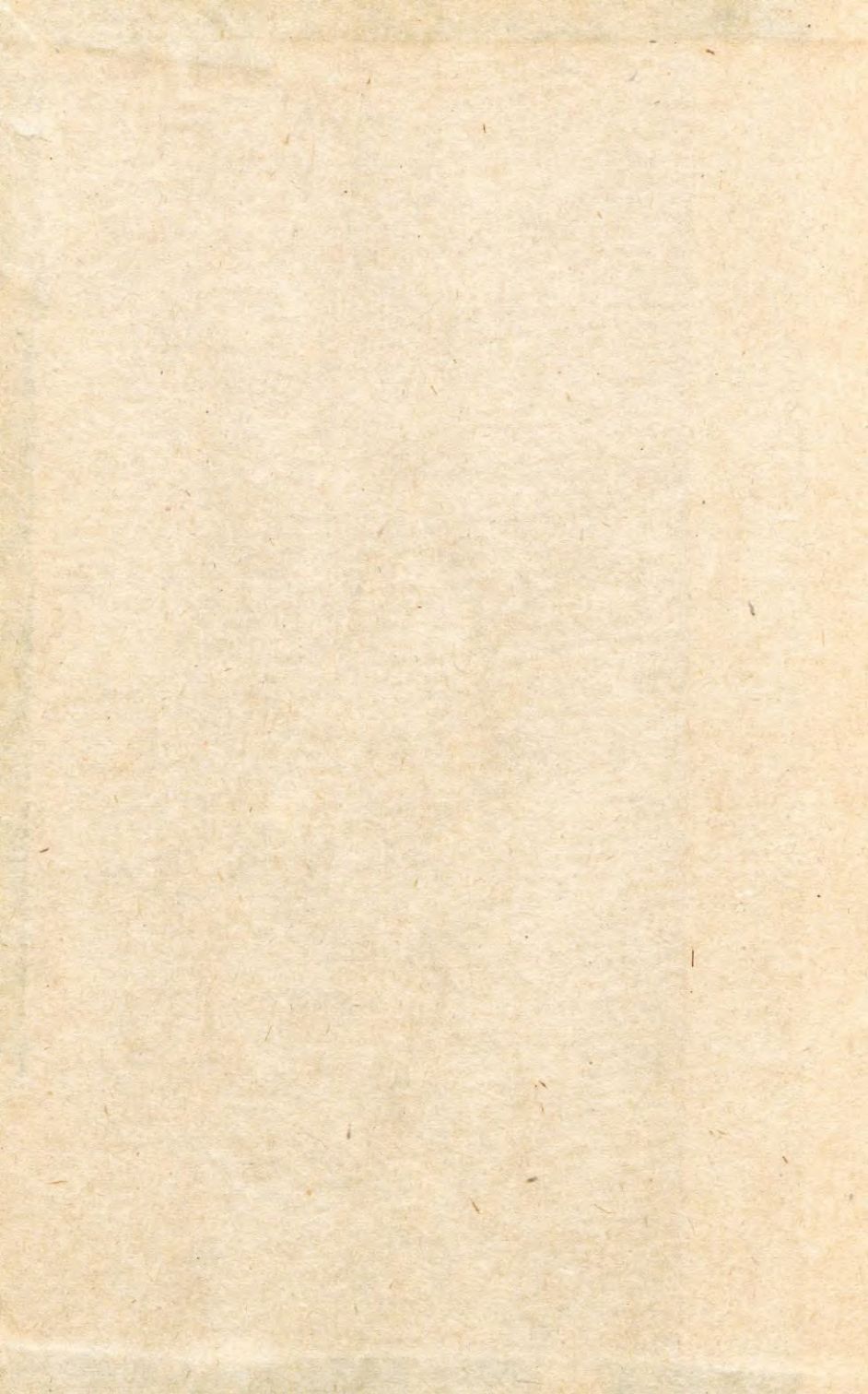


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A VISIT

TO

# LISSA AND PELAGOSA.

BY

RICHARD F. BURTON.

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## A VISIT TO LISSA AND PELAGOSA.

### PART I. — *Lissa*.

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ISSA of the classical, Lissa of our modern day, to the historian, perhaps, the most important, while physically one of the smallest, and the westernmost, that is the furthest from land, of all the main features forming the Dalmatian Archipelago, had again and again tantalised me with a distant view. From south as well as from north I had sighted the tall "Monte Hum" projecting two tongues eastward and westward; the former long, the latter short, and both outlined in regular series of gentle convexes and concaves, domes and breaks, with the last and lowest sinking below the blue Dalmatian Sea.

Three years, however, passed before September 1876 afforded me the opportunity of inspecting the new Vice-Consulate, and the graveyard of our gallant countrymen who fell in the naval action of 1811. My excellent friend M. Alber, Ritter von Glanstätten, President of the Maritime Government at Trieste, an official whose name will ever be remembered on the Istrian and Dalmatian shores, was sending the I. R. S. S. *La Pelagosa* (Captains Lúsina and Zudenigo) with a "Col-laudo" or commission to audit the accounts of a new light-house; and, as visits to isolated rocks have their difficulties in these seas, I felt grateful for his permission to form one of the party. It consisted of the Councillor Klose; Cav. Pietro Accerboni, I. R. Inspector of Lighthouses on the Austrian Littoral, and Herr Oberingenieur Richard Hänisch, the Government Engineer of the works; with the contractors M. Antonio Topich and his eldest son M. Serafino. The "Scientific Commission" was composed of Dr. Carlo de Marchesetti, Custos of the Civic Museum, Trieste; and Sig. Michele Stossich, a student of Natural History, son of the respected Professor of Botany at the Scuole Reali in the capital of the "Coast-land."

On Sept. 22, shortly after midday, when every item of nature looked its best and brightest, from the clear green of the shallow waters to the deep blue of the sky, we ran past the two sun-bleached rock-lumps, known as the "Manzetti" (bull-calves), and presently found ourselves in the magnificent Porto di San Giorgio di Lissa, where an Englishman still feels at home, and where English feeling is warmer than in many of our colonies. The harbour is one of the best in the region of admirable "Zufluchthafens," landlocked and free from rocks

and shoals; easy of access, and extending about one mile deep by half that average breadth.

On the seaward brow of the north-western ridge that bounds the bay, rises Fort Benting\* (Bentinck), an artless round tower, lately repaired and resembling its neighbour, Fort Robertson; both remind us of the engineer's maxim, "small work, bad work." The latter leads down to the larger square defence, called by the people Forte di S. Giorgio, and by us Fort York; it now serves as a Castello d'acqua (water reservoir); and it can cross fire with Fort Smith upon the other side of the harbour-mouth. The *Porto veramente teatrale* (Fortis) is defended to the N.N.W. by a natural breakwater, the Scoglio "Oste" or "Osti," in which we recognise (Commodore Sir William) "Hoste Island;"† the bare and glaring bit of limestone has changed its two old batteries and its ruined barracks for a trim, new green-capped lighthouse.‡ Complete defence against the sea is secured by a rocky prong projecting from the eastern jaw of the harbour. Here Fort Schmidt (Smith), backed by Fort Wellington on the ridge-top, the most elevated of the three martello-towers built by the English, crosses fire with Fort York, and with two more modern batteries, the Seppurinas (Zuparinas), upper and lower; the former generally known as La Manula, after a former Governor-General of the Dalmatian Kingdom. Lissa, condemned by the Reichs Befestigungs Commission of 1870, was formerly defended by about a hundred guns; all were removed in 1873, and the works are made over to a few care-takers.

It is almost incredible that this western "Cavalier" of the bastion of Central Dalmatia between the Rivers Kerka and Narenta; this natural fortress, distant only 150 direct geographical miles from Pola, and 130 from Cattaro, commanding the western terminus of the Mostar-Serajewo-Nisch-Adrianople-Stambul Line, the inner navigation-canals of the kingdom; and, indeed, the middle section of the Adriatic Gulf should thus be abandoned. Despite the example of the English, who, in 1810, thoroughly appreciated its value, the opinion of Tegetthoff has prevailed. The "Austrian Nelson" held that the isolated work must fall unless protected by a fleet, and, therefore, that the latter deserved all his care. Under present circumstances the peril of inviting hostile occupation is recognised, and Austria proposes to convert Lissa into a fortress of the second rank, with a circular tramway; platforms for guns

\* I quote from the latest Austrian hydrographic map, 'Küstenland, Lissa, No. 19,' the admirable work of my friend the Fregatten Kapitän, T. Oesterreicher, Aufnahms-Director im Jahr. 1869.

† There is another "Hoste Island" near the Tierra del Fuego.

‡ Not to be confounded with the outer lighthouse, which we shall pass on our way to Pelagosa Island.



and mortars at the crucial points, and a cistern at each front. The whole would be supported by a coast-guard of 7 or 8 monitors stationed in Port S. Giorgio; and in these days torpedos will not be forgotten.\*

As we steam onwards we leave to starboard the "Porto Inglese," covered by its own batteries, and marked by a small white-washed coal depot. The south-west end of the port known as the "Stanza" (*Statio*, i. e. *navalis*) forms a "Mandracchio," dock or inner harbour, protected by a spit jutting from the western jaw, the Point of S. Girolamo. And here we anchor off Lissa, the city whose age has not yet reached the fourth century. It is a long narrow line occupying a ledge faced by the still waters, and backed by hills rising some 300 to 700 feet; the latter are here fawn-grey with stone-heaps collected to clear the ground; there dark with the scrub of myrtle, juniper and terebinth; and everywhere dotted with patches of the carob (*Ceratonia siliqua*), whose deep metallic green is lit up at this season by points of burning red.† The place, like all the picturesque island-settlements of its date, wears a distinctly Venetian aspect; we see the ex-Queen of the Sea in its many-gabled houses of stone and lime, capped with rusty tiled roofs; its small barred windows and its huge balconies supported by proportionate corbels: a few of the façades are tinted red, but the blues and yellows of the Dalmatian mainland appear not to be in vogue.

Lissa city falls distinctly into three parts. The easternmost is the Kut, angle or corner,‡ which some derive from an English name—Coutts. It contains the Palazzo of the old Venetian Counts Gariboldi, and the lodgings of the English governor are still shown: here too is the solid steeple of S. Cipriano, which, from a fisherman's chapel built in the thirteenth or fourteenth century, became the point of attraction for the new settlement. The Čunkovica gorge, descending from the Altipiano, or plateau of the island, and crossed by a solid single-arched causeway (Pút od Čunkovica), separates the Kut suburb from the main body, which bears the name of *Luka*, or the Bay. The latter begins with the Batteria Madonna, so called from the parochial church whose skeleton belfry suggests peril

\* Two excellent papers by Colonel M——, on the 'Strategische Bedeutung von Lissa,' appeared in the 'Feuilleton of the Triester Zeitung,' December 5-6, 1876.

† The Algarroba, or Johannisbrod, as the German theorist boldly calls it, is about to be planted in India, where, if it flourish as in Syria, it will be a valuable acquisition.

‡ Compare the Sansk. कट्, to make crooked.

of earthquakes: this open work, together with the Wellington Martello,\* did considerable damage to the Italian ironclads, *Formidable*, *San Martino* and *Castelfidardo*, armed with 300-pounders, and compelled them to retire. The Madonna is now fronted by a shady Marine Promenade; the normal yellow Sanità (health-office), bearing the brilliant Austro-Hungarian flag, faces the dwarf Mole; and the neat Marina or quay of cut stone is broken with landing-steps, and garnished with cannon to make fast hawsers; the guns of Dubourdieu's ship *La Favorite* having thus been utilised. This broad and open esplanade, the glory of Dalmatian towns, forms a curious contrast with the single longitudinal alley-street and the cross lanes which certainly were not built to accommodate the coach and four. The Lùka ends at its Castello, a sturdy three-storied square tower with two angle-turrets or sentry-boxes projecting from the battlemented parapet: once useful to keep Saracen and Turkish pirates at bay, it is separated by a wide, clear space from the Mala Banda (Banda Piccola). This west-end occupies the bottom of the bay: its main features are the Chapel of Santo Spirito, the old Government House now occupied by its owner; the foreground of boats in the caulkers' hands, and the background of tenements creeping up the Bandarica hill. Beyond the western suburb begins the antiquarian interest of the bay; the Gradina, or old town (Issa), which we shall presently inspect. The island of Lissa, the Vis of the Slavs,† is so rarely mentioned in later works of English travel that, before proceeding to its antiquities, I ask leave for a few lines upon its topography and its annals. It is the westernmost of the great group which, disposed almost upon a parallel, ends the Dalmatian Archipelago to the south; the latitude of the apex is N.  $43^{\circ} 1' 43''$ ; its long. E. (Gr.)  $16^{\circ} 6' 54''$ ; it lies 12 direct geographical miles to the south-west of Lesina, city and island; 36 from the Dalmatian continent, and 65 from Monte Gargano. The length from east to west is 9 miles; the maximum breadth 4, and the circumference about 23. The distribution is into the "Gemeinde" (*Communes*) Lissa or Vis, and Comísa or Komiza, whose headquarters are united by a good road, easily covered in 2 hours. The former contains 3540 souls, of whom 3013 occupy the town:‡ and the whole island is rated at 8000: there is a single

\* Armed with three 60-pounders and one 30-pounder mortar.

† Vis would mean a height or a mountain-top: it is another instance of the curious facility with which the Slavs corrupt classical terms, retaining the general form of the original and adding a meaning of their own.

‡ The people, always apt to exaggerate in these matters, prefer 4500 for the capital. I borrow my figures from the 'Allerhöchste Kaiserreise' &c., Vienna, 1875, by my learned friend, Dr. (Professor) Franz Coglievina of Cherso.



Volkschule (Scuola Provinciale) and a Kuratstation (Curate-Station) at Lissa city.

The shape of the island is a long parallelogram with two breaks, the Porto di S. Giorgio on the eastern short side, and the Vallone di Comisa, contained between two long prongs stretching due west and south-west (mag.) The outer walls are stony ridges rising from 470 to 610 feet above sea-level and declining quaquaversally to the fertile plateau which, averaging 400 feet high, forms the body of the island; the valleys are rich, but the uplands in general want water. The necessary is poorly supplied by a cistern; the single spring near Comisa is reported to be brackish. The apex is "Monte Hum,\* a bald and flattened cone, numbering 1868 (Austrian) feet, on the south-west of the island.

