

## *The Sardinian puzzle*

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Sardinia is a Mediterranean island now part of the Republic of Italy. However, it was ruled by various different nations in the previous centuries. Its official language is Italian, while Sardinian has the status of a “regional” language. Sardinian is a Romance language, but there are clear traces of substratum languages, mainly in toponyms and plant names. According to Hubschmid (1960, 1963), it is possible to recognize up to six substratum elements. Some of them have no clear relationship with other languages (i.e oxyton toponyms), but in other cases we can identify interesting isoglosses which relate Sardinia to the Iberian Peninsula, Mediterranean Africa, the Island of Corsica and Tuscany. For instance, the protoform *\*matta* can be postulated for Sardinian *matta* ‘tree’, Basque *mata* ‘tree’, Catalan and Spanish *mata* ‘low bush’ and Berber *θamatta* ‘bush’.

Such linguistic affinities seems to be supported also by a genetic point of view. For example, Y-chromosome (Francalacci et al., 2003) and mtDNA data (Morelli et al., 2000) suggested some possible ancient contacts with Iberian Peninsula, whereas the study of HLA indicated important contacts between Sardinian and Northern African populations (Vona et al., 1997).

Data from classical and from autosomic DNA markers highlighted a strong genetic affinity between Sardinia, in particular the northern part, and Corsica, suggesting a common origin (Calò et al., 1997; Vona et al., 2002). Moreover, Sardinians do not constitute a homogeneous population from a genetic point of view (Vona et al., 1992). Gene frequencies show internal heterogeneity, which is statistically significant and correlated with archaeological and historical evidences, and in particular the distribution of genes is statistically significant correlated with the distribution of linguistic varieties (Cappello et al., 1996).

It is clear that, in such a complex environment, only a multidisciplinary approach can lead to a plausible model of historical explanation.

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