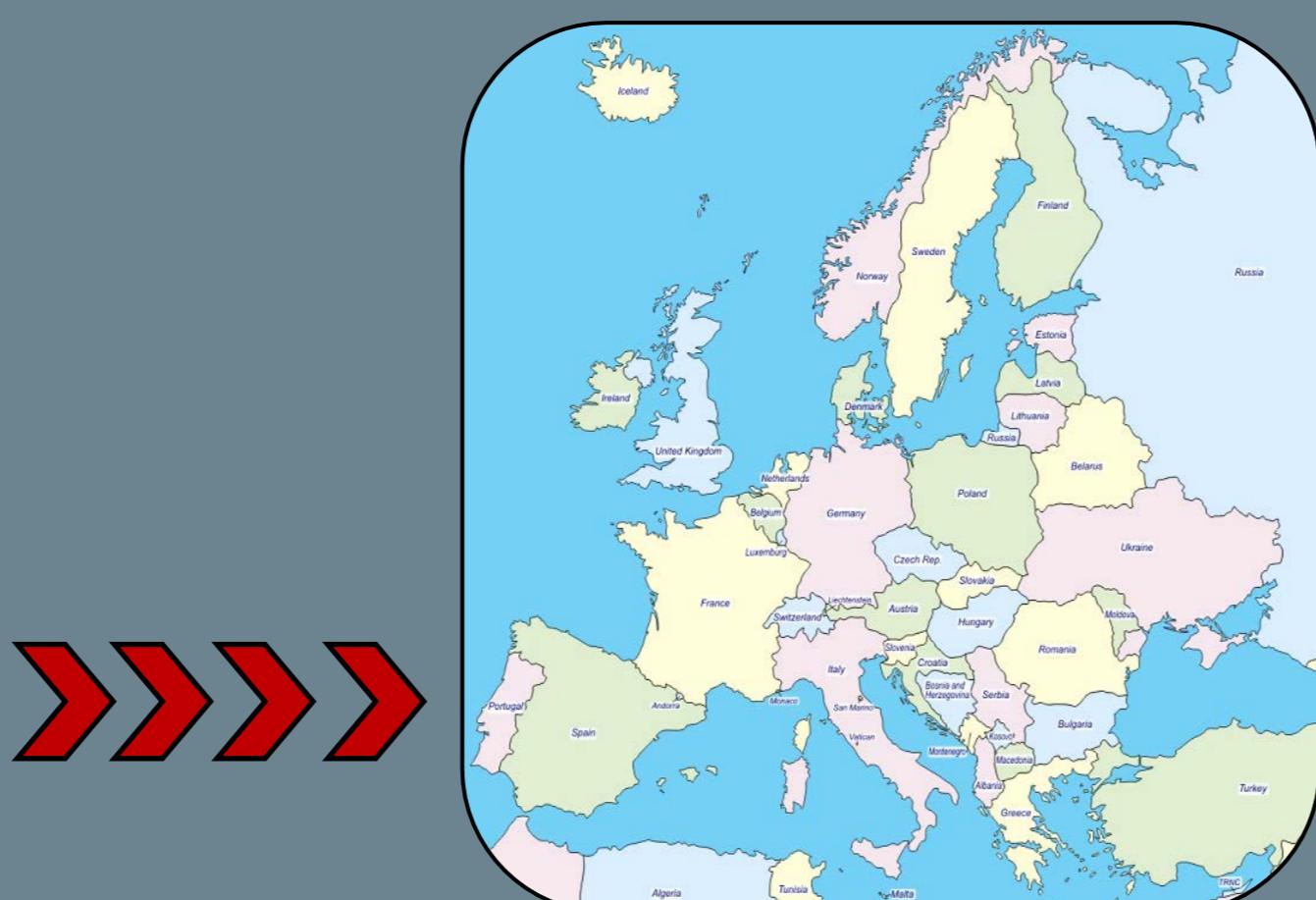