The history of Lissa has hardly been treated as it deserves. About the middle of the last century a literato belonging to the now extinct house of Caramaneo (*Slavicè* Karamanovich) made extensive studies. He fell into bad odour for proving, in a learned dissertation, that the relics of Saint Domnius at Spalato have no just title to honour; and his manuscripts are now, I am told, scattered amongst the descendants of his fellow-citizens. In 1772 the Abate Fortis† seems to have found the weather too hot for studying the *Vestigj miserabili*, whilst he notices at Zara (I. i. § 5, p. 17) three Greek tables from the island, apparently part of a Pésphisma, with fragments of the senators' subscriptions. Notes have also been published by Major Catalinich, of Zara, in his 'Storia della Dalmazia,' and by Professor Weber; but I was unable to find their works. The readiest source of information is the 'Manuale del Regno di Dalmazia,' annually published, since 1871, by Signor Luigi Maschek,‡ Councillor to the Luogotenenza of Zara. He borrows largely from the 'Prospetto Chronologico della Storia della Dalmazia,' and from vol. i. of the 'Memoria sulla Dalmazia,' by the Avv. V. Lugo. His historical and statistical details concerning the coast and the archipelago will be valued and acknowledged when the increased visits of strangers from the North shall call for a 'Handbook of Dalmatia.' Finally, I am

\* "Monte Hum" and our "Mount Hum" are pleonasms. "Hum," literally a hillock, and understood as *Sommità*, is almost a generic name with the Illyrian Slavs, as Monte Maggiore with the Italians. Thus, there is a "Hum" in Sabioncello, Lesina, Lagosta, Brazza, Montenegro, and other adjoining places. The vulgar sometimes pronounce the word like "Ghum," with the Arabic "Ghayn."

† I have noticed his meritorious labours (*Viaggio in Dalmazia*) in my paper on the 'Long Wall of Salona,' &c., *Anthrop. Inst.*, 1875. He was translated into English and printed by J. Robson, MDCCCLXXVII., in a folio of 584 pages; with the map and illustrations of the original, and, like it, without an index. The pages in the text refer to the Venetian folio of MDCCCLXIV.

‡ In my paper on 'Salona' (p. 276), the name was misprinted *Maschele*.

assured that the Abate D. Apollonio Zanella, of Bergamascan family, now of Lissa, a good Latin and Greek scholar, and a diligent student, whose fortune allows him to exchange parochial for literary labour, is preparing an exhaustive history of the classical island.

The glorious harbour of refuge, the amenity of the climate, and the fertility of the soil, must have attracted immigrants to Lissa before the dawn of history. Signor Lugo shows that a colony of Pelasgi, or Archaic Greeks, from Ægean Issa, or Isse\* (Lesbos), first occupied and named the island in memory of their old homes. Presently uniting with the Liburnians, the most powerful tribe of the northern mainland,† and associating with the Etruscans of Adria, they called that part of the Adriatic the Liburnian Sea. Its autonomy was subverted by the Tyrants of Syracuse. About B.C. 402 Dionysius the Elder occupied it by a colony, and gave it a place in authentic history. Between B.C. 384 and 380 these newcomers threw off the yoke of the old country; and, aided by the Issæi, defeated the Illyrians, especially the Ardiæi, whom Strabo § (vii. 5) calls Vardæi, and Ptolemy (ii. 16, § 8) Οὐαρδαῖοι; and shortly afterwards they founded Epetium (*hod.* Stobrez), Tragurium (Traù), and Lissus (Alessio), on the mainland. During the First Punic War Duillius gained his naval victory with the assistance of the Liburnians and of the "Lembi Issaici," manned by a brave and hardy race of seamen, by no means extinct. In B.C. 240 Agron, son of Pleuratus, king of the Illyrians, and his allies the Liburnians, successfully opposed the Issæi of Tragurium and Epetium, who attempted to annex the broad lands bounded by the Titius River (*hod.* Kerka) to the north, and by the Tilurus (Cettina, or River of Almissa) to the south. He was, however, unable to subjugate the island which the Romans, after conquering Sicily, in token of gratitude, had taken under their protection (B.C. 242).

In B.C. 229 Issa was blockaded by the fleet of Teuta, widow of Agron, who governed in the name of her stepson, Pinnes, a minor; and, ten years afterwards, it was occupied by Deme-

\* Strabo, i. 3. Lesbos afterwards took the name of Mitylene from its chief city, and retains the word in a corrupted form. The oldest name thus appears in Lycophron (Cassandra, 219-20):—

Ὦς μή σε Κάδμος ὤφελ' ἐν περιφύτῳ  
ἴσῃ φυτεύσαι δυσμεῖων πόδῃ γέτην.

Thus rendered by Jos. Scaliger:—

Atque utinam in Issa te (Prylin) Camillus insula  
Non procreasset, hostium nostrum ducem.

See vol. iii. p. 1129. Müller, Lipsiæ, MDCCCXLI.

† Liburnia began at the Arsia flumen (*hod.* Arsa) of Istria, and ended with the River Titius, now the Kerka of Sebenico.



trius, Tyrant of Pharos, acting in the name of the Illyrian queen.\* When the latter, beaten by the Great Republic, became a suitor for peace (B.C. 219), the Issæi were freed from paying tribute to her. They again assisted Rome in her struggle with Philip of Macedon, son of Demetrius (B.C. 200–197); and, as her friends and allies they retained their autonomy, despite the efforts of Gentius, the last king of Illyris,† who, in B.C. 167, after a month's war, surrendered himself to the all-absorbing Republic. Issa, the city, was an important place in the days of Cæsar, and at that time, as now, the island had two principal settlements; one bearing its name, and the other called “Meo,” which is probably represented by the modern Comisa. Finally, in A.D. 42, M. Furius Camillus Scribonianus, proclaimed Emperor by the Dalmatians in opposition to Claudius, but disowned by the legionaries whom he commanded, took refuge in Issa, where he was killed by the soldier Volaginius, in the arms of Claudia his wife.‡ For many a generation after that event Issa almost disappears from history.

This active alliance with the Romans, and perhaps her excellent growths of wine, recommended Issa to the notice of the classical poets and geographers. Scylax Caryandensis (fifth century B.C.) mentions “*Ἰσσα νῆσος καὶ πόλεις Ἑλληνίδες αὐταὶ* after *Φάρος* (cap. xxiii.). Apollonius Rhodius (*Ἀργοναυτικῶν Δ*, 563–5) writes:—

*τὰς δ' ἀπέλειπον ὅσαι Κόλχοισι πάροιθεν  
Ἐξείης πλήθοντο Λιβυρινίδες εἰν ἅλϊ νῆσοι  
Ἰσσά τε Δυσκέλαδος § τε καὶ ἱμερτῇ Πιτυύεια.*

\* The four principal epochs of Issan and Lissan history, are—

1st. The blockade by Queen Teuta (B.C. 229).

2nd. The occupation by Demetrius of Pharos (B.C. 219).

3rd. The occupation by England after the expulsion of the French (A.D. 1812–15).

4th. The attack of the Italian fleet, which ended in the naval victory of Austria (July 20, 1866).

† The historian Mr. E. A. Freeman, has adopted the general opinion that the Illyrians are represented by the people of Albania, “one of those ill-fated portions of earth,” says Arnold, “which, though placed in immediate contact with civilisation, has remained perpetually barbarian.”

‡ It is said that his sepulchre was found in 1710; but I failed to procure any information about it.

§ In my paper on ‘Salona’ (p. 280), I have mentioned the usual interpretation of *Δυσκέλαδος*. But may not the epithet “harsh-sounding” better apply to the neighbouring Island of Pelagosa, whose roaring and spouting caverns resemble those of *Μελίτη* (*hod. Meleda*)? The latter have been the subject of a modern volume, ‘*Bericht über das Detonations Phänomen auf der Insel Meleda*,’ &c., von Paul Partsch, Wien, Heubner, 1826. In pp. 101–102 the learned author quotes fifteen publications upon the subject: he approves of Herr Littrow, and he is severe upon Herr Sterlin. Finally, he adopts the “*Einsturz-Hypotesie*,” rocks falling in the hollow bowels of the earth, as the general cause of the mysterious sounds.

Scymnus Chius (first century B.C.), in his *Περὶ ἡγησις* (413-14), makes it the hegemon of the Illyrian Archipelago:—

Νῆσος κατ' αὐτοὺς δ' ἔστιν Ἴσση λεγομένη  
Συρακοσίων ἔχουσα τὴν ἀποικίαν.

Strabo (ii. 5 and vii. 7) places it correctly, and mentions its colony, Tragurium. Not so Pomponius Mela (ii. 7, *Mediterranei Maris Insulæ*), who, nearly a century after the geographer of Pontus, throws the Archipelago into complete and inextricable confusion.\* Pliny (Nat. Hist. iii. 26, &c.) correctly places Issa opposite the mouth of the Iader, or River of Salona, and mentions the Issæi and the Epetines, "nations inhabiting the islands, the former having the rights of Roman citizens." In Ptolemy (ii. 16, § 14) we have the following table of longitudes and latitudes:—

Τῇ δὲ Δαλματία νῆσοι παράκεινται

Ἴσση καὶ πόλις . . .	Long. $\mu\beta \gamma'$ ( $42^{\circ} 20'$ ) . .	Lat. $\mu\gamma$ ( $43^{\circ} 15'$ ).
Τραγοῦριον κ. π. . .	" $\mu\gamma$ ( $43^{\circ}$ ) . .	" $\mu\beta \alpha' \delta'$ ( $42^{\circ} 45'$ ).
Φαρία κ. π. . . . .	" $\mu\gamma$ ( $43^{\circ}$ ) . .	" $\mu\beta \gamma'$ ( $42^{\circ} 50'$ ).
Κόρκουρα ἢ μέλαινα . .	" $\mu\delta$ ( $44^{\circ}$ ) . .	" $\mu\alpha \alpha' \delta'$ ( $41^{\circ} 45'$ ).
Μελιτινὴ νῆσος . . .	" $\mu\delta \sigma'$ ( $44^{\circ} 10'$ ) . .	" $\mu\alpha \gamma'$ ( $41^{\circ} 20'$ ).

Here his latitudes are tolerably correct; whilst he places Trieste (Tergestum Colonia) in N. lat.  $44^{\circ} 55'$ , or nearly one degree too far south. Issa holds high rank in Agathemerus (*Ἀγαθημέρου τῆς Γεωγραφίας ὑποτυπώσεις ἐν ἐπιτομῇ*. Hudson's Geog. Script. Gr. Minores), who during our third century made in two books extracts from Ptolemy and earlier writers. His words are *Εἰσὶ δὲ καὶ ἐν τῷ Ἀδρίᾳ νῆσοι παρὰ τὴν Ἰλλυρίδα, ὧν ἐπισημότερος Ἴσση, καὶ ἡ Μέλαιμα Κόρκουρα, καὶ Φάρος, καὶ Μελίτη, ὧν ἀγνοῶ τὰς περιμέτρους* BIBL. A'. πεφ. ε', p. 156, *Σύλλογος*, &c., by the Brothers Zozimas, Vienna, AΩZ.

Issa, I have said, † almost disappears from history after the death of Scribonianus. She was alternately Roman, Byzantine, and autonomous. As Salona and the lowland cities of Dalmatia, the extensive commerce and navigation of the Archipelago must have suffered severely from the invasions of barbarous

\* His order, or rather disorder, is Apsoros (Ossero, Cherso, Lussin Island), Dyscelados (Lissa? Pelagosa? Brazza?); Absyrtis (Unie? Pago? compare Strabo ii. 5), Issa; Pityia (Pityusa or Porto Tolon, Santo Andrea?); Hydria (?), the Electrides (cf. Pliny. iii. 30; while Strabo, v. 1, denies their existence off the mouth of the Po); Nigra Coreyra (Cuzzola); Tragurium (Traù); Diomedea (the Tremiti); Estria (?); Sason (Saseno, Sasino, Sasono or Sasso off the coast of Albania); and, finally, returning from south to north, Pharos (Lesina), which is described as "adjoining Brundisium even as another (of the same name) lies near Alexandria."

† These notes on the history of Lissa in the dark ages are taken bodily from M. Maschek (*loc. cit.*).



hordes, the Ostrogoths (A.D. 393), and the Visigoths (A.D. 395); and, perhaps, not less from the rage of monachism introduced by the example of Saint Jerome (ob. A.D. 420) the Dalmatian. About A.D. 449, the Bosniac Slavs, driven by the Huns westward from the Danube, occupied the island; hence the Slav innervation of the present race. They were followed by another "Tempest of the Tribes," as Jornandes calls it; incursions of the Vandals, the Sarmatæ (A.D. 457), the Suevi, the Heruli, the Avars (A.D. 610), and the Croato-Serbs in A.D. 640. About the middle of the seventh century, the island, now Slavic, belonged to the empire of the East, as the Teutons to that of the West; and the cession of Dalmatia, by Carolus Magnus, to Byzantium in A.D. 808 confirmed its position.

But darker days were in store for it, and nothing can be more dreary or monotonous than its history: indeed the same may be said of mediæval Dalmatia in general. Between A.D. 837-864, the Narentan pirates became the pest of the Adriatic: they made themselves the *Maximi Venetorum emuli*; they did much harm to *tot populis Sclavoniæ nostræ*, and they retained possession of the islands for a century. In A.D. 867 came the Saracens, then apparently in league with their fellow thieves.

