. I am of opinion that it will eventually be found to be a moderately extensive Goldfield; and append a rough sketch plan of the locality.

NOTES ON LEONTOPODIUM CATIPES.

By Baron von Mueller, K.C.M.G., M.D., F.R.S.

[*Read* 15*th Nov.*, 1881.]

In instituting recently a census of the genera of the whole Australian vegetation, I had to give to the remarkable alpine plant, first described by De Candolle as Gnaphalium catipes, a generic place also, its position thus far having never yet been firmly settled. Examining the plant first from localities in the Victorian Alps, I placed it in Antennaria, and described it as A. nubigena already in 1854 (Transact. Phil. Soc. of Victoria, i., 45), alluding already to the likelihood of its identity with Gunn's plant, sent by Lindley to the elder De Candolle; but I had no Tasmanian specimens at that time to establish its sameness with the one of the Australian Alps. In assigning to it a position among the species of Antennaria, I was careful to point out at once that it did not altogether accord with the characteristics of the legitimate congeners, our plant not being strictly dicœcious. Indeed I was then already considering whether it ought not to find its most appropriate place in Leontopodium, notwithstanding the generally solitary capitula, and the biformity of the flower heads. To overcome the difficulty which presented itself, I framed a subgenus "Actina" for the reception of Anten-

naria nubigena, with the following characteristics :—" Scales of involucre radiating. Heads of the fertile plants, with several rows of female flowers in circumference, and with hermaphrodite ones in the centre. Heads of the sterile plants with only hermaphrodite flowers, a few rarely fertile, pappus at the extremity clavellate, with the exception of that of the female flowers, which is not thickened."

This subgeneric notation implied that the plant showed an approach to dicœcism, thus paving the way from Antennaria to Leontopodium. A few years later Sir Joseph Hooker transferred this plant to his genus Raoulia (Fl. Tasm. i., 206, t. lviii.), and in this he is followed by Bentham (Fl. Austr. iii., 651), both, it seems, having only occasion to examine that state of the plant in which the bisexual but often sterile flowers prevail, whereas De Candolle had before him only the other state of the plant, with chiefly female flowers in the capitulum, the latter being figured in my " Plants of the colony of Victoria" (Plate xlv., fig. 4., the other at fig. 3), the pappus of both showing also considerable dissimilarity. Although we now know that the prevalence of the female or of the bisexual flowers is one of degree only, still there is a distinct dimorphism, and this same disparity seems to occur also in the genus Leontopodium, so much so, that in 1876 Mr. C. B. Clarke, when describing Leontopodium alpinum from the Indian Alps (Compositæ Indicæ, p. 100), notes not only heterogamous, but also distinct male and female capitula in the same glomerule. The accuracy of this observation I was able to confirm on Sikkim and Tibet specimens from Hooker and Thomson, and some Siberian samples from Turczaninow; moreover Sir Joseph Hooker also records last year in the generic character of Leontopodium " heads uni- and bi-sexual" (Flora of British India, part viii., p. 278). Hence there can be no doubt that Antennaria leontopodina (D.C. Prodr. vi., 269), obtained by Royle from Western India, though omitted by Hooker, and also by Clarke, is a dicœcious state of Leontopodium alpinum. The opinion of Weddell (Chloris Andina i., 150), foreshadowed by myself, that Leontopodium should merge into Antennaria, though not countenanced by Bentham (B. & J. H. Gen. pl. ii., 303), deserves every consideration; but as additional species, likely yet to be discovered, and the re-examination of others, as yet only known in one of the states of dimorphism, may affirm hereafter the separation by R. Brown of Leontopodium from Antennaria, I deem it best to bring now the Gnaphalium or Raoulia Catipes to Leontopodium, by which means an interesting connection of an alpine plant of Tasmania and South-eastern Australia with the famous " Edelweiss " of Europe and Asia is established; moreover I am convinced that some

Raoulias of New Zealand will have to be transferred likewise to Leontopodium, notably the somewhat dimorphic R. glabra. Sir J. Hooker also alluding already (Handbook of the New Zealand Flora, i., 151) to the affinity of allied plants, placed by him into Gnaphalium, to Leontopodium. If it is desirable to maintain the multiplication of the genera of this group of Composites, then Anaphalis will claim also attention as regards the generic position of Leontopodium Catipes, especially as the involucre scales are radiating, though the general habit as well as the setæ of the pappus, free at the base, form but notes of trifling generic value. Finally it may be observed that Antennaria might become an apt point of generic concentration of the several allied plants with strictly universal capitula, while Leontopodium might receive those cognate genera in which the dicœcism is only imperfectly expressed.

I avail myself of this opportunity, while speaking of Tasmanian Composites, simultaneously to point out that Leptorhynchus nitidulus has this year been refound there, it not having been gathered by anyone since R. Brown visited the island in the beginning of this century. The new locality is Glenorchy, where it was obtained by Mr. Aug. Simson, and where probably other Gippsland plants may be found yet. Bentham thought to recognise in it the L. linearis of Lessing, which Steetz however rightly kept apart (Lehm. pl. Preiss. i., 450), although my anticipation proved correct, that L. linearis constitutes merely a variety of the common L. squamatus. I recognised rightly L. nitidulus as the genuine Candollean plant already in 1854 (second general report, p. 12). Furthermore, I like here to mention that Helichrysum Gravesii, according to the late lamented Rev. W. W. Spicer, is indigenous to Clarke's Island and Kent's Group.

REMARKS ON THE VEGETATION OF KING'S ISLAND,

By Baron Ferd. von Mueller, K.C.M.G., M.D., Ph.D., F.R.S.

King's Island, situated about halfway between one of the most southern prominences of the Australian continent and the most north-western point of Tasmania, has remained, in reference to its vegetation, almost unknown; for although this island was discovered, and its shores were mapped fully 80 years ago, very few plants were ever collected there. Anxious to push on the phytologic investigation of Australia anywhere, I recently induced Mr. Edw. Spong, who held the