Cryptostoma, p. 298.

There must be some mistake here. Neither the shell nor the animal of *Cryptostoma* in the least resembles either *Coriolla* or *Buccinum*; but is closely allied to *Natica*, and passes by means of *Natica melanostoma* into the typical form of that genus. The reason why the animals of various species of Lamarckian *Buccina* differ so considerably from each other, is that he has confounded in that genus many shells belonging to other genera. Thus, of the species noticed above, *Bucc. Linnæi* is a *Columbella*; *Bucc. mutabile* a *Nassa*; and *Bucc. maculosum* a *Polia*, or subgenus of *Triton*, Lam. On the other hand, *Cardita* is by no means so very different from *Astarte*, into which it readily passes by means of *Venericardia*. Indeed, two fossil *Astartes* have been described by Lamarck as species of *Cypricardia*, which is the next genus to *Cardita*.

XXXV.—*Notices of Botanical Excursions in the Neighbourhood of Trieste.* By EDWARD FORBES, M.W.S., For. Sec. B.S., &c.*

I VISITED Trieste in the month of June 1838, and spent five most delightful weeks in the neighbourhood, making the town my head-quarters. No locality could afford greater pleasure to the botanist, Illyria being famous for the peculiarities of its Flora; and I was especially fortunate in finding two of the most distinguished Italian botanists resident in Trieste, M. Tommasini and M. Biasaletto, to whose guidance and to whose company I chiefly owe the profit and the pleasure I reaped during my stay. Trieste is beautifully situated on the Adriatic at the base of Monte Spaccato, one of the border elevations of that great and singular calcareous plain the Karst. On the south-east side of the town the country bordering the sea is somewhat flat as far as the boundary of Istria, a few miles distant, and presents us with the salt marshes of Zauale; on the north-west the bounding precipices of the Karst rise directly from the sea. The excursions which I shall notice in

* Read before the Botanical Society, Nov. 14, 1839.

this paper are, 1st, the immediate neighbourhood of the town ; 2nd, Zaule and its neighbourhood ; 3rd, Monte Spaccato and Lipizza on the Karst ; and 4th, Contobello on the coast. These four excursions present a pretty good picture of the vegetation of the Triestine territory.

I. In the immediate neighbourhood of the town, in fact forming one extremity of it, is a little wood called the Boschetto, the favourite promenade of the inhabitants, which it well may be, since there alone you find anything like a collection of trees, the country of Illyria being exceedingly bare, and trees are great treasures in such a warm climate. This grove is laid out in pleasant walks, and there are one or two coffee-houses where the Triestine gentlemen breakfast in the open air at a very early hour of the morning, and where the Triestine ladies sip coffee towards dusk. In the evening it presents a very gay scene, and the botanist, resting there after his day's labour, finds himself greatly refreshed by the change from pretty flowers to pretty faces. In the Boschetto abound several rare and very interesting plants, such as *Chrysanthemum montanum*, *Chrysanthemum corymbosum*, *Thesium divaricatum*, *Inula hirta*, *Tragopogon floccosum*, *Potentilla pedata*, and *Polygala comosa*. Also some critical species of much interest to the British botanist, as *Lotus ciliatus*, Tenore, a southern form of *Lotus corniculatus*, *Ononis antiquorum*, and the *Lathyrus sepium* of Scopoli.

II. The salt marshes of Zaule are about four miles from Trieste, and abound in rare and interesting plants. The road to them is rather level and uninteresting ; by the wayside however I gathered undoubted specimens of the *Ranunculus verrucosus** of Sternberg, this being the original locality. Also in corn-fields *Bupleurum obovatum*, *Polygonum Bellardi*, and *Bifora radians*. On the hedges near Zaule I found two rare and beautiful plants, *Clematis viticella* and *Aristolochia rotunda*. In the meadows at Zaule grow *Holoschænus australis*, *Veronica latifolia*, *Brokhousia hispida*, *Gladiolus illyricus*, *Plantago altissima*, *Scorzonera laciniata*, *Scabiosa hybrida*, *Asparagus marinus*, and *Ornithogalum narbonense*, &c. The

* Perhaps not distinct from *Ranunculus Philonotis*.

ditches were filled with *Gratiola officinalis*. Several British plants abounded, such as *Scabiosa arvensis* and *Rhinanthus crista-galli* and *major*, here accompanied by *Rhinanthus hirsutus**, a plant which possibly may be found in similar situations in our own country. The marshes of Zaule are famous for Orchideæ. Of that tribe I observed *Orchis pyramidalis*, *O. acuminata*? *O. laxiflora*, *Epipactis palustris*, *Gymnadenia conopsea*, and *Serapias oxyglottis*, certainly identical with the *Serapias longipetala*, as here were flowers of each species to be seen on one plant. The plant I have noted as *Orchis acuminata* exactly accords with Reichenbach's description of Defontaine's species; nevertheless M. Tommasini informed me that he sent it to Reichenbach as such, who sent it back as *Orchis variegata*, identical with the German species.

Ascending the hills of Istria, above Zaule, we found *Scabiosa integrifolia* and *hybrida* growing together—certainly only one species. *Trifolium patens* and that beautiful shrub the *Colutea arborescens* were common. On the hills themselves we found *Athamanta Matthioli*, *Marrubium candidissimum*, *Drypis spinosa*, and *Silene saxifraga*; and by the road side on our return to Trieste we gathered *Oenanthe gymnorhiza* and *Rubus tomentosus*.