In the tenth century Venice determined to crush her piratical enemies, and her Admiral, Bragadin, recovered Lissa from the Narentans (A.D. 996). Probably at this time, its darkest hour, the classical city became a ruin, and the inhabitants exchanged the coast for the interior, where they occupied detached villages. In A.D. 1075, the Doge Domenico Silvio utterly destroyed the Normanno-Narentan fleet, with all their works and establishments upon our island. About the same time Zvonimir-Demetrius, King of Croatia, permitted Lissa, like Brazza and Lesina, freely to trade with his dominions. Venice, all powerful in A.D. 1143, allowed in A.D. 1184 her rival Ragusa to supplant her in the protectorate of the island, and, in A.D. 1242, the Commune of Lesina began to exercise a jurisdiction which lasted till late years. In 1278 (April 1), Lissa and Lesina, suffering from the pirates of Almissa, applied once more to Venice, who incontinently occupied the two: each was ruled by its own Provveditore, subject to the Provveditore Generale of Zara.

The descendants of the old Issæi, driven from the dangerous coast to the interior, held in the fifteenth century their capital at Velo-Selo,\* the Great Village, in contradistinction to the

\* In Russia we find the same word, as in Tsarköe-Selo. But the northern dialect, whose accents, irregularly distributed, form one of its difficulties, places the ictus on the ultimate vowel (Seló), whilst the Illyrians and the Slovenes,

minor settlements. Lying south of the new city, and north of a fine upland plateau rich in vines, it appears upon the map as Sventinovich, a mere corruption of Svetinij, the P. N. of the present proprietors, who, in Dalmatia as in Istria, often give names to the villages. The only remnant of this rustic capital is the chapel of the Gospa od Veloga (La Madonna del Villagio Grande). Velo-Selo was destroyed in A.D. 1483, by Ferdinand of Naples, and again in A.D. 1571, by the Catalonians and the Turks, under Sultan Sulayman III. The people have preserved the memory of the Ottoman Raid in their "Pisma" or songs accompanied by the single-stringed "gusle" or the three-stringed "Lira." As these hereditary legends are fast fading into oblivion, I may be allowed to quote a specimen.

Kukuriku Velo-Selo ;  
Do tri danka ne veselo ;  
Doci Turci, Katalani,  
Ostaćete svi poklani.

These rhymed hectasyllabics\* may thus be rendered :—

Arouse thee, Old-Town !  
Within three days, to thy sorrow,  
Come the Turks and the Catalans.  
All (of you) will be massacred.

The song, which has some eighty stanzas, and which shows undying hate of the Turk, refers to the "atrocities" of the day when, after vainly attacking Cuzzola Island, on the Fête of the Assumption (August 15, N.S.), 1571, the barbarians, headed by their Capodan, "Uluzali," fell upon Lissa, whose two wealthy and populous burghs were entirely unprepared ; and slaughtered the inhabitants of Velo-Selo. The words are supposed to be spoken by a cock which, standing upon the belfry-top of the Madonna Chapel, vainly warned the citizens of the horrors which awaited them.

The well-known volume of the Abate Kačić Miosić (*Razgovor Ugodni Naroda Slovinskoga, &c. Po Fra And. Kačicher Miossichiu : U Dubrovniku. Po Pet. Francu Martecchini. Edit. of Ragusa, 1 vol. folio, 1861*), also recounts, p. 177, the glorious defence of the Cuzzolans and of their leader Pomenić. The following three stanzas refer to Lissa ; and the old etymology is preserved :—

Zajceedri nevenselli Turzi  
Katalani nevirni Ajduzci  
Prija zozeh k' Visu dojedrisce  
Ter bogato sello porabisce

possibly affected by the Italians, prefer as a rule the penultimate (Sélo). Thus our captain's name is Lúšina in Slav, Lusina in Italian.

\* Whereas the old heroic songs of the Morlaks are mostly in blank decasyllabics.



Issikosce maloh i velliko  
 Jer se turkom medadasce nikko  
 Kakoseje onda rassellilo  
 Ni danasse nije nasellilo  
 Tuh bih turkom pozlachienu Bada  
 Pak odosce de starogagrada  
 Onde turci mallo zadobisce  
 Vech Varbosku sello porobisce

Thus translated by Sig. Serafino Topich, to whose kindness I owe the loan of the volume.

Discontented went off the Turks, (and)  
 The Catalans, faithless Hayduks (*i.e.* bandits):  
 Before daybreak at Vis (*i.e.* Lissa) they arrived,  
 That wealthy settlement sacking.

They cut to pieces small and great (*i.e.* young and old),  
 These being wholly unprepared;  
 The massacre was so complete  
 That, until this day, it (the town) has not been re-peopled.

There the Turks collected enormous booty, (and)  
 Thence they went to Citta Vecchia (Stara-grad in Lesina);  
 Where the Turks little could rob,  
 Yet they plundered Verboska village.

Shortly after this last event, the Lissans returned to the sea-board, and built the Borgo, which has, therefore, no pretensions to antiquity.

In the early years of the present century, when Europe had not renounced giving "letters of marque and reprisal," the restrictions to which foreign trade was subjected by Napoleon I. produced an immense contraband along the Dalmatian coast and Archipelago. Lissa, then autonomous, once more became the favourite rendezvous of privateers who differed little from pirates, and was partially occupied by Russia. The demand for British produce and the central position of the island invited England to make it the centre of her naval and commercial operations in the Adriatic. She defeated the French squadron on March 13, 1811, and, on April 25 of the next year, she took permanent possession, establishing at the same time a local legislative body. On July 13, 1815, the English evacuated Lissa and the other islands, and, on the general Peace, these passed under the dominion of Austria, who, in 1848, abolished the invidious jurisdiction of Lesina. Finally the Italian fleet attacked the island on July 18, 1866, and two days afterwards was decisively defeated.

The actual trade of Lissa is chiefly contained in wine-growing and fishing. During my visit the city was literally red with the blood of the grape, even as Lesina was slippery with oil in December, 1874. The island maintains the celebrity of which

Athenæus (Deip. 1) speaks in the third century, 'Ἐν δὲ Ἰσση τῇ κατὰ τὸν Ἀδρίαν νήσῳ Ἀγαθαρχίδης φασὶ οἶνον γίνεσθαι, ὃν πᾶσι συγκρινόμενον καλλίῳ εὐρισκέσθαι; and which was asserted by placing the grape-bunch upon the coins. Fortis (1772), opining that the wine *non è gran cosa*, attributed its deficiencies to rude workmanship, or to the disappearance of the ancient growth. If this be true, the island has progressed of late. Her produce is now esteemed, and, whilst want of rain reduces the growth of grain to a fortnight's supply and causes cereals to be brought from Caramania and the Black Sea—no easy matter in 1876\*—a fair average season yields from 70,000 to 80,000 barrels.

The vines are trimmed short and supported by forked sticks. Throughout the Mediterranean regions, the old home of Bacchus, a glance at a vineyard, its stakes and its espaliers, tells the observant traveller where he is. The plant will outlast, in exceptional cases, the century, but the usual limits of its life are twenty-five to thirty years. The invasions of the *Oidium* have been met by the sulphur cure:† here the peasants, a frugal and hardworking race, eagerly adopt the innovations which benefit them, whereas their congeners of Istria and Carniola do not; and there is a noticeable development since the Islanders were freed from the government of rival Lesina. This superior intelligence of the peasantry explains the commanding position of their bit of island, in the days of old, when their colonies of Tragurium and Epetium were equally famous for their wines.

The grape is of eight chief kinds. The *facile princeps* is the Vugáva, a name of uncertain origin, well known to the other islands. This white berry ripens—or, rather, is gathered—in mid-August; it is delicate and liable to injury, and, being dried before crushing, the Eimer or Orna (=56 to 68 litres) of yield diminishes, in the process of manufacture, to some 9 boccali (40=1 Orna); hence many proprietors have given up making it.‡ This wine when kept for four or five years is of superior quality. Next is the Rukalać, also a small sweet white grape, yielding the "Muscato," or Muscadel; and ranking third is the Čerljenak, a red seed. Good average wines are made of the white Balbut, the Kerštićevica, the Biela Loza and the Palarusa. The cheapest is the Plavac, a dark purple

\* The closing of the Black Sea ports will probably drive the trade to the United States. The bread is the worst article on Lissa Island.

† The Islanders have not yet had an opportunity of experimenting upon the latest treatment by "mundic water," the vitriolic supply of pyritic mines.

‡ The same is the case with the "Refosco d' Isola," which requires the grape to dry, and all the stalks to be removed: hence a considerable diminution.



berry, more pleasing to the eye than to the palate. The peasants of the interior still trample their produce; the city uses the newest presses, and M. Serafino Topich has studied œnology in the well-known establishment of Messrs. Clossmann and Co., Bordeaux.

Vine-growing is the work of veterans and *emeriti*, who thus employ the year: in September and October comes the *Vindémia* (Vendange), when every able-bodied adult is engaged in carrying his harvest; and, at this season, five florins a-day will hardly bribe a guide to leave his work. The younger men willingly engage as sailors, especially between November and May: many have made long voyages, and not a few have learnt English and other foreign tongues. Fishing, which is secondary only to wine-making, employs the months of April and May, October and November. The principal yield is the Sardella (*Clupea*, or *Alosa sardina*), of which during a dark summery night 60,000, 100,000, and even 150,000 head have been taken by a single boat. A poor year produces from 8000 to 15,000 barrels, each weighing between 96 and 100 funti (1·2 lb. avoird.); in 1875 the yield was about 25,000. The other species are the Orate (*Sparus aurata*), and the Dentali (*Dentex vulgaris*) which, caught in winter, used to be prepared with gelatine for the Venetian market; the Sgombri (*Scomber scombrus*), and the Branzino (*Labrax lupus*), which is caught even in port. As usual off Dalmatia and Istria, the Astice (*Homarus vulgaris*) is superb; the poorest meat is the Rasa (*Raja*, or *R. clavata*), caught with the Parrangála, or long line, carrying 200 to 400 hooks. The nets are of two kinds: "La Tratta" requires three smacks, one leading with a light in the bows, and the others following with the net. I suggested for economy of fuel the trial of white-painted boards used by the Chinese on moonlit nights. "La Voiga," a Dalmatian, not an Istrian, term, is worked by a single craft with a crew of five, and only in the dark. Essentially a *rete d'imbrocco*, in which fish enmesh themselves, and a *Sardelliera* (used to catch sardines and anchovies), it is composed of *spedoni*, or square pieces, increased to as many as sixteen if the fish be in large shoals, and the depth is regulated according to requirements.\*

M. Antonio Topich has received a medal from the World's Fair of Vienna for his preserved sardines, anchovies and mackerels; specimens have also been sent to the Exhibition of

\* Details concerning the Istrian fisheries will be found in "La Pesca lungo le Coste Austro-Ungariche," &c.), Memoria del Conte Antonio Marazzi, Roma, 1873), a large brochure. The industry in Dalmatia also has produced a little volume published during the Weltausstellung of Vienna (1873).

Philadelphia. He salts them to a certain extent, and then cures them with the finest oils: they are packed in tins made upon the island, with labels from Vienna. A century ago the main difficulties were the scarcity and the high price of salt: the necessities of the Austro-Hungarian Empire, like those of India, perpetuate the obsolete and unworthy gabelle; but the fishermen are favoured by Government, when they buy at Spalato the produce of the Istrian Salinas of Capodistria and Pisano. The general evil, here and in every item of the Dalmatian Archipelago, is the deficiency of communication: Lissa lies under the shadow of a great monopoly, and is limited to a single steamer-visit per week. Hence the abundant use of the telegraph, which is, however, somewhat like living on extract of meat instead of bread. Nor can the Islanders be held wholly faultless; they will not help themselves—they will call upon Hercules, the Government. Politics run high, and are aggravated by such retrograde *codino* or pig-tail (Ultramontane) prints as the 'Avvenire' of Spalato, a peculiarly vicious specimen. Local quarrels are fierce: it is popularly said that two Dalmatians cannot live together in a town without a quarrel; and yet I know of no race which to the stranger appears so genial and so sympathetic.

As the excellent vine is utterly neglected at Cherso, so at Lissa the olive does not prosper; and many declare that, like the date-palm and the cocoa, Bacchus and Minerva do not cohabit comfortably, as the "lamentable epitaph" says:

"Non bene conveniunt, nec unâ in sede morantur."

Fortis found a small trade in fruits of sorts; apples and pears, oranges and *agrumi* (lemons), melons and water-melons, figs and prunes, almonds, mulberries, and carobs: these are now barely sufficient for local consumption. The honey is excellent, despite a treatment worthy of prehistoric days; but it is produced in small quantities. The wool is poor, and the women use it in making *maglie* or *calze* (breeches). The only important form of "la petite industrie" is now rosemary-oil, of which the peasants annually retort some 20,000 funti (1·2 lb.), each worth from 90 soldi to nearly a florin. When the steamers touch at Lesina the passengers are offered small flasks of this essence, costing 20 soldi.\*

We cannot, I have said, expect to find ancient buildings at Lissa. In the back-streets behind the British Vice-Consulate you are shown the Popina-Kuča,† the Pope's Houses, where

\* The other curiosity of Lesina is a kind of lace made of aloe-fibre.

† Popina, the local mispronunciation for Papina, fem. of Papin, adj. Papal. Kuča, pl. of Kuća, a house. Hence the two heretical Russian sects, the Popovčina



Alexander III., when travelling from Rome, was received by Rainerius, Archbishop of Spalato. The little row of three old tenements is now tenanted by a Comisa family of the working classes, nicknamed by the people Muljat-Popini—Muljat the Papals. After leaving the island I heard of a “Phœnician tablet” built up in the house-wall of a certain Sig. Rendich, at the corner of the Piazza Opatia. The drawing sent to me by M. Serafina Topich shows a shield-formed field, 45 centimètres long by 35 broad, with a palm bearing fine branches on each side, and flanked by “Phœnician letters.” Most readers will agree with me that the figures are more probably the armorial badges of some baronial house.

The ruins of the classical town opposite Lissa, which we shall presently visit, have proved, like Aquileja, a mine of antiquities. Here was exhumed the beautiful specimen of Greek art, the tombstone which attracts every eye in the Museum of Spalato. According to D. Apollonio Zanella, it was one of 17 ranged in two tiers, upper and lower. The local collections are all private, and it is regrettable that the Lissans have not set apart a room or two for their antiquities, which lose half their value by transportation. The city boasts of a reading-room, and a map-room; but the *Museo*, though often proposed, has still to be established.

