the same structure in both, with the noteworthy physiological difference that the latter exuded a viscous substance by which they clung together in clusters. This provision, as we learn from Kerner's admirable observations, is only made where cross fertilisation is effected by insects, being unknown in anemophilous flowers. So it may be assumed that there is cross fertilisation of the expanded flowers of different plants, and it is known from actual observation that self-fertilisation takes place in the underground closed flowers. The cultivated plants produced underground fruits, which were as large as those represented in St Hilaire's figure, but Dr Grisebach does not state whether another generation was raised from the seed.

With regard to the purpose of these underground seeds, Dr Grisebach hints that it may be to ensure the reproduction of the plant in a locality where the prolonged droughts might otherwise jeopardise its existence. *Cardamine chenopodifolia* is a monocarpic, or what is more commonly called an annual plant, and the buried seeds would retain their vitality long after the parent had perished and the seed produced above ground had been dispersed or destroyed; and then when the rains returned the buried seeds would germinate. But this explanation is hardly sufficient, if we take into account the natural habitat of the plant. St Hilaire says: "Nascitur in pascuis maritimis;" and on Gibert's label in the Kew Herbarium, as already mentioned, there is the memorandum: "Croit jusque dans l'eau salée." Therefore it would seem more probable that the purpose is to prevent the seed being carried away by the water. We find another provision for this purpose in many of the Mangroves (*Rhizophora* spp. &c.), the seeds of which germinate while still in the seed-vessel attached to the parent plant; and the thick, heavy radicle goes on elongating until its combined weight and length bring it down to the mud, in which it soon takes a hold, and the plumule begins to grow, and the connection with the parent is severed. On the other hand, many other plants exhibit the same phenomenon, and some of them grow in quite dry localities; so it is not safe to generalise as to the advantages enjoyed by them therefrom. In fact, it is a subject awaiting thorough investigation, for doubtless some plants have retained the faculty after they have ceased to derive any benefit from it. Seeds thus sunk in the earth are not only protected from drought or water, as the case may be, but also from birds and many graminivorous animals that do not burrow.[1]

Cardamine flaccida, Ch. et Schl.

Cardamine flaccida, Ch. et Schl. in Linnæa, i. p. 21.
Cardamine bonariensis, Pers., Synopsis Pl., ii. p. 195; DC., Prodr., i. p. 150.

JUAN FERNANDEZ. *Douglas; Moseley.*

There is some doubt whether the Juan Fernandez plant be really *Cardamine flaccida*, inasmuch as it is to us uncertain whether that is a distinct species or merely a form of

[1] For further particulars on this subject see Dyer in *Nature*, xvii., 1878, p. 446.