Survey of Dalmatian Essential Oils

Rosemary, Sage, Laurel and Others Described
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THE Dalmatian Island world, fascinating to the historian and beautiful to the tourist, since 1919 forms part of Jugo-Slavia and to a lesser extent of Italy.

Innumerable islands of various sizes, all surrounded by the blue Adriatic extend along the continent from Trieste in the North to the Bay of Cattarro in the South. Characteristic of Dalmatia are its barren mountain ranges, ascending on the islands to two thousand feet and on the continent even to four thousand feet.

Ancient ruins of Roman palaces, Venetian campaniles and loggias, ramparts of medieval fortresses, decrepit fishing villages and quaint harbors lend to Dalmatia an aspect of picturesque charm and of past grandeur.

The warm Southern climate and the permeable calcareous soil bring forth a vegetation typical of the Karst Mountains. It is the evergreen rugged flora frequently referred to as *Macchia*. The hillsides facing the continent are often covered with dense and beautiful pine and oak forests hardly touched by man.

But on the summit, the aspect abruptly changes and towards the Adriatic the mountain slopes are mostly barren and sun-parched. Rivers suddenly disappear in the loose, calcareous ground and form huge caves from which they emerge down on the coast or reappear as submarine fountains in the Adriatic Sea. Centuries ago these slopes were probably covered with extended woods until the Venetians felled the trees for use in ship building without thought of reforestation. Thus the slopes finally became deprived of humus and now only the hardy *Macchia* finds sustenance where other plants must perish in heat and drought.

Poor hamlets of windowless and crude, stone houses are surrounded by low and loose stone walls; beyond them the *Macchia* stretches as far as the eye can discern. It is not a plant group of great variation, only a few species of bushes and trees occurring all over the Islands. Sturdy oaks, rugged pines, lofty eucalyptus and thorny aloes, laurel, myrtle and juniper all grow together. Between them the ground is covered with blue flowering rosemary, silvery green sage, yellow blossomed helichrysum and the air is fragrant with the balsam of the ever present labdanum. Leaves and branches of the hardy perennials are protected by thick skins or, as in the case of labdanum, by exudation, which feature during three months of excessive heat prevents the water in the plant cells from evaporating and thereby preserves plant life.

As in Northern climates the flora during Winter enters into a dormant period, so in the Karst the perennials of the *Macchia* slumber through the peak of Summer heat and reassume full activity in Fall with the first ample rains. In contrast to the perennials the annual plants of the *Macchia* come to their fullest development before the heat sets in and then perish in the Summer; the seed, absolutely heat and drought resistant, finds protection and sustenance in the poor soil and late in the year starts to grow.

The history of plant distillation in Dalmatia goes back probably one hundred and fifty to two hundred years. It was, of course, distillation under most primitive conditions, very likely in the type of stills originally invented by the Arabs and introduced to the Balkans by the conquering Turks. Such types of crude still are to be found today among the flower distillers, not only in Dalmatia, but also in the Valley of the Roses in Bulgaria.

Before the war, when Dalmatia was part of the Austro-Hungarian Empire, its government made great efforts to develop an essential oil industry on the Dalmatian Islands. Model distilling plants were set up in some of the villages and the farmer distillers were organized into co-operatives with a view to finding a regular sale for their oils.

But from 1914 to 1918 the Islands were near the actual fighting zone and the male population when called to arms could devote no attention to the distillation of oils.

Spain, also favored with a Southern climate, a similar vegetation, and in addition, remaining neutral, found its great opportunity during those years to develop an essential oil industry. After the war, the Spanish essential oil exports grew to such importance that today they far surpass Dalmatia's. Today Spain almost holds a monopoly on the production of oil rosemary, spike-lavender and thyme.

The years after the war were rather difficult for Dalmatia. A few of the Northern Islands fell to Italy but the mainland and most of the Southern island became part of Jugo-Slavia.

Although both the Italian and Jugo-Slavian governments are trying to stimulate the Dalmatian essential oil industry, the fact remains that the old Austrian Empire with a united consuming population of forty million has disappeared. Spain practically dominates the world market in supplying oil of rosemary which before the war was almost exclusively distilled in Dalmatia.

To a small extent, Dalmatia staged a comeback with the sharp increase in the production of oil of sage (*Salvia Officinalis*). Before the war this oil was not in much demand and Spain even today does not produce it. Yet the increased tonnage of oil of sage can not by far compensate for the loss in reduced exportation of Dalmatian oil of rosemary.