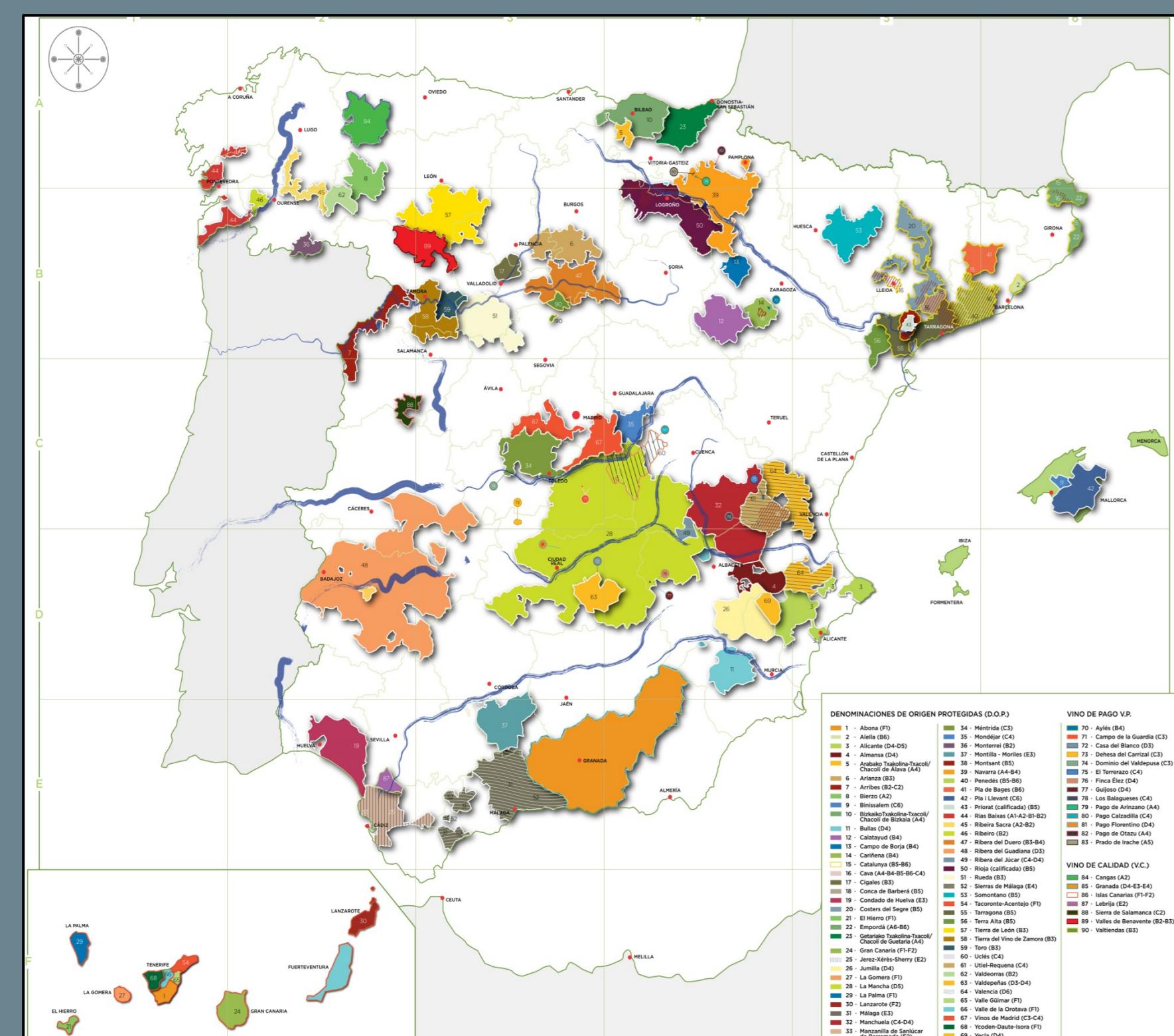


