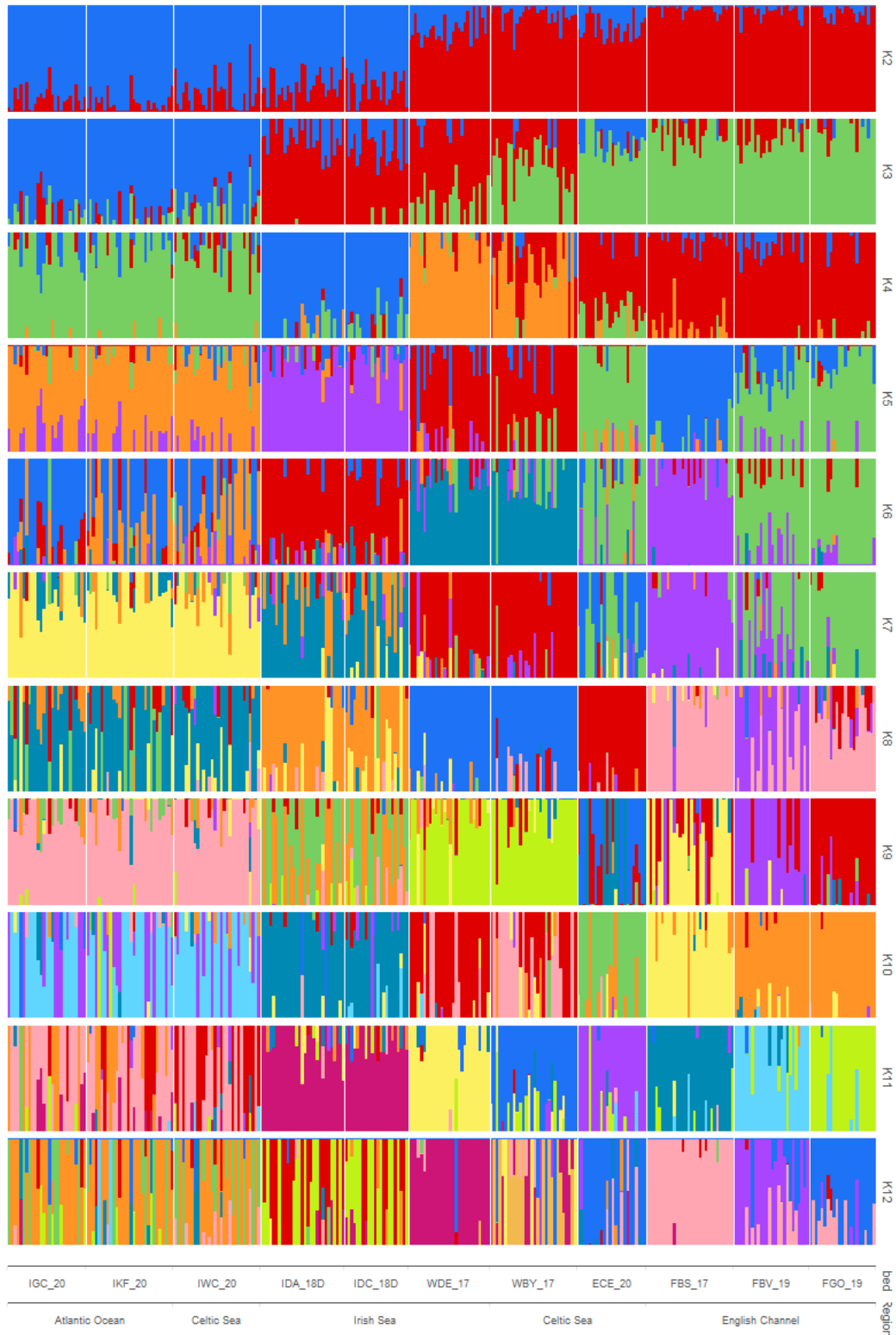
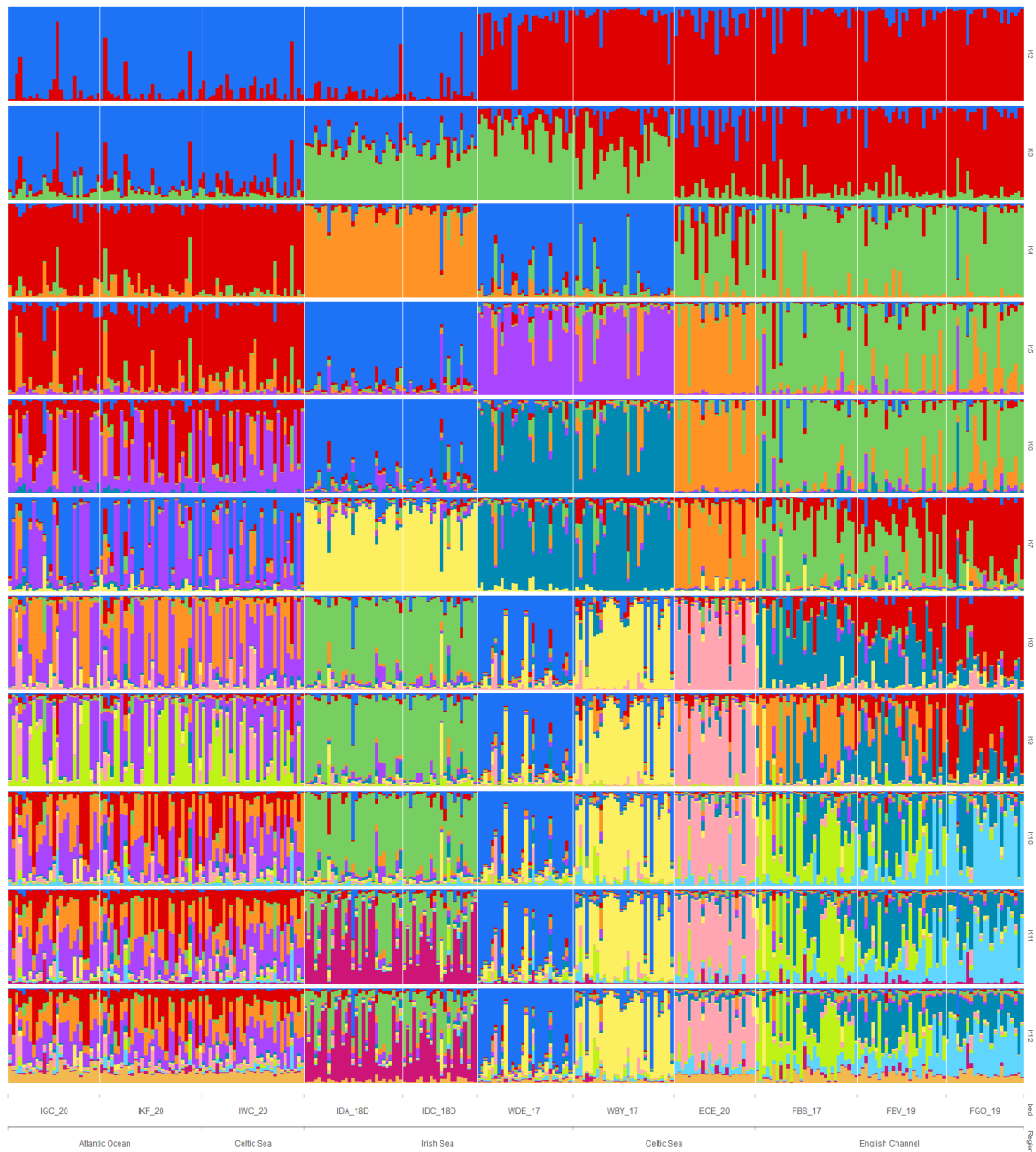


Supplementary Figure 1. Oceanography of the SW British Isles region (a and c) and Galicia (b and d). (a and b) May to August average SSTs for the years 2019 - 2020 with summer (June to August) 1 °C surface to bottom vertical temperature difference contoured highlighting frontal areas. (c and d) May to August residual currents averaged over the top 30 m of the water column for the years 2019 - 2020. Current strength is shaded, and arrows indicate current direction. Black circular markers indicate sampling locations.