At the British Vice-Consulate an upper room has been filled with the finds from Pelagosa, which will be noticed when we visit the island. The articles from old Issa are a massive semi-circle of terra-cotta, like the upper vault of an arch; a corner-stone, probably of a tomb, with five colonnettes and six guttæ below; and a fine cotta medallion showing the head apparently of a Juno in high relief. The Reverend, summoned to Zara immediately after our arrival, could not show us his collection: the only items we saw were four noble specimens of the black and coloured ware usually called “Etruscan,” cenochoës of claret-jug shape, the handles ending above in animals’ heads. The Podestà, Cav. Pietro de Dojimi, an old and famous Lissan family, exhibited a large quantity of pottery, none equal, however, to those of the Abate; sundry coins of Roman emperors, and a few islanders. The moneys of the Issæi are mentioned by Fortis (ii. § 5, p. 164). In his day, however, only two types were known, one with an amphora and the other with a goat on the reverse, the obverse of both showing a helmeted head of Pallas facing dexterwise. The Biblioteca Patria of Zara \* in-

(with priests) and the Bespopovčina (without priests), as opposed to the Yeress, or pure schismatics.

\* P. 173. Printed at Zara in 1863. The notices of the coins are by Dr. George Pullich, under the librarians SS. J. Danilo and J. Boglich.

forms us that some 600 specimens, between Greek and Roman, had been found: amongst them eight types, varying in diameter from 0·015 to 0·023, denoted those of Lissa. In most of them the obverse varies in minor points; one has a bunch of grapes, and the reverse with a horse pacing to the right, and the legend  $\text{I}\Sigma$ . The reverses of the rest show the stag, standing or courant to right, or the goat standing and facing dexterwise. We were told of a coin bearing a galley, but I can find no notice of it in books; perhaps it was struck to commemorate some Roman victory.

There is a grand ossuary\* of full size, and the finest glass, with scanty iridescence, which had been found in a pot and cover of coarse stone. The lachrymals are numerous, and the flasklet of blue glass, with a Medusa's head standing in high relief, on both sides of the lower and somewhat compressed bulges, is of admirable manufacture. Another gem is a ring of pure gold, plain and twisted above, a shape which might be found to-day: it was taken with sundry coins from an ordinary terra-cotta vase. In the façade of the Podestà's house are set two Greek inscriptions rudely executed.

Dr. de Dojmi, the eldest son of the family, who had travelled as far as Baghdad, accompanied us to the westernmost point of the Banda Piccola, where the antiquarian interest of Lissa begins. Here the open *place*, bounded northwards by vineyards and kitchen-gardens, bears amongst the Slav population the names of Mrtvila,† dead man's ground, or Grabišcie, the graves; and here, to the south of the classical city, lay the cemetery, as was usual in Dalmatia. It extends to the foot of the bulge still known as the Gradina (old town), a lump of limestone rock,‡ thinly covered with fertile humus, divided off by dry walls, and grown with many vines and a few carobs. In a garden belonging to the Podestà we were shown a standing pillar, with a Greek inscription not easy to decipher; two fragments of Latin inscriptions on broken slabs, and a large statue of white marble, whose head had apparently been borrowed from another.

The English visitor to Lissa will probably inspect the Cemetery at the root of the rocky headland crowned by Fort Smith, where lie the forty-five officers and men § killed in action on

\* Many of these urns still contained bones almost consumed by the fire.

† Fem. plur. of Mrtvila, from Merti or Mrèti, to die. In the Slovene dialect, further north, Mrtvila would signify "lethargy," or sleepy sickness. So Grob is a grave, and Grobje, or Groblje, a graveyard.

‡ The best maps and plans hitherto published depress the Gradina in favour of the Bandarica, the more substantial feature to the west.

§ A large proportion to the wounded, who numbered 145 (James), or about 1 to 4, showing the severity of the struggle.



March 13, 1811. Sig. Antonio Topich, one of the principal citizens on the island, has for years kept the graveyard in excellent condition, solely at his own expense. These memories of English prowess are often locally preserved, when at home, where men have other things to think of, they fall into oblivion. I rejoice to add that in 1875 her Majesty's Foreign Office appointed the generous islander British Vice-Consul for Lissa.

The Cemetery, which is not noticed by Wilkinson (1848), nor by Neale (1861), is reached by boat in a few minutes from the city. It is marked by the little chapel of Saint George and the ruins of a battery. At the entrance of the masonry *enceinte* are two inscriptions on slabs of white marble. That to the left tells us "I freddi avanzi qui sepolti sono dei Britannici Eroi che in mare perirono della patria in difesa e in onore del Trono." The other, in English, evidently cut at Lissa, bears the date MDCCCXV. The gate leads to a central walk, metalled with pebbles, and bordered with the luxuriant and graceful American aloe. The first monument erected over officers and men bears inscriptions which date Feb. 22, 1812; in the centre of the walk lies a flat slab, preserving the name "Honourable Charles Anson,"—his grandson, now in the Besika Bay fleet, lately placed on it a wreath of immortelles,—and easternmost, a pedestal, without date or legend, bears a scalloped cap somewhat like the funereal Turkish turban. Near the south-west corner, three heaps of earth cover the remains of sixteen Austrian artillerymen and infantry: they were killed on July 19, 1866, the day before the second naval battle of Lissa, by the explosion of the powder-magazine in Fort Smith,\* under the fire of four Italian ironclads, before the latter were compelled to retire by the Madonna Battery near the head of the harbour.

My first visit to Lissa ended (Sept. 27) with a walk to the Gradač, on the northern coast, about the middle of its length. Guided by Sig. Serafino Topich, we passed through the Banda Piccola suburb, remarking that, as usual in Dalmatia, many of the houses are approached by flights of steps. Traversing the Grabišcie, or Grave Valley, now well grown with grapes, we struck *the Dol*,† a longitudinal depression, which divides the island into two systems of highlands, the southern half being the more important. It presently becomes the Samogor, trans-

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\* Captain Brackenbury, in his able sketch of the action ('The Times,' August 14, 1866), calls this work by its Italian name of S. Giorgio.

† Meaning a valley in general: the diminutive is Dolina, a pretty word extensively used.

lated "bosco isolate," \* and under the name of Valle di Kostrina it unites with the Vallone and Port of Comisa, distant about 11 miles to the west. In this direction the depression gradually rises some hundred feet towards the northern foot-hills of "Monte Hum," and the inverted ogive is protected by Fort Maximilian, at the beginning of the inclined plane, which falls towards the Western Sea. The principal wild growth of the soil, which is reddish like that of Istria, is the *Agave Americana*: its leathery skin, well provided with stomata, enables it, like the cactus of Africa, to live almost by breathing, to resist the most powerful suns, and to flourish upon the barren rock. This is the Maguey which supplies Mexico with the fermented pulque and the distilled mezcal. It thrives gloriously in its island home, whilst in India it loses its qualities, its beauty, and its majesty. The carobs had been frost-bitten. The average maximum of cold is  $0^{\circ}$  R. = ( $32^{\circ}$  F.), but in 1875-76 the temperature fell, I was assured, to  $-6^{\circ}$ , and even  $-7^{\circ}$  = (F.  $18.50^{\circ}$  and  $16.25^{\circ}$ ).

The peasants were busy driving mules, ponies and asses, laden with large skin-bags containing grapes partially crushed for closer packing; and all were exceptionally civil. The women wear sailor-hats, home-made of straw, and trim their hair in a single flat curl on each temple, suggesting the English "aggravator." Their husbands, especially when belonging to the Slav or national party, affect red caps, and the peculiar Montenegrin "fez" is not wholly absent. Hard work and harder fare have the usual effect: the good Maté (Matthew) Radissié, who accompanies us, is only fifty-two, and looks seventy. He quotes the proverb, "Acqua fa male e vino fa cantare;" but his untimely old age, poor fellow, owes less to excess than to want of it.

In the Samogor we saw the inland powder-magazine, at which many an Italian shell had been vainly directed. Most of Persano's officers had served in the Austrian navy, and they well knew where to shoot. From that point we turned north-west, and followed the rough foot-track winding up the lateral valley Drascovca. The total of an hour placed us at Zapaklinica, † where, according to local tradition, lay the city of Teuta, widow of Agron, who is known to every Lissan as Kraljica Otaka, Queen of the West (?), ‡ and suggests the curious ques-

\* From Samo, alone (solus?), and Gora, a hill or an upland wood, the Spanish Monte. In Slovene Sámó would mean self, e.g. "samoljubac," a self-lover, an egotist.

† Pronounced Zápaklínitsa. Some derive the word from Kopati, to dig, grub: others translate it, at the little pitch (-pine hill). Pakliti would mean to apply Paklina or pitch: Pakla is Hell. In fact the etymology is dubious.

‡ The people translate the word Queen of the East, which is Istok (Iztok)



tion whether *Teŭta* is a corruption of *Otaka*, or vice versa.\* The historians of Rome tell us only that the first Illyrian war was caused by the unrepressed piracy of her subjects; that she vainly attached Issa (B.C. 229), which had placed itself under the Ægis of the great Republic; that she assassinated one of the two brother-ambassadors sent by the Romans, and that sundry defeats compelled her to buy peace (B.C. 227–28) at the cost of paying tribute, and of yielding her fleet, together with the greater part of her dominions. But we are nowhere told that the gallant Queen ever dwelt at Issa.

Nothing can be more charming than the site of Zapaklinica. The city, now a succession of small vineyards parted by dry walls, rose at the head of a slope gently falling towards the deep blue waters on the north-west. Eastward, or to its right, swells the bush-clad *massif* of Vissokaglavica: † it is fronted on the west by the “Kompris,” banded with naked rock, and by the “Smokvaglava” or Figs’ Head—Raas el-Tín—similar in

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opposed to Otok, the west. Possibly *Teuta* may have been a royal title, not a name, for we find the first wife of Agron called *Triteuta*.

\* Fortis, when discussing the origin of the Morlaks (vol. i. c. 2, p. 45), adduces the following 20 names of towns, tribes, and persons, from the classical historians and geographers, to prove that the Slav tongue was spoken in Istria and Dalmatia during Roman domination; *Promona* (P. N. of City, Keltic?), *Alvona*; (*hod.* Albona, certainly Keltic); *Senia* (Senones?); *Jadera* (corrupted from *Diodora* or v. v.); *Ratanenum*; *Slupi*; *Uscana*; *Bilazora* and *Zagora* (both significant in Slav); *Tristotus*; *Ciabrus*; *Ochra*; *Carpatus*; *Pleuratus*; *Agron*; *Teuca* (*sic*); *Dardani*; *Triballi*; *Grabæi* (significant in Slav); and *Pirustæ*. He notes three Greek similarities, evidently borrowed, viz., *Spugga* (σπύγγος); *trapeza* (τράπεζα, like Sanskrit); and *Katrida* (καθέδρα); and he might have added *Gispod*, from *Δεσπότης*. He gives 12 Latin resemblances: *Salbun* (Sabulum); *Knin* or *Klin* (cuneus, a wedge); *Plavo* (flavus); *Slap* (lapsus aquæ, waterfall); *Vino* (vinum); *Capa* (caput); *Rossa* (rugiada, dew); *Lepto* (lepidus); *Zlip* (lippus); *Sparta* (sporta); *Skrinje* (scrinium); and *Lug* (lucus). He quotes also 12 Italian forms, besides 10 Venetian words, which are evidently borrowed from the Wends, viz.: *Abhajare* (oblajati), to bark; *Sealigiare* (svlačiti), to strip of baggage; *Barare* (vacare or variti), to cheat; *Tartagliare* (tarlati), to stutter; *Ammazzare*, to kill, from *Maç* (mač), a sword, and its derivations, *Maçati* (mačiti), to fight, fence, put to the sword; *Riceo* (srichian), rich; *Tazza* (Cassa); *Coppa* (Kuppa); *Danza* (tanza); *Bisato*, an eel, the common term in Istrian Italian, from *bixati*, to run away; *Bravo!* (Pravo! same sig.); *Briga* (briga), a quarrel. He ends the list with 13 English similarities; *Stina*, stone; *Mese*, meat; *Med*, mead, honey; *Brate*, brother; *Sestra*, sister; *Sin*, son; *Sunze*, sun; *Smule* (glass, mule?); *Mlike*, milk, *Snig*, snow; *Voda*, water; *Grab*, grave; and *Srebro*, silver.

He also anticipates the learned Mr. Edward A. Freeman in noting (i. 2, p. 47) that the Dacians spoke a Slav tongue. As regards the vocables quoted above, if the old Illyrian be represented by modern Albanian, it probably had Indo-European, and especially Keltic affinities, and thus we may explain the remarkable family likeness. It is much to be wished that these words should be examined by Keltic scholars. Finally, though the subject is far too extensive for anything beyond mere mention, I would express my surprise at the modern theory of Schleicher and others concerning the comparative antiquity of the Slav family of languages, than which nothing can be more Sanskritic than Sanskrit itself.

† In Italian rendered “piccola testa alta,” high little head, from *Visok*, tall, and *Glavica*, dim. of *Glava*, a head, a headland, and so forth.

form, but somewhat greener. In front lies the Porto Gradač, an irregular triangle of clear blue water, edged and scalloped with leek-green, forming a natural "Mandracchio," or dock: the cove is parted by a promontory with outlying rocklet, from its western neighbour Porto Chiave. Regular excavations have not yet been made at Zapaklinica, but many remnants of antiquity thence find their way to the city.

Enjoying the cool prospect of the waves below,

"A bowery hollow crowned by summer sea,"

a bath fit for Venus Anadyomene, we wound along the western shoulder of the Vissokaglavica by an elementary track through the luxuriant semi-tropical bush. Here we remarked the Terebinth, the Myrtle, the Arbutus, and the Arum; the Phillyrea (*media*) and the "Divlja Maslina," or wild olive; the pretty heath (*Erica multiflora*), and the lentisk, which supplies the Mastikhe of Chios, the only island now producing the noble gum on a large scale; the Juniper of the two normal species, especially the *J. macrocarpa*, with edible berries; and the pine (*P. maritima*), which towers over the humble growths.