DIVERSITY OF SPANISH GRAPEVINES AS REFLECTED IN THE VARIATION OF LEAF MORPHPOLGY

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Spain has the greatest diversity of grapevine growing regions (home to some 85 areas with Denomination of Origin status)

Spain has conserved many old varieties of grapevine (some of which remain undescribed), the great majority of which are cultivated on only a small scale. The ampelographic description of these varieties is a necessary task if they are to be preserved, and a vital step in their gaining official recognition

The 'mean leaves' of 248 grapevine accessions from around Spain have been constructed and statistically compared following the method of Martínez y Grenan (1999).

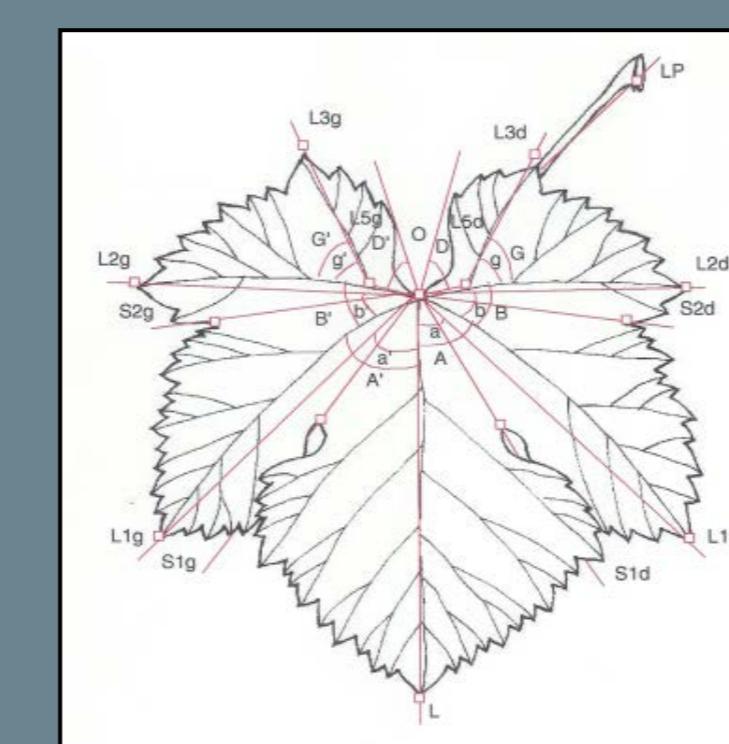
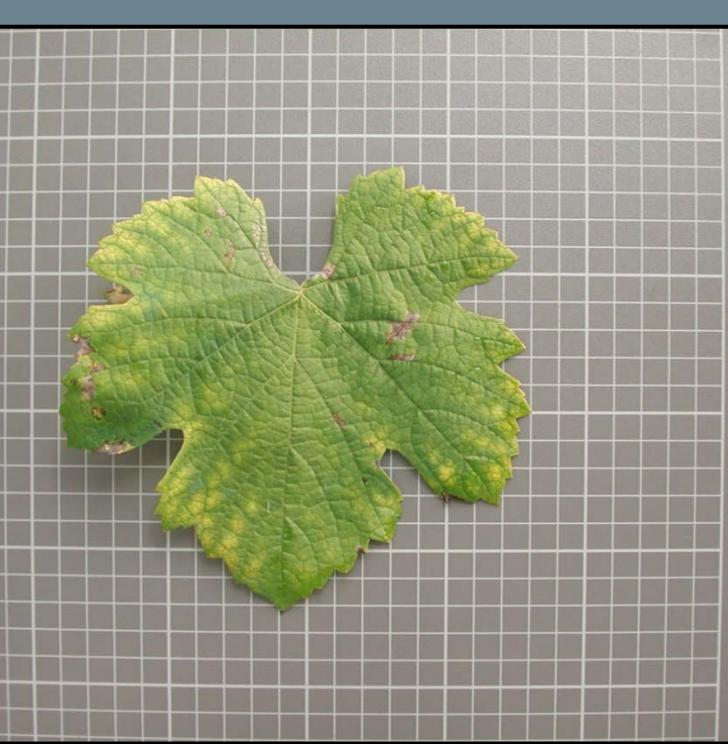
Average Leaf Reconstruction



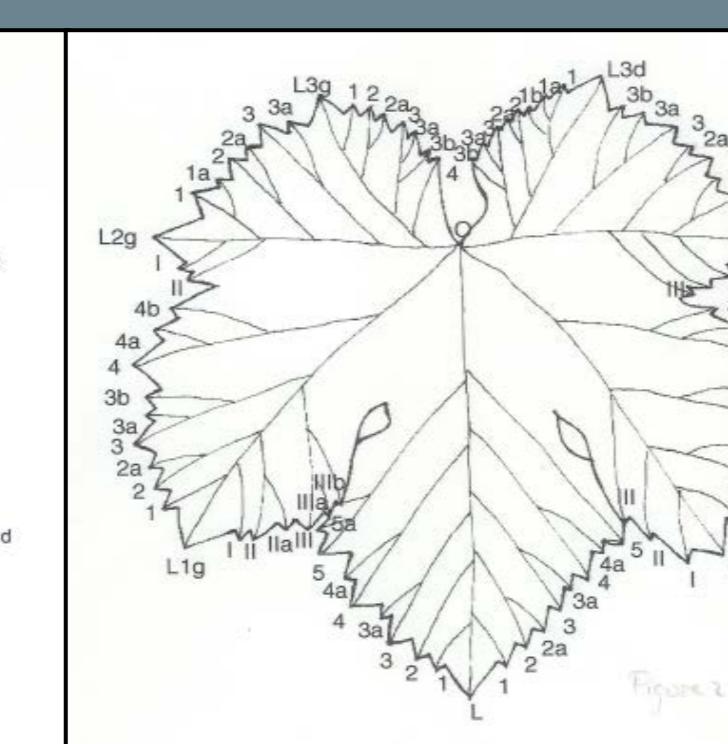
1 Sampling (11 adult leaves per accession)



2. Digital photographs of all leaves were taken



3. Variables measured (lengths and angles) with analySIS 3.0 software



4.