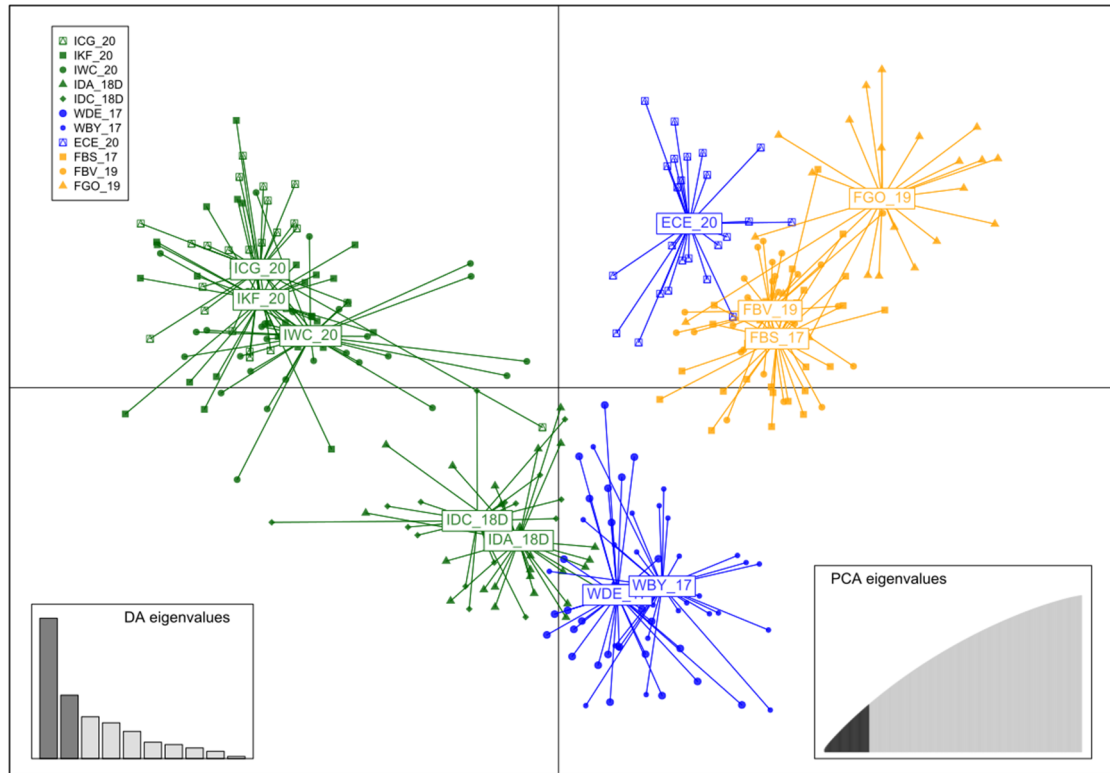


Supplementary Figure 2. fastSTRUCTURE plots (K2 -K12) for the SW British Isles using the 186 divergent outliers identified in the region. Each vertical bar represents one individual, and the colour proportion for each bar represents the posterior probability of assignment of each individual to the different clusters (K) inferred by the program.

