

The Land of 1000 Islands

Along the eastern coast of the Adriatic Sea which belongs mostly to the Republic of Croatia there are more than 1000 islands. Most of these islands are small and uninhabited, with only 15 islands with an area greater than 50 km², and a population over 1000 (1). Only 47 islands are inhabited and most of them only with a few families. Croatian islands can be divided into two groups: northern and southern. The northern group comprises the islands of the Kvarner bay, Velebit channel, and Zadar archipelago: Krk, Cres, Lošinj, Rab, Pag, Ugljan, Pašman, and Dugi Otok. The southern group includes the islands of the Central and Southern Dalmatia: Brač, Šolta, Hvar, Korčula, Vis, Lastovo, and Mljet. The total area of 47 inhabited islands is 3138 km², or 5.6% of the total area of the Republic of Croatia. The total population of the islands is slightly over 100 000, which represents more than 2% of the total Croatian population (1).

Today, almost all of the island communities face the problem of depopulation (2). Before the 1991-1995 War, according to 1991 census, the proportion of persons older than 60 years was 23%; today it amounts to more than a third (1). The proportion of women aged 20-29 on the islands is considerably below the national average, 10% or less. The main reasons for depopulation of the islands include difficulties in transporta-

tion to the mainland in the period outside the tourist season, higher prices of goods, lack of economic resources and workplaces as a consequence of tiny markets, problems in education system due to small number of children, lack of secondary and tertiary health care facilities, and many others (3).

The current population structure of Croatian islands is the result of changes that occurred during their long, rich, and turbulent history which has been very well documented. Therefore, it represents a rare example of a true "metapopulation," ie, an extremely sub-structured population and is thus a useful model for many anthropologists, human biologists, and biomedical scientists (4). The earliest available data show that the eastern Adriatic region was inhabited as early as the Neolithic by non-Indo-European populations. Around the year 2000 BC began the settlement, first of Proto-Illyrians, and later Illyrians. In the 4th century BC, first Greek colonies on the Adriatic coast were formed, and the colonization was continued by the Romans during the period between 3rd century BC and 6th century (5). The first great influx of Croats (people of Slavic origin) into the area occurred between the 6th and 8th century. The existence of very old Croatian toponyms implies that the Croatians inhabited most of the Eastern Adriatic islands very early,

assimilating the remaining Illyrian, Greek, and Roman settlers (6).

In 1409, the whole region, except the islands of Lastovo and Mljet, which were part of Republic of Dubrovnik, fell under the Venetian rule, under which it remained until 1797, when the Venetian Republic was defeated by Napoleon Bonaparte and ceased to exist. During that period, Venetian monopoly resulted in a limited autonomy of the islands. In the time of Venetian rule over the coastal part of Croatia, there was a constant threat from the Ottoman Empire's raids from the continental part of the Balkans, reaching as far as the vicinity of the island of Pag. The Republic of Dubrovnik managed, through its skilled foreign policy, to avoid confrontations. However, the clashes between the Ottoman Empire and Venetian Republic produced extensive migrations from the mainland areas, especially from today's Bosnia and Herzegovina, to the eastern parts of the islands of Brač, Hvar, Korčula, and Pag. The newcomers brought their gene pool and a variety of cultural specificities, including the "štokavian" dialect of the Croatian language to the predominantly "čakavian" area. The most extensive migrations to these islands occurred during the Cypriote (1571-1573), Candian (1645-1669), and Morean wars (1684-1699). The newcomers were given land and awarded special privileges – "The Paštrović Privileges" – which exempted them from service on Venetian galleys in wartime, from paying certain taxes, and performing public works. These benefits resulted in animosity and created socio-cultural barriers between the immigrant and indigenous population, increasing the sub-structuring even further. Furthermore, by marriage with the natives, newcomers would lose their privileges, which represented a barrier to gene flow between the native and immigrant population (3,6-8).

After 1797, most of the islands were incorporated into Napoleon Bonaparte's "Illyrian provinces" and the "The Paštrović Privileges" were abolished, removing the barrier between the

populations. Between 1815 and 1918, the islands were incorporated in the Habsburg Monarchy, and in 1918 the islands became part of the Kingdom of Serbs, Croats and Slovenes, which was renamed Yugoslavia in 1928. During the 19th century and first half of the 20th century, the islands were depopulated in most cases. This was caused by difficult economic conditions, which resulted in large oversea emigration, mostly to North and South America, Australia, and New Zealand. There are very few examples of migrations from the coast to the islands. One of them is the island of Pag, where free working places in rich salt-works attracted many workers from the mainland (3,6-8).

Today, the Eastern Adriatic Islands are part of the Republic of Croatia, which became an independent state in 1992. The present population is derived from indigenous Croats speaking the "čakavian" dialect of the Croatian language, and from immigrants from the Balkan mainland, who brought in the "štokavian" dialect during the 16th and 17th century. Both groups are Roman Catholics, and on most of the islands there are parish registries which provide useful data on births, marriages, and deaths of the island population, dating back to the beginning of the 18th century. Large linguistic, cultural, and population genetic differences still exist among the villages, as a result of not only geographical isolation or sociocultural and biological separation, but also the hostility between the small groups of inhabitants. However, these characteristics, coupled with reduced genetic and environmental diversity within the settlements, make the islanders of Croatia a unique resource for studies in population genetics and genetic epidemiology, which can have broad and very general implications for the understanding the processes of evolution, population genetics, and their relationship to health and disease in the global human population.

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