Number of teeth between the major veins was also recorded

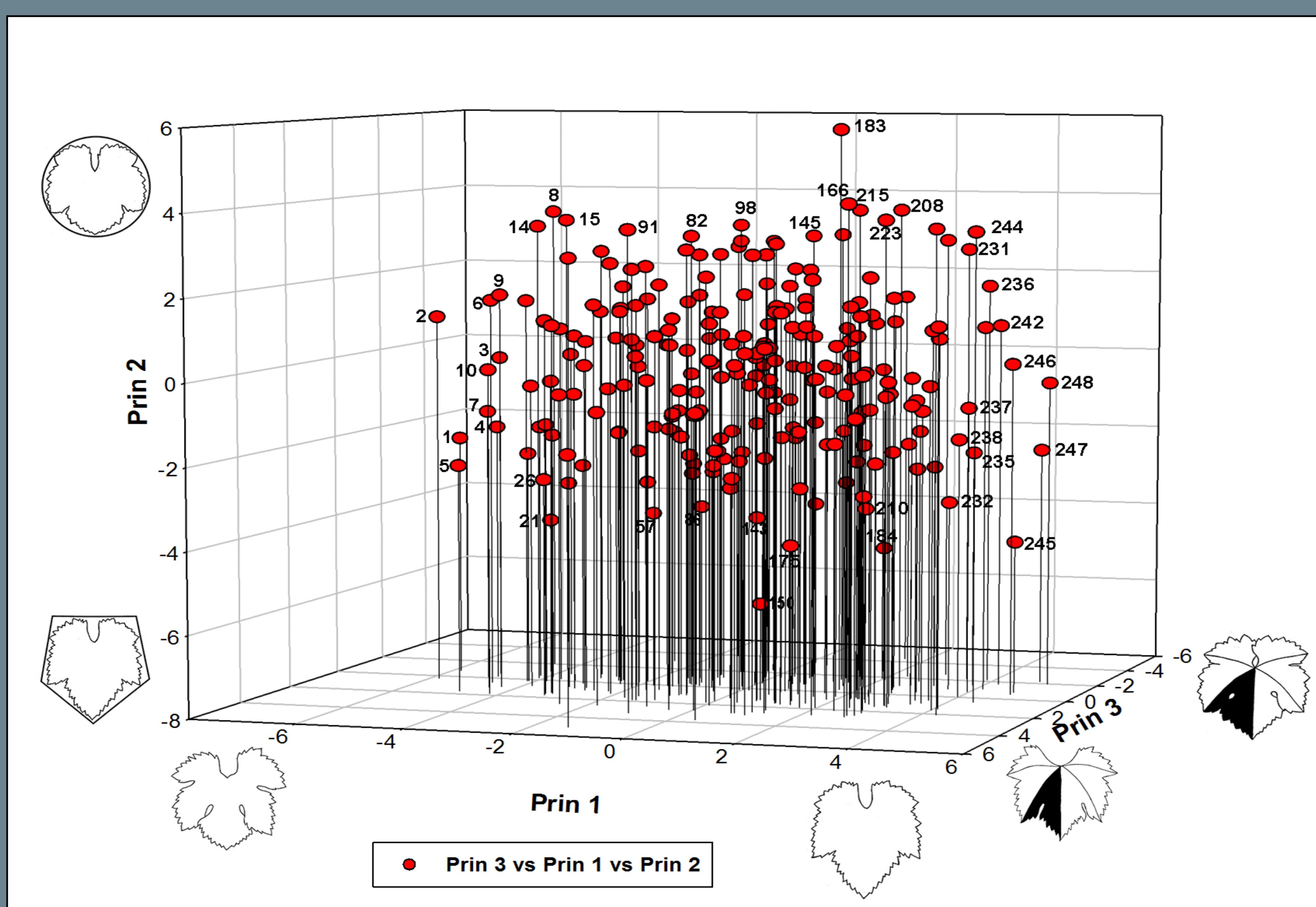
Rel.2=L1d/L; Rel.3=L1g/L;
Rel.4=L2d/L; Rel.5=L2g/L;
Rel.6=S1d/L1d; Rel.7=S1g/L1g;
Rel.8=S2d/L2d; Rel.9=S2g/L2g;
Rel.10=A+B+G;
Rel.11=A'+B'+G';
Rel.12=a+b+g;
Rel.13=a'+b'+g';
Rel.14=(S1d+S2d)/(L1d+L2d);
Rel.15=(S1g+S2g)/(L1g+L2g)