After thirty minutes' walk we struck the neck of the Isthmus that forms the eastern pier of Porte Gradač; and we rested at the Taddeina-gradja, a line of low cattle-sheds roofed as usual here with Zimble or slabs of fissile limestone: the place takes its name from the family that owns it. Thence we proceeded to the headland still called Gradačski-rát\* or "old town point"; where the castle of Queen Teuta is placed by local tradition, and where she buried, before her flight, the treasure vainly sought by a host of gold-hunters. The greater length of the little peninsula stretches to the north-west, and is cliff-bound and precipitous everywhere save towards Porte Gradač on this south-western side. The easy slope shows two modern cisterns. The *terre pleine* bears evident signs of levelling, and the thinness of the soil, which is not worth ploughing, has preserved it from disturbance. The circuit has been walled wherever access was possible: in most parts the foundation is level with the ground; but at the neck there is a tall mound of débris which might prove productive. Across the narrowest part stands a fragment of wall, 15 mètres long by 2·30 high and 0·80 thick: the cement contains water-rolled pebbles as large as almonds: this defence, which, at Lissa, was described to us as classical, may have been built by the Venetians or even by the Slavs, possibly on an older base. The point commands a lordly view

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\* Rát, meaning a headland or rocky point, is a frequent ending of words in maritime Dalmatia.



of the beautiful islands and highlands of middle Dalmatia, disposed in successive vanishing tiers of white limestone, dyed azure by the limpid air; and to the west over the deep-blue sea, and distant some 33 miles, lies the Pomo-rock,\* exactly imitating a ship under full press of canvas—the tradition is that during some war it was cannonaded by mistake.

From this commanding ground we could sight the spot where the *Ré d' Italia* underlies 200 fathoms of water. The second battle of Lissa was fought on July 20th, 1866, about 10 miles north of the harbour.

We returned to the city by a shorter cut along the eastern flank of the "high little head"; in full sight of the Canale di Lissa, where the Embatte or sea-breeze was creeping down from the north, ruffling the waters into a deeper blue, while the smooth azure slept near the shore. Every bit of plain and hollow had been turned into a vineyard: houses were scattered here and there, and the peasantry of both sexes and all ages were merrily gathering their grape-clusters. The panoramic view of Port Saint George and of Lissa City, faced by its purple bay, and backed by its stony and bushy hills, was as pretty a sight as man would wish to see.

A third rough foot-path debouched upon the venerable Gradina, the classical old town. The site is a bulge of ground rising to the north-east of the Mrtvila flat, and connected by a gentle slope with the higher hills behind on to the north. It is separated by the cove known as the Porto Inglese from a similar hillock to the north-east: here they say appeared a Latin inscription locally believed to "commemorate the defeat of Queen Teuta by a Roman centurion."† It was published by Mommsen (I. 177) luckily before the stone, which measured 80 centimètres by 50, was broken and built up in the nearest

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\* In Slav Jabuka (Yabúka), also meaning an apple. An attempt was made to ascend it, in the spring of 1876, by Herr Spreitzenhoffer, an employé of Government at Vienna, accompanied by Sig. Serafino Topich: the weather was so bad that the explorers could not even land.

† I could not procure, either at Lissa or at Trieste, a copy of Mommsen's *Corpus Inscript. Lat.* The following transcription was kindly forwarded to me by D. Apollonio Zanella, who declares that it was found (1859) in the Gradina upon the property bearing his family name:—

Q. NVMERIVS. Q. F. VEL (velina)  
RVFVS. LEG. PATRON.  
PORTIO(um) REFICIVNDVM.  
DE. SVA. PECVN. COER. (curavit)  
IDEMQVE. PROB.

Sig. Ljubie has also published it in the Fasc. xxxi. of '*Rád Jugoslavenke Akademije*' (Agram, 1875), in which he attempts to complete the series of the Prætors, Legates or Lieutenants who governed Dalmatia in the Roman days.

Martello-tower, shortly before the affair of 1866. Since the historian's visit, some 14 years ago, the work of destruction was continued; and the remains of the Roman hypocaust in the Podestà's property have been buried. The ground, which doubtless still covers many a relic of old Issa, is broken by loose walls forming terraces for the vine: it has, I have said, been a mine of plunder for collectors; and the rains still wash from it coins in quantities, rings and scraps of corroded metal, Cotti of all kinds and the normal cubes of coarse mosaic. The only sign of actual excavation appeared in a cistern, revetted with the finest lime-cement: the contents were brown earth and dusty débris mixed with broken pottery. The foundations of the old walls *in situ* are easily recognised by the size and cutting of the stones: in sundry places the natural rock has been trimmed and squared; and the superincumbent masonry evidently belongs to a later date. The lowest level was occupied, according to local legend, by the Forum: here the inscription was found, and here a worked monolith is an undoubted remnant of antiquity.

The whole sea-face of the Gradina is fronted by a modern dry wall, within which are the walls of the older *enceinte*. To the north-east are two masses, apparently turrets, while various tall outstanding buildings, mere shells and shreds of cut stone and lime, rise from the vineyard to the south. We noticed a number of ancient remains built up in the dry wall, such as the volutes of a capital and the pediment of an altar. Nearly opposite the Velinin,\* the little maritime powder-magazine, built not by the English but by the Austrians, is the trunk of a statue, fine Carrara-like marble, 6 feet 5 inches (Austrian) in height, with toga and sandals, the latter apparently unfinished. It was found about 15 years ago in the Podestà's property; and possibly it adorned the forum or the portico referred to by the inscription. The arms are broken off, and the head, bought with five florins, they say, was sent to Vienna by M. Hoffman, a classical captain in the army. At the easternmost bend of the same wall, there is a torso of smaller size, also clothed: its imperfect condition masks to the non-professional its style and date.

From the Gradina we walked to the Point and Convent of S. Girolamo, now a natural mole projecting from north to south, fronting the city and defending the Stanza, or dock, to its west. According to tradition and appearances, it was an island: the narrow channel connecting it with the mainland, and once bridged over, has been filled up by time, whilst around it there

\* Meaning the "Great Wall," so called from a feature once existing there.





are traces of a similar subsidence,—a movement not confined to Lissa. We failed to find the subaqueous mosaics mentioned by Fortis (II. 5, § 1, p. 162), and repeated by Maschek (p. 114 'Manual for 1873'); but the northern shore shows beneath the water large cut stones, supposed to be a mole. A shell of Roman theatre, with the arc opening southwards, forms the terrace of the convent-hospital: the solid masonry at once strikes the eye, and the large stones conceal a core of hard rubble bedded in mortar. The latter was mixed with the usual coarse gravel, and in places we remarked the bits of pounded brick, which in England are held evidences of Roman workmanship.

The convent is rich, and its tenants, the Minori Osservanti, have large estates upon the island. Don Girolamo Marinković, the Padre Guardiano, showed us with some pride a "veritable pepper-plant" growing in the garden. It proved to be the pepper-tree of Gibraltar (*Schænus mollis*), a very different affair, probably introduced by Bill Smith. We also visited the monuments of the thirty-six artillery-men and marines killed under Tegetthoff. The latter were covered by a lion couchant, of tasteful work, by the sculptor Botinelli, domiciled at Trieste. The Italians seem to have thrown their shells without much discrimination: several of the missiles, still unexploded, were rolled by the children down the hill-sides, and some fatal accidents followed the bombardment.

We had not time to exhaust all the memorabilia of Lissa. D. Apollonio Zanella recommended a visit to a tumulus called Stavelo, the place of rest, on the south-eastern shore, near the Valle Rúda, or the Mine. He spoke also of the Caverna di Pretišjana, near Taleska Bay, which we shall presently sight on the mid-southern length of the island, a double feature, whose western section may contain traces of pre-historic man. Above that portlet also are found, on a conical hillock, scatters of cut stones, possibly belonging to an older day. Many of them were used by Signor Topich in 1866, when building the tower which served as a *corps-de-garde*. For additional information he referred us to D. Pietro Borčić, Parroco of Comisa town; to D. Simeone Pietrić; and to D. Antonio Mardossić, who lives upon his own property inland. Even the vulcanism of the Comisa district deserves study. Fortis\* heard of igneous matter; the people talk about conglomerate of lava at the Scoglio Brusnik, alias Molisello; and

\* Viaggio (ii. 5, § 1, p. 166). He mentions Donati's 'Saggio d' Istoria Naturale dell' Adriatico,' and he here shows a wise sceptical or scientific spirit.

my learned and excellent friend, the venerable Cav. Muzio de Tommāsini,\* of Trieste, found near Comisa a diallagite like that of Busi Island, and suspects trachyte. Diallagite is mentioned also by Franz Ritter von Hauer (p. 368, 'Die Geologie,' &c., Wien, 1874). Finally the Comisans show a deposit of gypsum, which may have been converted by heat from carbonate into sulphate of lime.

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## PART II.—*Pelagosa.*

I. *The Voyage; Landing.*—Early on September 23, 1876, *La Pelagosa* steamed out of Lissa to inspect the youngest and the finest of the sixty lighthouses, with which Austria has provided, at a considerable expense, her Adriatic seaboard. Very lovely, even in the dimming scirocco, is the view from the mouth of glorious St. George's harbour. In front, distant some 12 miles, is Lesina, with its ex-French town and port, and its forts Napoleon and Spagnuolo: here low-lying, the island towers high and broken to the east. Behind it rises the dark dorsum of rugged and roaring Brazza, "Capris laudata Brattia;" while the continental horizon-line shows the nick of historic Clissa, acropolis of Salona; the pyramidal buttresses of the Mossor (Mons Aureus), and its prolongation, the Biokovo, or White Mountain, whose pale and tormented brow is faintly streaked with azure light and bluer shade. When the sharp Maestrale (north-wester) has purged the air, the sun picks out every feature with startling distinctness; and, as the last glories fade in the waning grey, the mountains become the wan and unsubstantial phantoms of what they were,—imperial giants, robed in purple and gold. Looking backwards we see the ridge-line west of Lissa city, crowned by the two chapels of SS. Cosmo and Andrea. The Scotchman, being the taller, has been used for an "optical telegraph;" while "Monte Hum," the island-apex, backs, with its naked and couthless form, the fair scene of harbour, city, and bushy slope.

Beyond the jaws of St. George we pass to port a low white rock, "La Vacca," whose two "Manzetti" (bull-calves) we had sighted when making Lissa. Beyond it, to starboard, stand Le Strazzine, tall cliffs, jagged and abrupt, upon whose sea-lashed base, during an Ostro-Scirocco (south-south-easter), an English man-of-war narrowly escaped wreck, with the loss

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\* Since these lines were written, my excellent friend died full of years and of honours.



of her masts. Between this wall and the Promontore, the easternmost projection of the island, the inclines wear a coat of lighter and livelier green. Our Lissan companions remember the days (July 18-20, 1866) when the hill-sides were aflame with the shells vomited by ships and batteries. While the second great naval battle of Lissa was fought about 10 miles to the north, here the land preserves many a memory of the English victory. Beyond the Bight of Strončica,\* translated the "little *Approdo*," or landing-place, we were shown the position of the submerged rock, upon which Captain Hoste, by bold and skilful tactics, succeeded in grounding his dangerous enemy, *La Favorite*, the forty-gun frigate of the gallant Commodore Bernard Dubourdieu. Here the latter, together with his captain and a crowd of the crew, assembled on the forecastle to board the *Amphion*, were killed by the discharge of a "brass 5½-inch howitzer, loaded with 750 balls." It is well to "REMEMBER NELSON," but I hope that some future James will do more justice to the memory of the brave French sailor.† Off that bight, now called "Little Smokova," in Italian "Porto Figueira," where the Torre Telegrafica now stands, *La Favorite*, commanded, after her double disaster, by Colonel Alessandro Giffenga, with an Enseigne de Vaisseau to work her, was set on fire, and at 4 P.M. "blew up with a great explosion." Some of her guns, they say, are still to be seen under water.

Beyond the fine lighthouse which garnishes the Promontore di Lissa, and the "Great Smokova" bight, we sighted the islets forming a false coast along the eastern and south-eastern shores. The first is the "Greben" (*Pectines*),‡ a name and a feature equally common in the Dalmatian Seas; bare rocks with comb-like crests, and bluff to the windward where the Scirocco breaks. Next comes the distorted triangle Budicovač, a two-hilled well-wooded dot tenanted by vine-cultivators: the unfortunate Emperor Maximilian had thoughts of buying it, and probably he was not its first admirer, as two Roman coins have been found there. One of our party, translating the name "Become thou" (budi) "a smith" (kovač), argued the presence of metal, possibly of mines. But the learned D. Apollonio explained the title as "La Sentinella" from buditi, to wake, to keep awake, either because the fishermen here posted a man to look out for squalls, or because the ground is high compared with the little Zaule (Sleep!), the low rock to the west. I was

\* In the Hydrog. Map also Stončica, probably a local corruption of Strančica, s. fem. dim. of Strana, side, flank, slope.

† 'Naval History,' vol. v. pp. 253-56 and 351-53.