III. The excursion to Monte Spaccato and the Karst is probably the most characteristic of this singular country. To any one but a botanist the Karst is a place to be avoided, or passed over as quickly as possible. It is thus described by an English writer: "It is a table land of bare limestone rock, believed by geologists to correspond in age with the chalk separating Carniola from the coast land, or Littorale. It is a waste like no other; not a tree within sight, scarce a shrub or even a blade of grass to relieve the painful glare of the white shattered stones which strew the surface. To use the words of a German traveller, the landscape might be painted with ashes and chalk." Horrid however as the Karst thus appears to be to the ordinary traveller, to the botanist it is a paradise blooming with rare and beautiful flowers, for every crevice on its bare surface presents him with plants which

* The seed of the Zaule plant does not however answer to Reichenbach's character of being "exalatus."

grow nowhere else, and every little oasis in its barren desert is radiant with flowers of exquisite loveliness, and odorous with fragrance of sweetest herbs. In ascending Monte Spaccato from Trieste, we pass over two different geological formations, the lower part being composed of conglomerate and the upper of limestone, each presenting a different Flora. The latter rock especially abounds with rare and local plants. The hill is a natural botanic garden; it is so covered with various species, which greeted us in such quick succession, that it was as much as I could do to carry away a few examples of each for myself without taking duplicates. Our progress upwards was first hailed by *Polygala comosa*, which abounds alike on lime and sandstone. *Andropogon Gryllus* and *Festuca glauca* are likewise frequent on the latter rock. The sides of the hill are covered by *Ostrya carpinifolia*, *Quercus pubescens*, *Pistacia Terebinthus*, *Rubus discolor*, *Cytisus capitatus*, and *Genista sylvestris*. Amidst these I picked a beautiful specimen of the splendid *Limodorum abortivum*. As we ascended to the calcareous strata many species quite new to me appeared, often of great beauty, such as *Berinia andryaloides*, *Convolvulus Cantabrica*, *Euphorbia fragifera* and *Onosma stellulata*, and plants past flowering of *Pæonia peregrina* were not rare. But the summit surpassed the sides: there were concentrated the more beautiful plants we had passed, accompanied by *Genista sericea*, *Linum perenne*? and *narbonense*, *Veronica austriaca*, *Arenaria loricifolia*, *Euphorbia* (nov. species near *Gerardiana*, Thomas,) *Genista diffusa*, *Arenaria verna* (the true plant, not the British), *Astragalus vesicarius*, *Silene Pseud-otites*, *Orobis versicolor*, *Hieracium peleterianum*, *Dictamnus fraxinella*, (which with *Clematis erecta* also adorned the sides), *Centaurea variegata* and a hundred others, "too numerous to mention." Of great interest to the botanist, on the highest point, grew *Spartium radiatum*, first found here by Mr. Bentham last year, and refound by myself. Among the plants past flowering I remarked *Gentiana angulosa*, *Scorzonera austriaca*, *Mercurialis ovata* and *Cineraria arachnoidea*, while *Centaurea splendens* and a host of *Dianthi*, as yet in bud, gave evidence of a harvest in a month or two as rich and as varied as that present. The view from the summit of the hill

was very magnificent, stretching over Frioul, Carniola and Istria, bounded on three sides by the snow-topped chains of the Alps, on the fourth by the blue Adriatic. At our feet lay Trieste.

Among the green spots on the Karst the most remarkable is Lipizza. Lipizza is truly an oasis in a desert: it is a wood about seven miles from Trieste, where the emperor breeds horses for his stud. Many of the most beautiful and rare plants of Illyria are found there, and some of its flowery denizens grow nowhere else. From Lipizza I obtained *Lilium carniolicum* and *bulbiferum*, *Delphinium fissum* (rariss.), *Medicago Karstiana*, *Potentilla recta*, *Potentilla inclinata* (not distinct from *P. canescens*), *Hieracium bracteatum*, *sabinum* and *obscurum*, *Scorzonera villosa* and *glastifolia*, *Loranthus europæus*, *Quercus cerris*, *Ornithogalum comosum*, *Lactuca perennis*, *Dianthus atrorubens* and *virgineus*, *Vicia sordida*, *Rosa rubrifolia*, *Iris graminea*, *Coronilla montana*, *Centaurea adonidifolia* and *Cerinthe maculata*. At Lipizza and other places on the Karst the localities richest in plants are singular basin-shaped depressions of the surface.

IV. The excursion to Contobello, though not so rich as that to Monte Spaccato or Zaule, is interesting as exhibiting the sea cliff vegetation of this part of the shores of the Adriatic. On the way side between Contobello and Trieste grows the rare and beautiful *Rosa sempervirens*. On the sea-coast I gathered *Lathyrus Nissolia*, *Chlora serotina*, *Dorycnium pentaphyllum*, *Ruta divaricata*, *Lonicera etrusca*, *Palinurus spinosus*, *Rhamnus alpinus*, *Ethionema saxatilis*, *Teucrium montanum*, *Trifolium angustifolium*, *Smilax aspera*, *Coronilla Emericus*, *Quercus Ilex*, *Verbascum nigro-austriacum*, *Salvia officinalis*, *Rubia peregrina*, *Phillyrea media*, *Ligustrum vulgare*, and last, not least, the loved plant of lady and poet, *Myrtus communis*, on its native rocks in full bloom, as fair and sweet there wild, as when petted and caressed in the finest garden.

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