5. Relationships calculated.

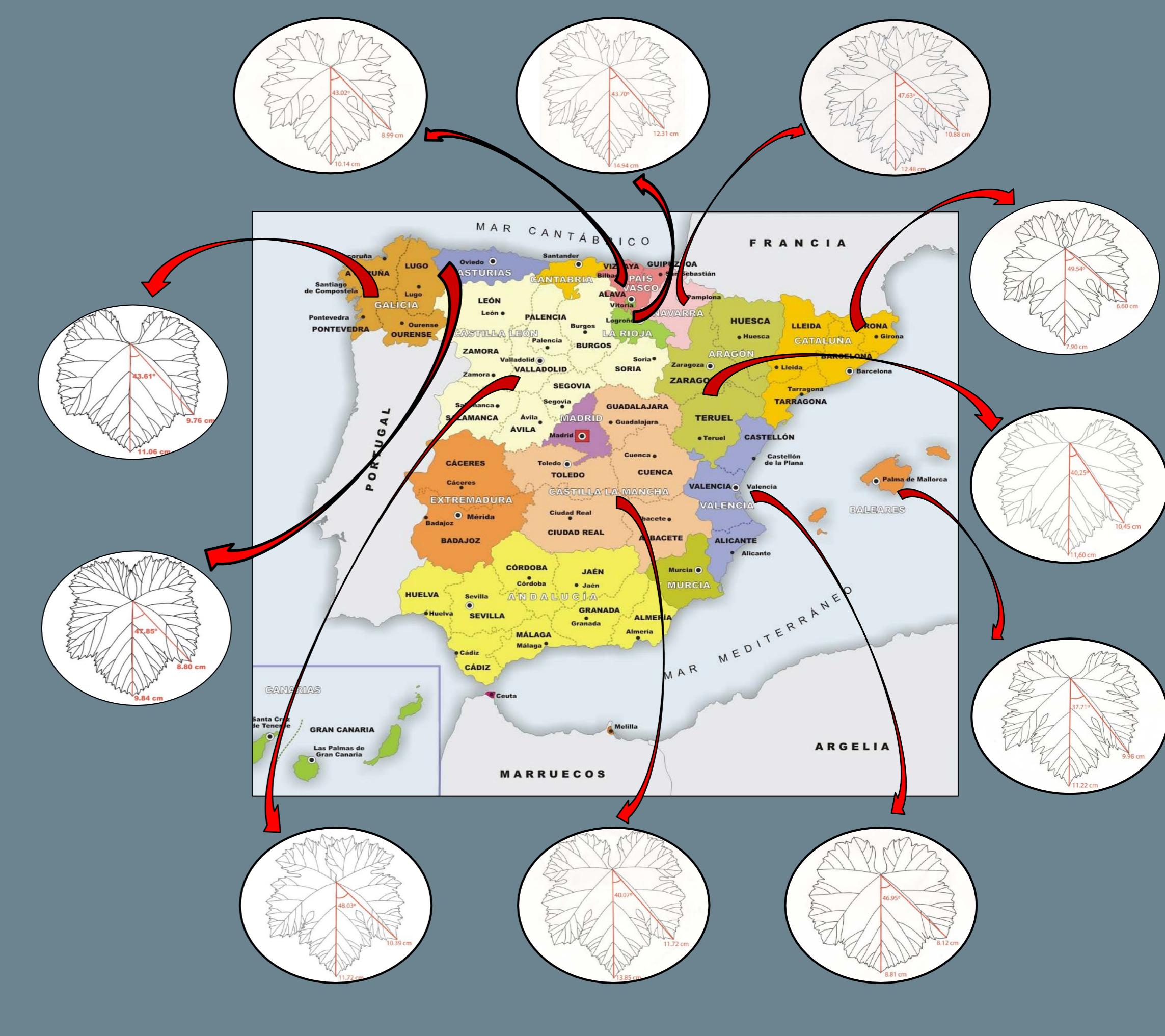
Results

Some examples of reconstructed mean leaves are shown in the map

The results of the Principal Component Analysis (PCA) confirm the country's richness in grapevine varieties and the great variation in their foliar morphology.



Results of the Principal component analysis (PCA) in terms of the raw data from the above defined leaf relationships. The first three components explained 88% of the variation.



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