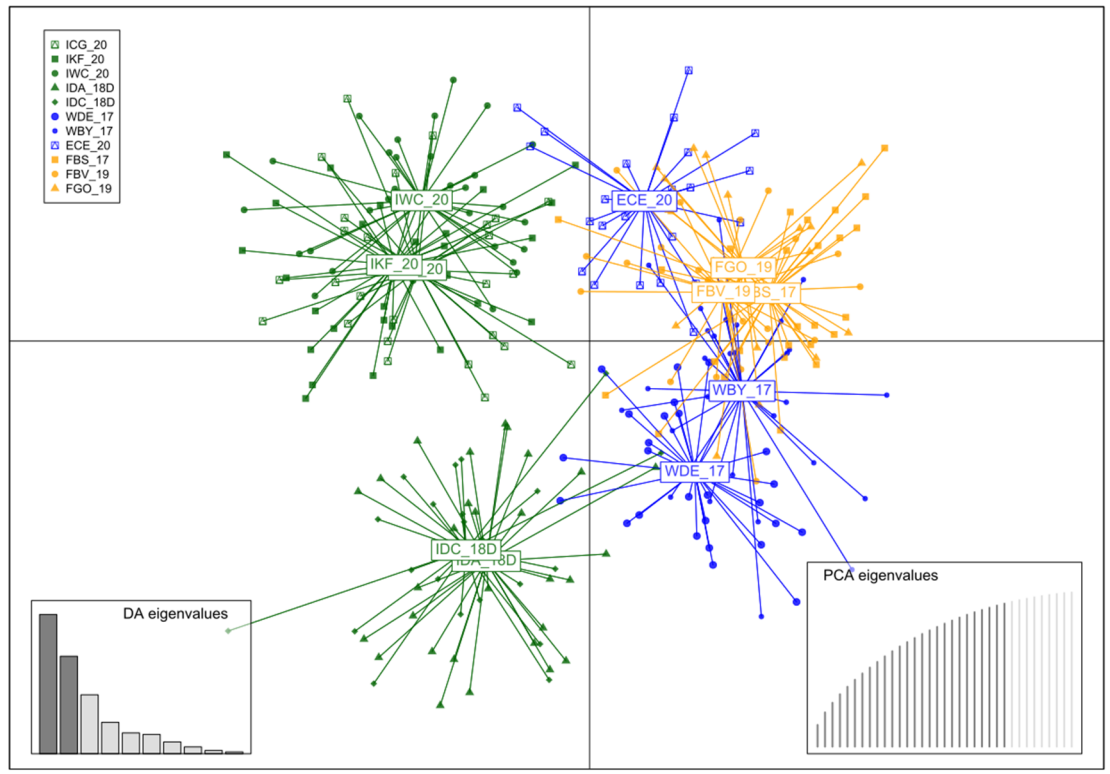


Supplementary Figure 3. fastSTRUCTURE plots (K2 -K12) for the SW British Isles using the 35 shared divergent outliers between methodologies identified in the region. Each vertical bar represents one individual, and the colour proportion for each bar represents the posterior probability of assignment of each individual to the different clusters (K) inferred by the program.