‡ The generic Slav word reappears in the Italian "greppi," precipitous cliffs.

reminded of a great Istrian antiquary who found at Castel Venere a stone bearing

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and incontinently rendered it "Marcus Metallus Caji Filius Fecit." It was the old tale of "Bill Stumps his Mark;" a peasant seeing the citizen carefully copying the legend, explained it as the work of his father, and read *Mistro Marco Cocetto fese (feci, fecit) fare.*

South-west of Budicovač lies the Scoglio Ravník ("flat rock"), an arid level whose only claim to notice is a veritable *grotta Azurra*. Dr. Coglievina (*loc. cit.* p. 395) describes it as a tunnel in the limestone cliff, with a two-arched entrance formed by a natural column; and with a remarkably regular interior about 40 feet wide, into which the magical light penetrates by a spiracle, opened in the dome as if by the hand: he declares that in the poetic days of the Greeks this grot would have become a bower for the Nereids. Steaming nearly due south, we left to starboard, and south-west of Lissa, the tall islet-rock Busi: here some 30—40 Corydons feed their sheep and goats, living on milk and fish, a leprous diet, and on bread and wine sent by their employers. Further to the north-west, and 18 miles distant from Comisa, rises the Scoglio Brusnik (the Whetstone) or Molisselo, famed for a peculiar lizard with a coat like black velvet. Two and a-half miles to W.N.W. of it is S. Andrea, possibly the Pityeia of the old Greek poet; rich in ilices and junipers, it still bears the *Pinus maritimus*. Here also live a few shepherds, not without danger, as seven were carried off by a storm-wave on December 2, 1869. An ugly deed is connected with this skerry. Shortly after our evacuation of Lissa (1815) an English vessel was wrecked on the Kajola Rock off Pelagosa, and the crew, taking to their boat, made Saint Andrew's isle; where the skipper's belt, supposed to contain gold, caused the murder of all hands, except a boy, whose witness led to detection. The criminals died in jail: "carcere durissimo," with its bi-weekly flogging, was certain doom in the days of the "paternal government;" and even now it seldom outlasts the tenth year. Last and westernmost of the scatter, 12½ direct geographical miles W.N.W. from St. Andrea, is Pomo, the Apple, a barometer which rises from the sea only in the finest weather.

A glance to port shows us lumpy Curzola (Korkyra melaine). Hereabouts the Venetians were defeated, with the loss of 66 galleys and 7000 men, by the Genoese (Sept. 8, 1296), when a certain Messer Marco Millioni (*Milione*) was taken prisoner. Backed by the lofty and weather-beaten peninsula of Sabbion-



cello with its Acroceraunian brow, it is protected southwards by Lágosta and dots of islets. The most westerly of the latter is La Cazza, the Ladle, and the name explains itself as we pass by: the inverted bowl is the bare and dome-shaped northern hill, some 780 feet high, and the handle is the long low Point Gradiska, sloping to the south-west and ending in a dwarf bulge upon which a lighthouse is being built. A castle, mediæval and probably piratical, has left traces upon the slope of the quartz eminence;\* and the barren-looking rock supports "pastors:" they are permitted to keep their favourite goats.

We steam slowly, for *La Pelagosa*, whose maximum speed is 9·2 knots, rolls heavily under the Scirocco with sea abeam; and about half-way between the islands, our destination begins to rise from the blue bosom of the waves, in the shape of a rudimental turret-ship, a lumpy line crowned by a point. Presently it developes itself into a regular profile. Beginning from the east are the two small jagged rocks, the Kamik Tormentone,† and behind it the Scoglio Ostre (southern); further west is a comparatively large dome, the Mala or Piccola Pelagosa; and westernmost, its occidental outliers being hardly visible, rises *the Pelagosa*, a long dorsum of dark rock, culminating, when it faces the setting sun, in the "Castello," a fine pyramid about 100 feet high, and crowned with the imposing Pharos. There is naught around it but sea and air; nothing to give a measure of comparison; and, despite the humble altitudes the aspect of the "Ocean-isle" is at once grandiose and picturesque.

Before landing, we will briefly note what has been written concerning Pelagosa.‡ Ancient history ignores it, either on account of its situation, or, possibly, making it an outlier of the Diomedean (Tremiti) group. We can hardly connect the name with the Macedonian Pelagonis bounding Illyria,§ nor with our old friends the Pelasgi or Pelargoi (archaic Greeks). The word suggests an Italian, not a Latin, derivation from Πέλαγος,|| the latter word being used in these seas: for instance "S. Giovanni in Pelago," the miraculous island south of Rovigno. But we are unable to fix upon the date at which it was given.

\* A plan has been supplied to me by the kindness of M. M. Topich; but I prefer not to describe the site before making a personal inspection.

† A local corruption of "Tramontana," the north wind.

‡ It should rather be called Le Pelagose, as the two main features are quite distinct. James (*loc. cit.* p. 256) calls it "Pelagoso," but he also transforms (p. 363) Parenzo into a feminine "Parenza."

§ Strabo, vii. c. 7, § 8, &c.; Livy, xlv. 29; Pliny, iv. 17, &c.

|| Otherwise, the form would be the classical "Pelagia" (πελάγια) or Pelagica (πελαγικά), meaning the Marina; as "pelagia concha," the shell-fish that produced pearls.

Our principal modern authority is the Abate Fortis (ii. 5, § 1, p. 162), whose description, slightly abridged, is as follows. "The island of Pelagosa lies 60 miles from Lissa, and a little more or less from the promontory of S. Angelo in Puglia (Apulia).<sup>\*</sup> The main rock, and the smaller features which rise from the sea in its neighbourhood, are remains of an ancient volcano. I would not assure you that it has sprung from the waters like many other parts of the Archipelago, although this is suggested by the silence of the oldest geographers. Apparently it should not have been confused with the Diomedean group (the Tremiti), distant some 30 miles, yet this confusion may possibly have taken place. *The lava which forms the skeleton of the island most resembles the commonest matter erupted by Vesuvius, as far as we could judge when sailing along it.*<sup>†</sup> If some naturalist would visit its highest points we might learn whether it has been thrown up by a submarine volcano, like the islet near Santerini (Santorin, of old Thera) in our days; or whether it was the summit of some ancient cone of eruption, whose roots and slopes were buried in the waters when the Strait of Gibraltar was formed, an invasion which cannot be doubted by those who have examined the bottoms and the coasts of our seas. The fishermen of Lissa declare that violent earthquakes are often felt there;<sup>‡</sup> and this would appear from the aspect of the island which is rugged, ruinous, and broken into fragments." So far Fortis, who has been copied and mis-copied into those mines of errors, popular Cyclopædias and Gazetteers.<sup>§</sup>

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\* The Abate measures by the short Italian mile of 4000 feet, not the Austrian of 6000, and in purely topographical matters he is not always trustworthy.

† The italics are mine. As will be seen, the signs of vulcanism at Pelagosa are rather latent than striking. The learned Abate had a personal knowledge of Vesuvius, and, as he takes care to state, he only sailed past Pelagosa. In making this and other features comparatively modern, that is after the date of the classical geographers, he was guided by the opinions of his day and the era mis-assigned by his Church to the "Creation."

‡ We shall see fatal signs of these movements the moment we land.

§ Knight's 'Cyclopædia of Geography' (Bradbury and Evans, 1856); J. R. McCulloch's 'Dictionary' (Longmans, 1866), and the Engl. Trans. of Lavallée (Stanford, 1868), clean ignore it. Fullarton's 'Gazetteer of the World' (London, 1856), says, "Pelagosa or Pellagosa, a small desert isle of the Adriatic, 42 miles south-west of Lagosta Island; and 32 (read 26) miles from the coast of the Capitanata in N. Lat. 42° 21' 30" (read 42° 23' 44") and E. Long. (G.) 16° 15' 50". It is surrounded (read 'bordered to the east, to the west and to the south, the north being clear') by dangerous rocks, of which the principal (probably the 'Kajola,' Norie's Cajola) is in N. Lat. 42° 21' and E. Long. (G.) 16° 19' (Norie, N. Lat. 42° 23' and E. Long. 17° 22'). It affords fine marble" (the only marbles are a few imported fragments). The latest reference, in A. Keith Johnstone's 'Dictionary of Geography' (New edition. London. Longmans, 1863), thus runs: "Pelagosa is a desert island in the Adriatic Sea, midway (a rough computation) between the Promontory of Gargano, South Italy and Dalmatia."



It may be as well here to state at once the conclusions to which our researches led. The sea about Pelagosa, being abnormally rich in fish, naturally attracted honest labour, and the latter, pirates and water-thieves. One of the finds suggests that it was a battle-field and a burial-ground for men of the Stone Age. It is not without signs of Etruscan occupation; and it was regularly inhabited by the Romans, Pagan and Christian: almost all their remnants seem to be sepulchral, as if they had converted the rock into a cemetery.\* From documents still preserved in the archives of Lesina, we learn that during the supremacy of Venice (thirteenth century), the noble Lusignano house of Slavogosti, being exiled by the "Serenissima Republica," took refuge in the Rock and there built a stronghold. These fugitives practised every manner of oppression upon the hapless fishermen till their den of thieves was razed to the ground by the suzerain power. Probably to these days we must refer the ten skulls and the heap of bones in the Topich Collection. All are comparatively modern, and show the orthographic-brachykephalic form with prolongation of the parietal bones, except a lower jawbone† almost petrified, with the roots of four teeth converted into a friable yellowish substance.

When the coast was clear of Corsairs, the fishermen of Lissan Comisa built, upon the central plateau, a rude little chapel dedicated to St. Michele. Pelagosa was claimed by the kingdom of Italy, which occupied it provisionally; and retired only when the Comisani proved their rights by producing ancient documentary evidence. The trigonometrical bench-mark, dated 1859, shows that it is now under Austrian rule.

After these preliminaries we proceed to land. The usual course lies to the west of Pelagosa, outside three detached fangs, the Manzetti, in Slav Volič;‡ and the navel-like Scoglio Pampano or Perpak: they are separated by a deep-sea channel from Point Kapič, on the main feature. On the south-western flank of the Castello block towering above us, we remark a sloping plainlet grown with *Artemisia*: here, as will be seen,

\* The distance from Lissa and the other larger islands may suggest difficulties: but we are not without example. Fortis (i. 4 § 7, pp. 164-65), when describing the Scoglietto di S. Stefano, west of Sebenico, explains the presence of Roman tiles, urns, and mortuary inscriptions, one of the latter robbed of its bronze letters, by the fact of its having been a Sepolcreto "according to the praiseworthy customs of the ancients who, wiser than the moderns, removed far from their settlements the corruption of corpses and thus prevented the dead injuring the living."

† Found in the Cava or new quarry, as will presently appear.

‡ Plural of Voliki, a bull-calf; from Vol, an ox.

were found traces of habitation. After 5 hours 30 minutes of slow progress, we passed to port the "Zuffi" (Prongs), two sharp and comb-like ridges of sea-blackened limestones, trending nearly north—south, and rising sheer from the clear depths of blue and green. We left to starboard the dangerous Kamik, Sasso or Stone, which, viewed from above, resembles not a little the "Dog-rock," at the mouth of the Lycus River of Bayrút. It is also called Sika or Sikka, a corruption of the Italian "Sicca" (shoal), and must not be confounded with the Secca Mina to the south of Little Pelagosa. Between the two main islets lies "breeches rock," the Gaće, or Scoglio Braghe,\* and, finally, some  $3\frac{1}{2}$  geographical miles to the s.s.e., lies another rock, awash and separated from the main feature by a clear deep channel. This is the Kajola, a Slav corruption of La Galliola (= galiggiante, the floating); and here the English merchant-craft was wrecked.

To the north of the "Dog-rock" lies the southern landing place, the Žalo,† meaning Spiaggia or beach; a strip of shingle about 100 yards long, which can hardly accommodate more than ten to twelve fishing-boats. They must transfer themselves to the north-west, when the dangerous Scirocco blows, at times raising the water 15·2 feet above its normal level; this fierce south-easter has thrice washed away the solid bit of stone landing-pier. The peculiarity of the Žalo is the perfectly rounded shape of the water-washed pebbles: some are regular as old musket-balls, and have been carried off by the fisherman to serve as "boccie" or bowls.

The east end of "the Strand" is called Pod-forano, referring to its being under the Lusignani. Here, about a century ago, 4 or 5 smacks belonging to the rival island were drawn up, and the crews were ashore, when 20—25 of them were crushed to death by a rock-slip, the result, they say, of an earthquake. Since that time the people of Lesina have abandoned the Žalo to the Comisans. Strong retaining walls of masonry have been built to prevent such accidents; but the cliff in places overhangs, and we were shown a boulder which had lately fallen upon the shingle beyond the defence. Nothing, indeed, can look more unsafe than the foundation of the island generally: the insecure base, as throughout the Archipelago, and many parts of the coast, is a stratum of schist, here slate-blue, there ochre-yellow, which crumbles when dry, and which melts and becomes soppy

\* On the S. Francisco River I found a cachoeira or rapid called Tira-calcoens—i.e., "Take off your drawers" (for easier swimming).

† So pronounced and written: a more correct form is Žal or Žalo (Zhal, Zhalo), a coast, bank.



when the rains drain down to it through the fissures from above. Upon this loose argillaceous formation is built the tottering wall of limestone and of hard siliceous breccias. The first aspect suggests that some day Pelagosa may sink as suddenly as it is supposed to have risen.

We will reserve for a future day a careful inspection of the sites where the "finds" appeared; and at once proceed to lodge ourselves at the Lighthouse. A zigzag of 9 ramps, the painful and laborious work of the last three years, leads from the Žalo to the summit of the cliff, and here we find the platform of S. Michele, some 165 feet more, exactly 55 mètres above sea-level, and the only flat bit of building-ground on the upper island. A few yards of *strada d'accesso*, or level road, lead to the second or short zigzag of three ramps, which ascends "Il Castello," the turret of the "last Austrian ironclad." This was the fisherman's name for the tall castellated mass which forms the west end of the island; the apex of the comb or ridge, rising 332 feet above-sea level, bluff to the south, and of gentler inclination northwards. It was hardly accessible when the Pharos was planned; and the works began by laying out the zigzag, and by cutting off 3 or 4 feet from the head to gain a level. The material, a dark flinty limestone, was mistaken for gneiss and granite; the fracture is subconchoidal; it melts in nitric acid, leaving a residuum of silex-grains; it is generally unfossiliferous, and its character suggests exposure to great heat.

The Pharos, which is perhaps the best on this coast, was built by Sig. Antonio Topich, a contractor whose name is associated only with hard and honest work. The engineer was M. Richard Hänisch, who enlarged the plans and carried out the works prepared in the office of the President of the Maritime Government, Trieste. He began his local studies in 1874, and he visited the island six times, some visits lasting three weeks. The first stone was laid on May 19, 1874, and the average number of hands employed was about one hundred. The estimates asked florins 50,000; but unforeseen difficulties raised the sum to 85,000; not including 62,000 francs for the lighting apparatus, and 18,000 francs for its iron dome and other necessities. Thus the construction, of admirable strength, cost only about 12,000*l*. It was first lighted on September 20, 1875: its orbit covers 500 square kilomètres, and it is equally visible from the Pharos of Lagosta Island, and from that of Italian Viesti upon the Promontory of Monte Gargano. The apparatus is of the latest construction, and nothing can be more picturesque than the eight broad rays of light cleaving, like swords, the glooms gathered around.

The only inhabitants of the island are the employés of the Lighthouse, 5 assistants and 2 women. All their supplies are imported, even water: the last item costs some 2000 florins per annum. We found large and comfortable rooms; and passed there the four days between Saturday and Monday, whilst the steamer retired from the open and unsafe anchorage to Lissa. We had reason to be grateful to M. M. Topich, who had the happy thought of carefully preserving, despite a hundred difficulties, every remnant of antiquity which was unearthed by the workmen, and to M. Hänisch who, when not officially employed, accompanied us on our several short excursions, and showed the value of extensive local knowledge. To the latter gentleman I also owe some admirably drawn maps and plans; and I only hope that he will be persuaded to lithograph his novel and beautiful sketches of the curious scenes which Pelagosa affords.

II. *Observations on Natural History at Pelagosa.*—Pelagosa, occupying a neutral tract between the Dalmatian and the Diomedean Archipelagos, is so little known to the reading world, that perhaps it will be advisable, before describing its antiquarian yields, to offer the results of our naturalists' four days' gleanings. The account must be short, as there are no books to borrow from; and the *mise-en-scène* may be interesting, because in many points the island is a new world upon a small scale; exceptional, and differing in climate, in geology, in flora, and perhaps in fauna, from all its Dalmatian neighbours.

The site, as has been shown, is in the heart of the Temperates (N. lat. 42° 23' 44"). The distance from Lissa Port is 40 direct geographical \* miles, and 37—38 from the nearest south-western point; 29½ miles part it from the Italian coast (Viesti, on the Garganian promontory); 37 from the Tremiti, or Diomedean Archipelago; and 62 from the mainland of Dalmatia, the Adriatic being about 80 miles broad on this parallel. The form resembles upon the map that of a monstrous fish, with the head to the west, inclining a few degrees northward, and a well-defined fluke or forked tail to the east, with a little southing. The point of caudal junction, called "Il Confin," is an ugly knifeboard of crumbling yellow rock, with a precipitous fall on either side. The area of the larger feature is 349,000 square yards, or 72·3 acres, or 53·75 Austrian "Jugeri Cadastrali;" the smaller is of 41,712 square miles, or 8·6 acres, or 6·5 "Jocks." The maximum length of Great Pelagosa, from E.S.E. to W.N.W. is 1390 mètres. The greatest breadth of the base is 270 mètres, diminishing to 93 at "Il Confin;" and the average height of the jagged crest is between 60 and 70, rising to above 100 at the Castello. The Scirocco, tyrant of these seas, has converted the whole southern face, except at the "Žalo," into a stiff and broken cliff-wall, with denticulated head, and face corroded, channelled, and tunnelled into a thousand different forms. The northern side, seldom troubled by the Bora, is a dorsum of comparatively gentle slope, becoming more inclined and rocky as it descends seaward, where the bare fawn-coloured Calcaire is blackened by the washings of the ever-restless sea. The upper parts are clad with shallow brown humus, scattered stones, and thin vegetation: the chocolate colour of the soil at once attracts

\* In Austria there are 15 *meilen* to the degree; the same is the case with the Germanic mile.



notice, after the red earth of Istria and Dalmatia. About the east end of the island, as is also the case in Little Pelagosa, there are caves, hollows, and fissures; and those opening with upper spiracles, when the waters expel the compressed air, produce confused and prolonged groans, like the moans of pain—lugubrious accompaniments to the rough weather of a storm-lashed wintry night.

The meteorology of the rock appears to be wholly exceptional, and I have ventured to suggest to my energetic friend, President Alber, the advisability of supplying the Lighthouse with instruments and forms for regular records. As we approach it the air of the Mediterranean appears to lose splendour, and the lively light is suddenly exchanged for an ashen hue, especially about the horizon. Too small to attract clouds, Pelagosa is, in popular language, a *Spartivento*, or “split-wind,” like the cape called Clear, in cloudy Ireland. You see the storms furiously raging a few miles off to right and left, and the rains deluging the Dalmatian and Apulian shores. You feel an absolute stillness, reminding you of the *πείρατα γαίης* :—

Τῇ περ βῆσι τῇ βιοτῇ πέλει ἀνθρώποισιν  
 Οὐ νικητὸς, οὐτ' ἄρ' χειλῶν πολλὸς οὔτε ποτ' ὄμβρος  
 'Αλλ' αἰεὶ Ζεφύροιο λιγὺ πνέοντας ἄητας  
 'Ωκεανὸς ἀνίσχιν ἀεὶ ψύχειν ἀνθρώπους.—Odys. iv. 563.

It is a surprise, after the cruel climate of Trieste, which—the reverse of California, whose winter is May, and whose summer is only June—combines the winter of Iceland with the summer of Bombay; whose Bora, the alternative of the wet and gloomy Scirocco, blows a hurricane worthy of Antillean Saint Thomas, overturning carts, and requiring ropes along the quay to prevent the inhabitants being blown into the sea; and whose only alternatives are the *Contraste*, when the north-easter and south-easter meet and fight for mastery, and the *Provenza*, when the weather hesitates which of the two courses to take. Hence the annual average of mortality rises to 40 per 1000, nearly doubling that of London.\* At Pelagosa the Bora does not tyrannise over the cold season; and the Scirocco, after blowing for a few hours, either falls off to the west, or becomes a gale (*fortuna*). During twenty-nine months only four or five showers fell, and the dew, as in the fabled Garden of Eden, does its nightly duty by the ground. Even in the hot season calms are rare, lasting only for a few days; and the island is ever fanned by some gentle breeze. It is a popular saying that nothing ever falls overboard; some gust catches your hat and carries it back to deck. The sick, transported from the coast, speedily recover, and hitherto the employes have not known what sickness is. Finally, lest eternal perfection should become hateful, the occasional thunderstorms are of terrible violence. The solitary rock seems to attract them, like the Oil Regions of the United States, where the tanks are so often struck and destroyed. I enclose a Memoir † and illustrations, by M. Hänisch, of a *Gewitter*, accompanied by a s.s.w. gale and diluvial rain, which broke over the island at P.M. 0° 45' on April 17, 1876. The “thunderbolts,” discharged with a terrible

\* I know only one city in Europe, Rotterdam, where this figure is exceeded. But the climate of Trieste is not the only factor in the sum: the others are the vile hard water charged with lime, and the state of the old town, which has literally no drains. The former evil can hardly be remedied: there is no soft water in the neighbourhood. The latter can be wholly changed by widening to double their breadth the *androne*, or *cals-de-sac*, and the close alleys which represent streets; by laying down sewers for the impurities which now fester in the houses; and by the general “abolition of rookeries”—the latter foul as the “condemned localities” of Birmingham.

† “Wirkungen eines Blitzschlages auf der Insel Pelagosa.” Estratto dal ‘Bollettino delle Scienze naturali,’ N. 2, Annata ii. (Trieste, 1876).

detonation amidst a sheet of violet-coloured flame, seem to have fallen in bunches, or gerbs. The platinum point of the lightning-rod, 116 mètres above sea-level, was fused for half of its total length (three centimètres), without, however, the rest of the conductor being damaged. A fragment from one of the stone steps was struck off, and the south-western angle of the two outer walls was bored through. We were shown an iron-bound deal box, upon which the fluid had described the most curious figures; whilst another, containing tow, was carbonised externally, but its inflammable store remained uninjured. A hammer and a hatchet showed the line of passage, especially at the edges, by fusion, which partly converted the straight lines into fusiform excrescences about the size of peas. More curious still, the lightning passed diagonally through some twenty cans of petroleum, placed at different intervals, and scattered the combustible contents without setting them on fire. Lastly, about 10 mètres from the latter place the "thunderbolt" had discharged itself into the live rock of silicious limestone, cutting a cleft half a mètre in depth. The whole of this channel was carbonised to a sooty black, as though a mine had been sprung.

During our stay at Pelagosa the weather was mostly gloomy, apparently threatening a storm, and the employés of the Lighthouse declared that the first flash of lightning would drive them to the *baracke* upon the lower platform. In April the first assistant, who was standing upon the lower step of the main door, was thrown to the ground, where he remained senseless, and unconscious of the loud detonation. After a few minutes he recovered, and felt a dull pain in the right arm, hip and foot, which, however, soon disappeared. Entering the building he found the wife of one of the light-watchers creeping on all-fours, and almost out of her mind with fright. She also soon recovered. The third assistant, who was in the ground-floor kitchen, near the petroleum-magazine, complained of a lancing pain in the big toe of his right foot; and a painter belonging to the house, though accustomed to the springing of mines, fled to the lower lodgings, and did not return home till compelled by hunger.

The geological formation of Pelagosa is peculiar and exceptional as its meteorology, differing from that of all its neighbours and of the coast; and showing within narrow limits an abnormal amount of convulsion. The Adriatic, trending north-west to south-east in a basin of nearly equal breadth, whose axis is subtended on either side by similar orographic systems, the Liburno-Dalmatian chain to the east, and the Apennines on the west; and thus forming a gulf unlike any other in the Mediterranean, is usually distributed into three basins. A line of rocks and shoals passes through the "Kajola," Pelagosa, Pianosa and the Tremiti Archipelago to the Promontory of Monte Gargano, whilst there is the deepest water to the north and south. Our island forms apparently part of a volcanic curve, possibly a circle, whose plutonism is hardly yet exhausted. To the north, Lissan Comisa shows diallagite, an augitic pyrogenous alliance, which probably enters into the formation of Busi Island, and in the former place it supports gypsum-beds, which suggest that the direct action of sulphurous vapours has converted the carbonate into sulphate of lime.\* To the E.N.E. is Meleda Island, whose detonations, especially those of 1823, 1824 and 1825, are now explained by volcanic causes; eastward is Ragusa, where a terrible earthquake in 1667 buried some 5000 of the inhabitants; the neighbouring islands are also subject to this phenomenon, and the calcareous highlands of Dalmatia when examined carefully will probably, like those of Syria, show many detached tracts of plutonism. To the south-west again are the Tremiti

\* In the Museo Civico of Trieste are three drawers full of fossils and geological specimens, in some of which this change may be noticed.



structures analogous with Pelagosa: here, on May 15th, 1816, an eruption which lasted only seven hours, threw up pumice stones and sulphurous lavas. The great centre of the movement may begin in the Apennines behind Gargano.

Dr. de Marchesetti\* is disposed to date the genesis of Pelagosa to the post-cretaceous epoch when the plutonic action of the Euganeans, the Emilia, Etruria and Latium, prolonged through the eocenic and miocenic periods, gave the Italian peninsula the configuration which still distinguishes it. According to him, the great depth of water around the rock would argue a sudden rise, like the impetuous emergence of the Liburno-Dalmatian ranges in the cretaceous epoch. This period, as its strata prove, was one of vehement dislocations, producing irregular fissures with extensive and profound disruption, and contrasting strongly with the gentle upheaval of the Apennines in the post-cretaceous age.†

The stratographical succession is readily observed in the many transverse sections of our island, which is utterly destitute of the granite, gneiss, tufa (volcanic) and lava which were freely reported to exist. The strike of all the strata is from north-east to south-west, and the dip varies from the almost horizontal to the quasi-perpendicular. The base, shown along the whole southern wall and in the north-western bight, is a fine-grained schist, blue, and variegated, yellow-greenish, and sometimes ochre-coloured, with oxides of iron; a marly clay, showing frequent fucoid impressions, and splitting into thin lamellar strata with signs of decomposition. In ascending order upon this formation, especially on the southern part of the island, rest beds of gypsum, granular in the lower, and fibrous in the higher part, the upper limit being undefined and passing insensibly into the overlying marnose beds. But the mass of the island is a calcareous breccia, a rock which suggests that the disturbing action, at the close of its existence, was sudden and powerful. The fragments of the once-continuous calcareous strata have been comminuted into every possible shape; and compacted by a tenacious dolomitic paste before the angles were blunted. This breccia, sufficiently hard to strike fire, contains a quantity of true silex: the colour is dark brown, and the crevices are filled with red clay; in places there is a partial crystallization or vitrification of the strata, which look as if revetted with obsidian. Nodules of volcanic retinite (retinasphalte) were found both in the breccia and in the nullipore limestones. The only fossil was an ammonite, whose septa had been obliterated, rendering the species undeterminable. We also collected fragments of blue sandstone like steatite, and of sandstone enclosed in banded limestone, the common effect of calcareous deposition. The breccia in the north-western bay is dyked with a line of yellow clay, like the "Cimento" of Pola.

In the central part of the island, the continuity of this breccia is interrupted by a large fissure trending east—west and presenting strata of different materials. These, beginning from below, are two beds of red schistose clay, dipping gently from south to north, and separated by a layer of greenish schist. They are overlaid by two strata, as usual, rich in fossils. The lower, varying from 1 to 2 mètres in thickness, is an ochraceous conglomerate of Pleiocenic age, showing *Venus*, *Ostrea*, *Pecten*, and other mollusks, with nullipores. The upper,‡ measuring 2 to 5 mètres, a granular limestone of

\* My companion read a valuable and highly applauded paper on Pelagosa before the Società di Scienze Naturali in Trieste (Nov. 6th, 1876), and it appeared in extenso in the 'Bollettino' of Jan.-Feb., 1877.

† Similar signs of a circular wave of elevation, probably beginning at Monte Gargano, are to be found in the stratification of Pasman and Zuri Islands, near Sebenico, but the distance is too great to connect these with Pelagosa.

‡ Not the lower, as asserted by Dr. G. Stache, "Geologische Notizen über die Insel Pelagosa," p. 125, 'Verhandlung der k. k. geolog. Reichsanstalt,' 1876.



chalky and tufaceous aspect, and containing mostly helix, outcrops upon the surface, and we shall trace it from the *Cava* or quarry to the very base of the Castello. This upper mineral, evidently much more modern than the other, must be referred to the diluvial epoch.