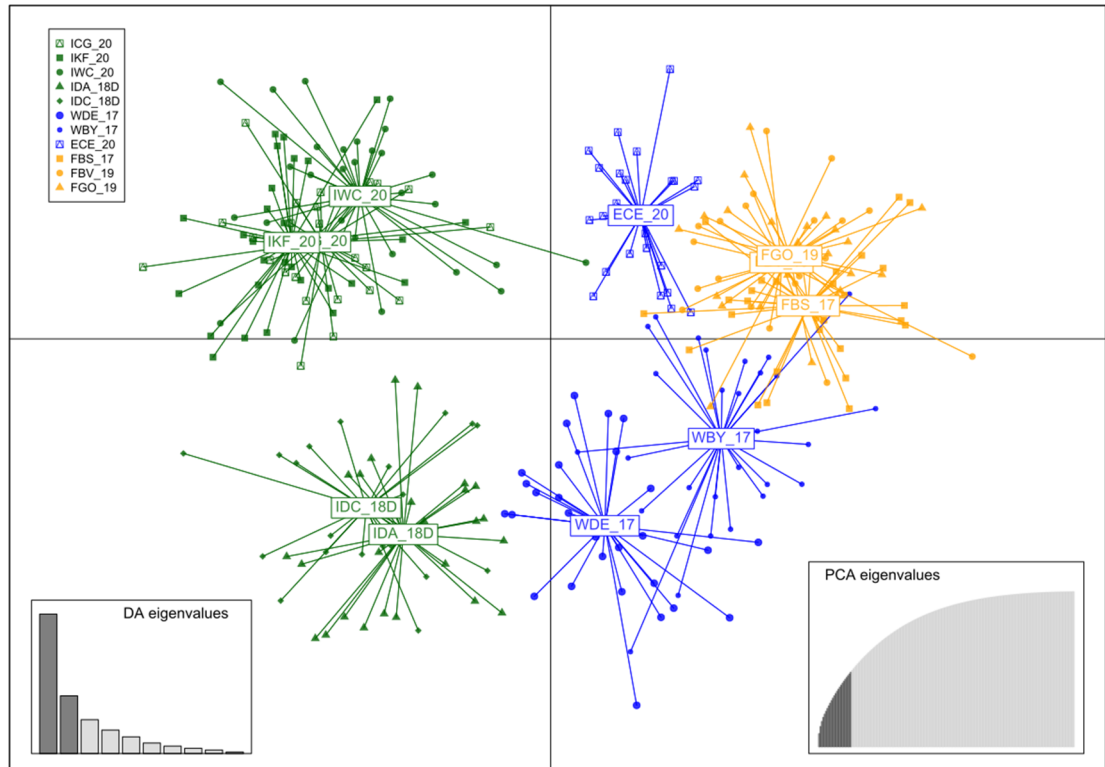
A



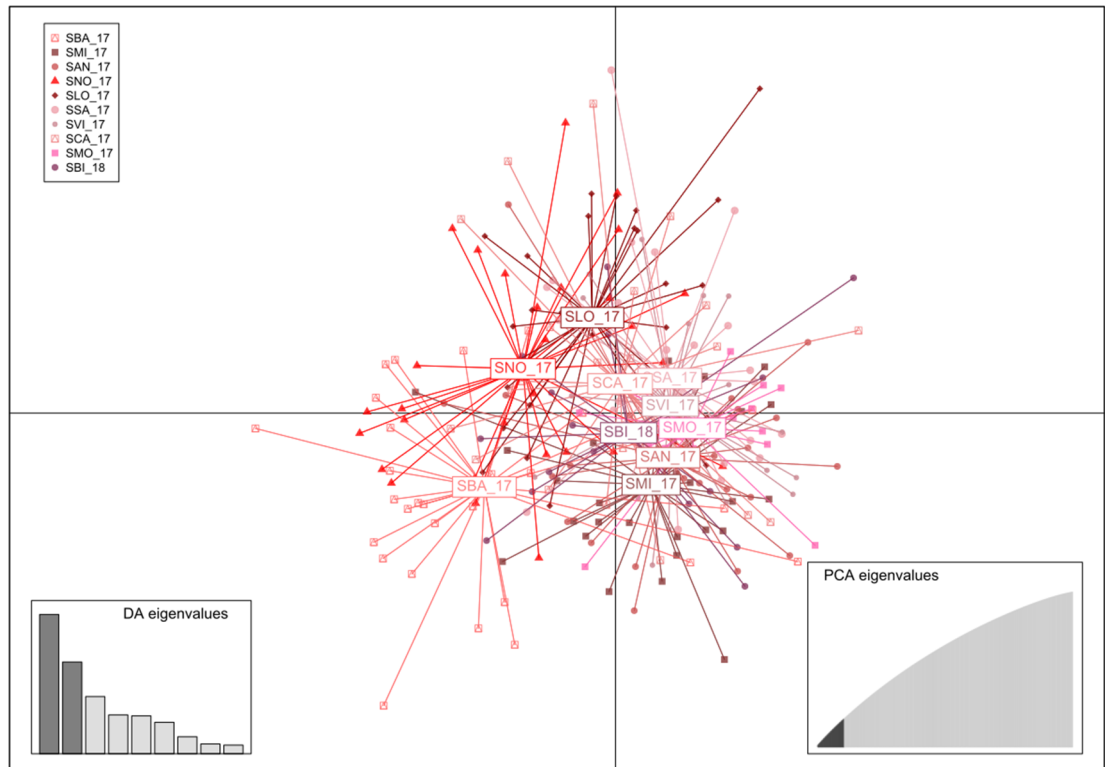
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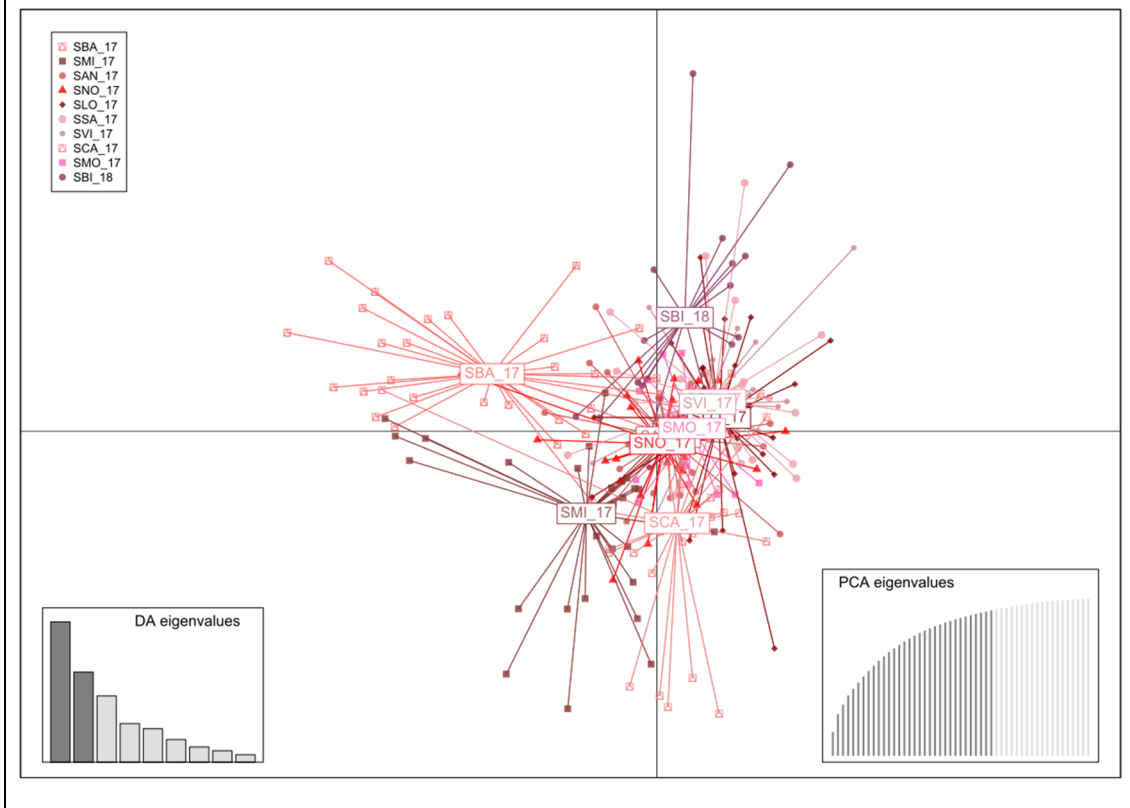
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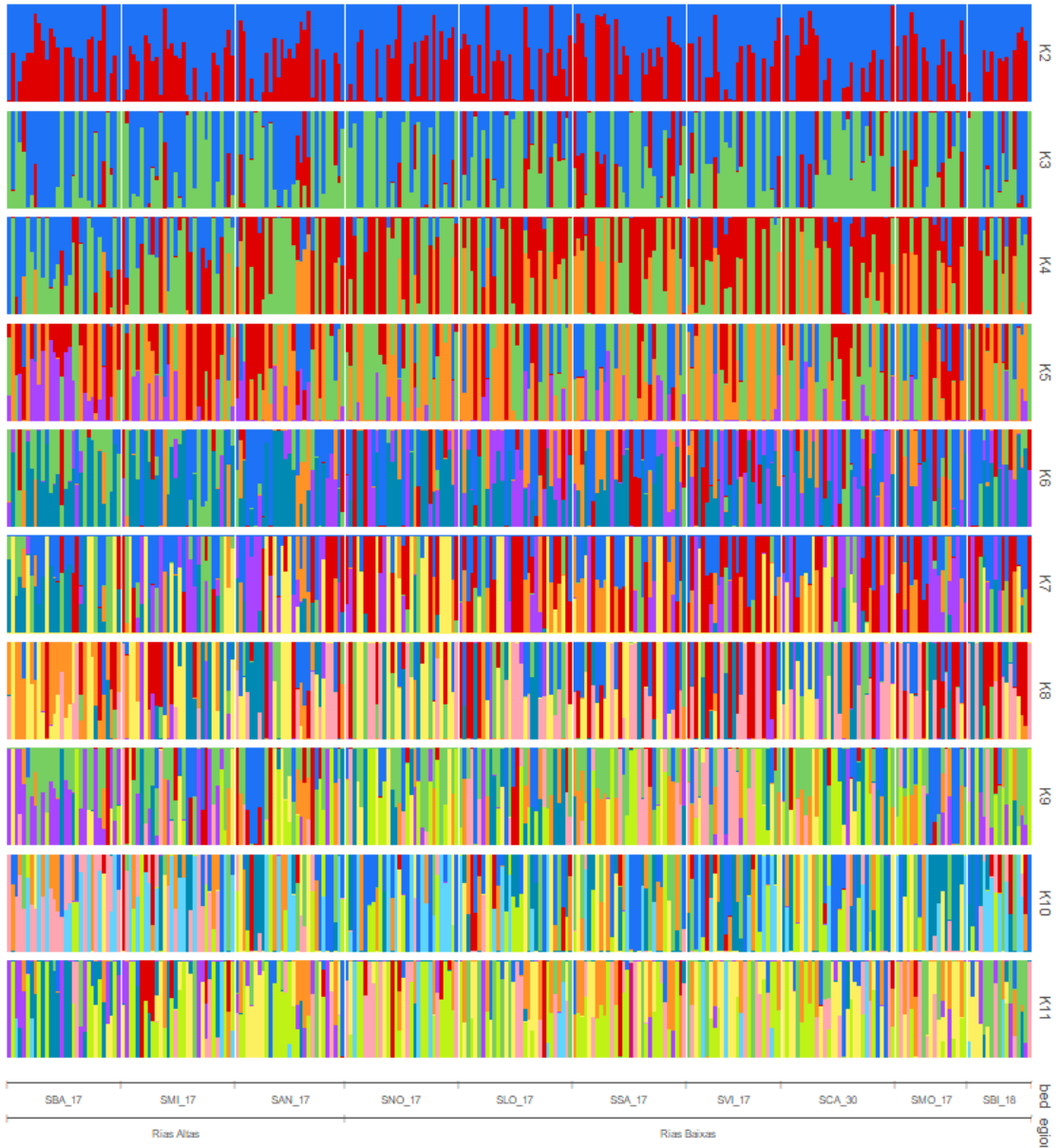
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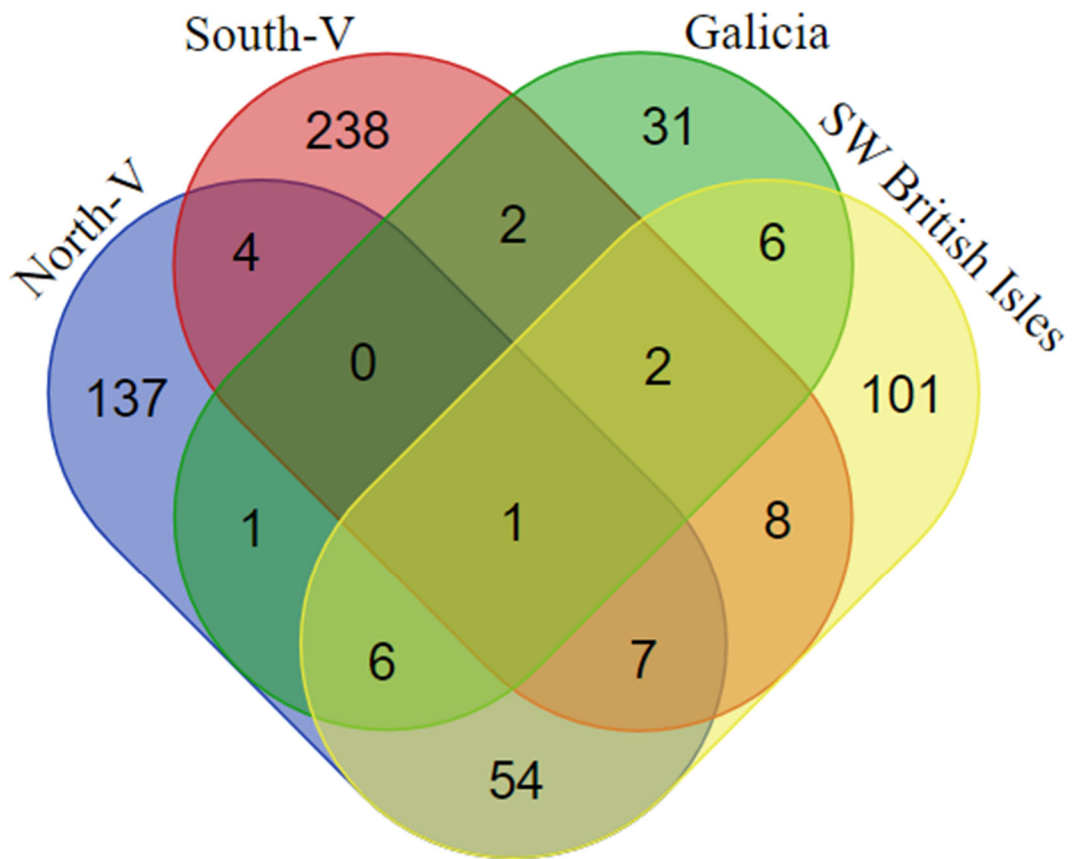


Supplementary Figure 4. Discriminant Analysis of Principal Components (DAPC) plots of *Cerastoderma edule* beds belonging to the SW British Isles [using the neutral dataset (A), the 35 shared divergent outliers between methodologies (B) and 186 divergent outliers (C)] and Galicia [using the neutral dataset (D) and 51 divergent outliers (E)]. The weight of retained discriminant analysis (DA) and principal components selected are shown on left bottom box and right bottom box, respectively. Codes are shown on Table 1.



Supplementary Figure 5. fastSTRUCTURE plots (K2 -K11) for Galicia using the 51 divergent outliers identified in the region. Each vertical bar represents one individual, and the colour proportion for each bar represents the posterior probability of assignment of each individual to the different clusters (K) inferred by the program.





Supplementary Figure 6. Outliers under divergent selection in Galicia and SW British Isles regions from this study and in North-V and South-V regions analysed by Vera et al. (2022).