The breccia which composes the *charpente* of the island culminates in the Castello, where it becomes darker, more flinty, and more homogeneous. The two lower courses of the lighthouse are built of this refractory material, which blunted the tools, and which proved so expensive that the contractor preferred importing his limestone from "Spljet" (Brazza), the quarry used for Diocletian's palace at Spalato. About the juncture of the first and second ramps of the short zigzag the breccia is traversed by a vein of the loose Eocene sandstone called, in Istria, *Tasello*, *Masegno*, and *Crostello*. Near the apex the breccia becomes more porous, and it supplies the island with what little soil it has.

Botanically considered, also, we are here in a small new world, of which, as yet, no satisfactory examination has been made. The first Commission, composed of the Councillor Muzio de Tommasini, Professor von Syrski, formerly custos of the City Museum, and Sig. Michele Stossich,\* reached the island on September 23rd, 1875. Dr. de Marchesetti's visit was in September 26-29, 1876. Thus the favourable season was missed on both occasions; and only dilettanti have made collections during the most propitious times.

Briefly to sketch the broad features of the Pelagusan flora. There is an absolute want of the trees and gregarious shrubs of the Dalmatian and the Diomedean islands: we look in vain for the ilices and junipers, the Illyrian oliveworts and arbuti (*unedo* = *corbezzolo*), the rock-roses or cisti, and the ericas, which form the greater part of the neighbouring vegetation. The area is confined, and the flora is not easily recruited from abroad; hence the predominance of the families best suited to the spot, and the small variety of forms. The rough and rocky soil also limits the extension of gregarious plants; and favours the diffusion of growths which, despising such hardships as, for instance, the spray that dashes over the Pharos-top, can climb the rock and thrive upon the scanty humus of its fissures. Moreover, characteristically poor in annuals, it is abnormally rich in bulbs, especially squills and wild garlic:† in places where the soil favours, they grow at the smallest possible intervals. A new species, discovered by my friend Cav. Tommasini, was named by him *Ornithogalum Visianii* (Tommasini), after the "illustrious Father of the Dalmatian Flora," and has been described by Dr. de Marchesetti (*loc. cit.*). On the other hand, the *Flora rupestre*, which presents a certain variety, is noteworthy for its alliance with the Dalmatian and Apulian growths. An adherent white tomentum mostly clothes the leaves, and two species are especially characterised by limited diffusion. These are (1) the *Centaurea Friderici*, of which more presently, and (2) the brassicaceous *Abyssum leucadeum*; the latter absent from Dalmatia, but abundant in the Tremiti and in the adjoining mainland of Japygia (Apulia).

It may be noted that the few trees are never allowed to survive babyhood. We found a fig rising to 6 feet on the southern shore, the true wild-olive (*Olea Europæa*), the vine run wild, and the bay (*Laurus nobilis*), especially in the hollow mouth of the Castello; while here and there flourished a solitary bush of blackberry (*Rubus amoenus*, rovo moretto, or moro spino), and a flexible *Dioscorea* (tammaro = *Tamus communis*). The growths which at once attract the eye are the Absinthium (*Artemisia arborescens*), congener of the Arab "shih," sweetest of desert herbs, which is conspicuous for its absence from the neigh-

\* Sig. Stossich published an "Excursione nell' Isola di Pelagosa," p. 217, 'Bollet. della Soc. Adriatica di Scienze Nat.' for 1875.

† The effects of eating the latter are notable, as in Tibet.



bouring archipelago; and the Capparis, with bloom as bright as the Passion-flower, a leaf metallic as the Ipomœa, and a root which will split even a Roman wall. There are also solitary bushes of *Ruta bracteosa*, *Coronilla emerus*, the malvaceous *Lavatera arborea*, the *Convolvulus cneorum*, the holly-like *Ruscus aculeatus*, the *Pistachia lentiscus* (rare), the *Euphorbia dendroides*, imitating dwarfed Chinese trees, and the wild kapuz (*Brassica Botteri*), bitter, but edible when new grown and well boiled. In the hollow north of the Pharos, well sheltered from the tyrannical scirocco, our botanists collected *Statice cancellata*, *Crithmum maritimum*, *Suaeda fruticosa*, *Olbione portulacoides*, and *Lotus cytisoides*. The frequent spray-showers have thickened the peduncles of *Picridium vulgare*, immediately under the flower; and the *Silene inflata*, condemned to live in crevices, has become gibbous with frequent knots and fleshy leaves, like one of the Crassulaceæ. As on the other islands, the *Centaurea Ragusina* lights up with its silvery leaves and golden flowers the dull and melancholy nakedness of the rock. The rich brown humus, which clothes the gentler slopes and comparatively riant tracts to the north, produces a tall asphodel with branches like candelabra, and yellow and rosy corollas: this is the Asâyet el-Rai (Shepherd's-staff) of the Libanus. Its *malefica radice*, like that of the arum, is or was (according to Fortis, II. 1, § 2) pounded into a farina, making the worst of bread, by the poor, who also support life by boiled juniper-berries. Here also were found the large-bulbed squills (*S. maritima*), *Senecio (crassifolius)*, a thin *Fumaria*, *Papaver (setigerum)*, the *Piumino* or *Lagurus (ovatus)*, *Cernithis (aspera)*, and *Jusquianus (albus)*. On the more fertile parts grow *Chrysanthemum (coronarum)*, the *Matthiola (incana)*, a red crucifer locally and erroneously called "viola,"\* the eternal *Clypeola (maritima)*, whose white flowers even near Trieste last almost throughout the year, and a little green heliotrope (*H. Europœum*, var. ?), which some would identify with the sunflower of Ovid.

The want of rain limits the variety and the growth of mosses; of these only two were noticed—a *Barbula* and a *Hypnum*. Less rare are the lichens, especially the common lithophils of Istria and Dalmatia, e.g. *Verrucaria purpurascens*, which lights up the rock; *Ramallina* and a *Rocella*, the latter abundant. The algaous vegetation, nullipores, sargassum, corallines, &c., is well developed, as the reader will find from Dr. de Marchesetti's catalogue.

Rabbits have been found on Little Pelagosa; none on the main feature, whose only mammals are imported rats and mice: at times a "sea-bear"† enters the baylet to the north-west. Migratory birds here rest for a few hours; and, during the season, often dash themselves against the Pharos: woodcock and quail are the most common. Of the residents we observe the sparrow-hawks, called Mangia-galline ("Hen Harriers"), hovering in the air; a few common gulls in the offing, and solitary stone-birds (*Monticola cyanea* ?) and water-wagtails (*Motacilla*). Poultry apparently does not thrive, possibly because here, as in Iceland, the cereals are absent. The only important avi-fauna are the "Diomedean birds" (Strabo VI. 3, § 9), concerning which so many strange tales are told; Pliny (X. 44) calls them "Cataracta," a name still applied to the Skuas; and they are figured and described by Aldrovando (Historia, etc., Jour. III. pp. 57–62). But whilst Pliny makes his Aves Diomedæ‡ resemble coots, Ovid (Met. XIV. 498, 503) declares that, though not swans they are likest white swans; and thus narrates the fate which befel the companions of famous Diomedæ:

\* No true violet was observed.

† The common seal (*Phoca vitulina*), by the Slavs called Medved, and the Italians Orso di Mare: in Portuguese Madeira it becomes Lobo de Mar, or "sea-wolf."

‡ Linnaeus poetically named "*Diomedæa exulans*," the albatross, a bird unknown to classical literature.

"Vox pariter, vocisque via est tenuata : comæque  
 In plumas abeunt : plumis nova colla teguntur,  
 Pectoraque, et tergum : majores brachia pennas  
 Accipiunt, cubitique leves sinuantur in alas.  
 Magna pedum digitos pars occupat : oraque cornu  
 Indurata rigent, finemque in acumine ponunt."

Stuffed specimens of this *Larus* (?)\* were shown to us; gull-like forms, with brown coats and bent bills. The Italians call them Gabbiani: the Slavs apply the term *Kaukale* (Ital. *Cocale*) to the larger kind and *Gregole* to the smaller bird. Their wailing cry is that of a child—*vagitus infantis similis*—and they are caught by swarming up the rocks at night with torches or limed poles, a dreadful trade, as is such birding everywhere.

The lighthouse employés produced spirit-specimens of a scorpion and a monstrous lizard with three tails: the original appendage had been supplied with a second which had bifurcated: they had also two snakes, one dark brown, the other lit up with greenish-white, and showing a triangular head, but no fangs. This lacertine coluber (*Cælopeltis insignitus*, Geoff.), which some have turned into a new species, *Cælopeltis Neumeyeri* (Verzeich. p. 57, Vienna Museum) is common in Dalmatia and Greece. The lizards, which are very numerous, are supposed to be of one species (*L. viridis*); but we noticed a second, apparently differing in colour and markings from the common green-yellow. There are sundry species of spiders, amongst which is a large *Lycosa*: centipedes, beetles, and grasshoppers are also numerous. The ground in places is covered with land-shells, especially *Helix*, *Clausilia*, *Pupa*, and *Bulimus*. M. Topich sent me a splendid specimen of a fossil univalve. M. Hänisch has collected a drawer full of "moulds"; mostly *Helix*. I have also seen the *Pectunculus* (*pelosus*?) of huge size, and splendid specimens of *Venus*. The fish require especial study: the staple article is the Sardine, whose mortal enemies, the shark and the dolphin, are never far off.

### PART III.—*Little Pelagosa.*

MM. Marchesetti and Stossich, intent upon collecting botanical specimens, took boat from the "Žalo," and visited Malo (Little) Pelagosa, the second largest feature of the miniature archipelago. This lumpy dome, lying to the east of the "Velika," well illustrates the luxuriance of local nomenclature. The Slav and other fishermen have given at least a hundred names to the whole group. The northern bay of the rocklet, for instance, is *Pod-molo* (for *malo*), "under the Little." To the south are the Bights of *Popina*, "the place of a Pope," and of *Luk*,† or wild garlic. East lies *Mevêdina*, or "She-bear" (i.e. seal) "Bay;" and *Rasenj-rot*,‡ or *Punto Spiedo*, projects from the western flank. I cannot but suggest that "Bogaso Grande," opposite Spit-point, is the Turkish *Bugház*, a pass.

\* We neglected to borrow one, having been told that many were in the Museum of Trieste, which proved not to be the fact. It will be some time before this mistake can be repaired.

† *Luk* is evidently a congener of the German "Lauch," a relation to our "leek."

‡ Local mispronunciation for *Ražanja-rát*, or Roasting-spit Point.



The only sign of old human occupation noticed by the visitors was a vedette like that upon the Castello-flank. The oval of rude stones, some 6 mètres by 4, and strewn with sea-sand about 1 foot deep, crowned the central and highest part of the dome. Attached to its crest is a triangular offset of the usual *terriccio nero*, or dark malin, which may consist of animal and vegetable débris: fragments of pottery nowhere appeared.

The geology and botany of the rocklet were more interesting than the vedette. Whilst the line of outliers ranged to the west of Great Pelagosa appear in shape and substance, dip and strike, to prolong the main chine of limestone, those of the opposite flank present a notable contrast. Already in the eastern part of the rock appears a yellow-red marne, which splits into laminae with parallel faces, much resembling the *Argille scagliose* of the Emilia, which appears in Tuscany, and in other parts of Italy, but is nowhere known in Istria and Dalmatia. This formation is generally held, in Italy and elsewhere, to be the solidified remains of the *salse*, or boiling muds vomited by the Apennines at the end of the Cretaceous, and before the setting in of the Tertiary, period. The distinguished Professor G. Capellini, ex-Rector of the Bologna University, refers them to a process of metamorphism by means of gaseous exhalations and thermal springs. Their signs of vulcanism, the want of fossils and of regular stratification, the frequent hornito-like openings, as if caused by gaseous explosions, the broken surfaces, and their aspect of desolating sterility, are described by my illustrious friend, now unhappily no more, Professor G. G. Bianconi, in his '*Storia Naturale dei Terreni Aridenti*.'

This characteristic marne is still better developed in the rocks off Little Pelagosa, and renders the section of the latter very interesting. The dorsum which culminates to some 50 mètres is composed of the calcareous breccia which characterises the whole group; whilst a fissure, varying in breadth from 30 to 40 mètres, and splitting the dome from south-east to north-west, is filled with the porous and tufaceous, the uniform and pultaceous mass, of rosy tinge, containing a quantity of comminuted flints and limestone flakes. The parts richest in silex, and where its fragments are of the largest size, are those resting immediately upon the calcaire: from the centre of the rocklet, where is the greatest depression in the fissure, these débris are almost absent.

Despite the name Luk, plants were comparatively rare on Little Pelagosa, which showed only a modicum of wild garlic. The rocklet, on the other hand, can boast of two species which are distinctly its own; and the marvel is that they never sought a home on its congenial soil by crossing the few yards of sea

separating them from the main formation. The first is the *Centaurea Friderici*, discovered by Professor Botteri, and named, by Professor Visiani of Padua, after the late Frederick Augustus, the botany-loving King of Saxony. It resembles the *Centaurea Diomedea* of the Tremiti, discovered by Professor Gasparrini. It is said to be found upon the almost inaccessible Pomo (Jabuka) Rock; and its leaves, like other congeners of the Gentian subclass, suggest a superior tonic "bitter." Again the *Anthyllis barba-Jovis* is found upon the Little but not on the Great Pelagosa; and *Convolvulus cneorum*, so common in the former, appeared only in one spot of the latter.

After four days of pleasant retreat beyond wars and rumours of wars, we left the lighthouse with cordial thanks to our hospitable and attentive hosts, M. M. Topich. The only serious fault of our second visit to Lissa was its short duration; and here we bade a temporary adieu to our friends, with a "Hip, hip, hurrah" à l'Anglaise, that seemed to revive the memories of more stirring times. The good ship *La Pelagosa* got up steam on September 27, and in twenty-four hours we had covered the 220 miles separating Lissa from Trieste.



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