

MARINE BIODIVERSITY AND CLIMATE CHANGE (MARCLIM)

The European geographical distribution of intertidal indicators

A Preliminary Report by

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The MarClim indicator species have been selected to represent intertidal rocky shore organisms whose northern or southern biogeographic limits of distribution occur near the British Isles. This report details the current distributional range for each individual species within Europe.

Legend for Figures:


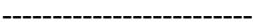

-  species present
-  annual summer isotherm °C
-  annual winter isotherm °C



Figure 1. *Chthamalus montagui*

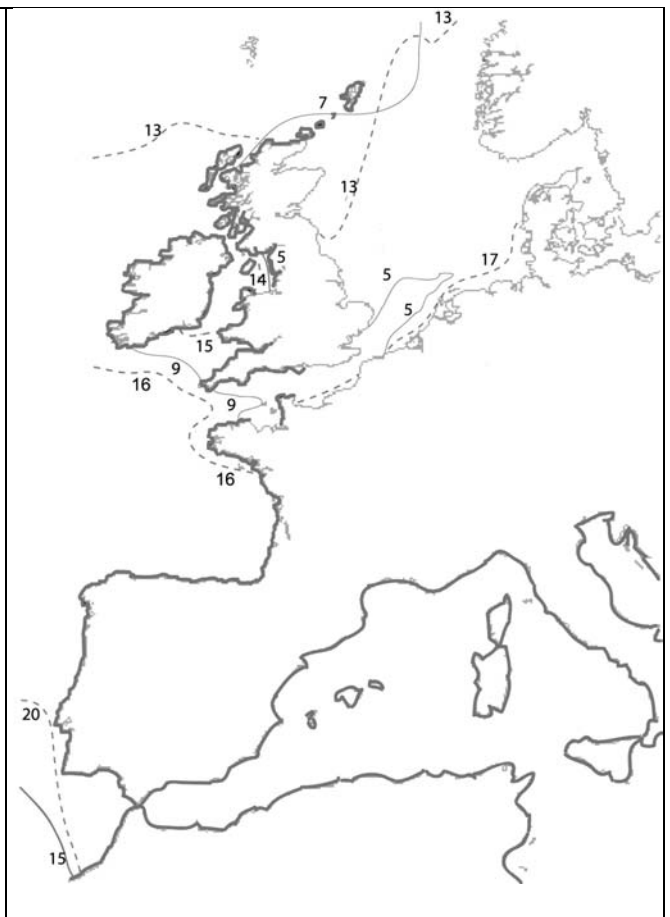


Figure 2. *Chthamalus stellatus*



Figure 3. *Semibalanus balanoides*



Figure 4. *Elminius modestus*



Figure 5. *Patella vulgata*

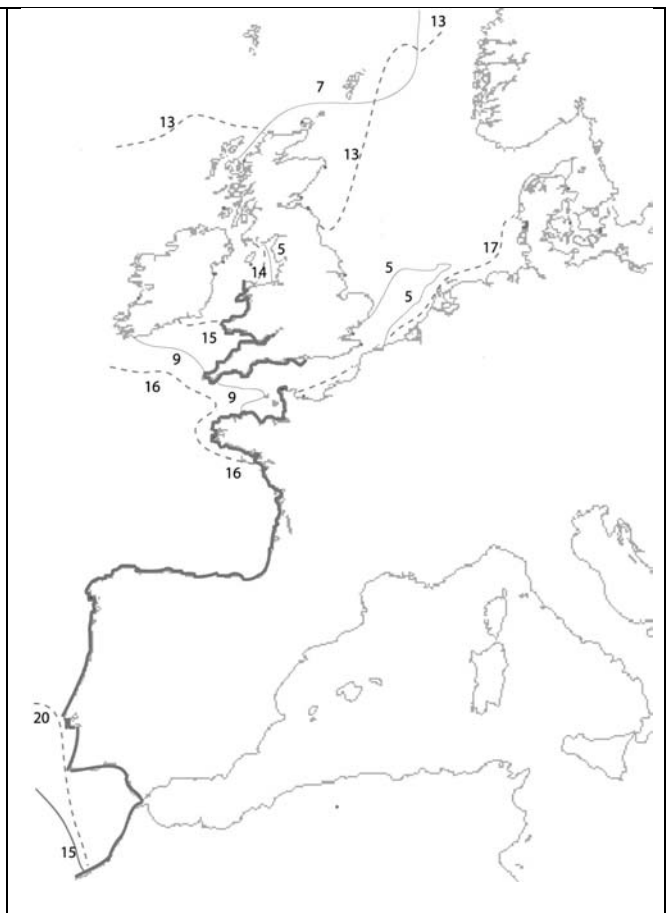


Figure 6. *Patella depressa*

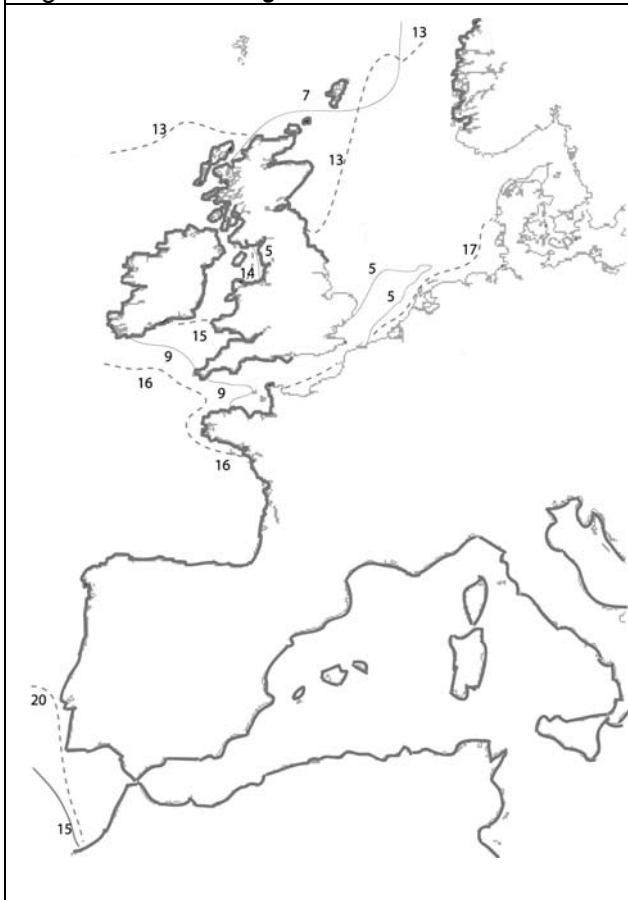


Figure 7. *Patella ulysiponensis*

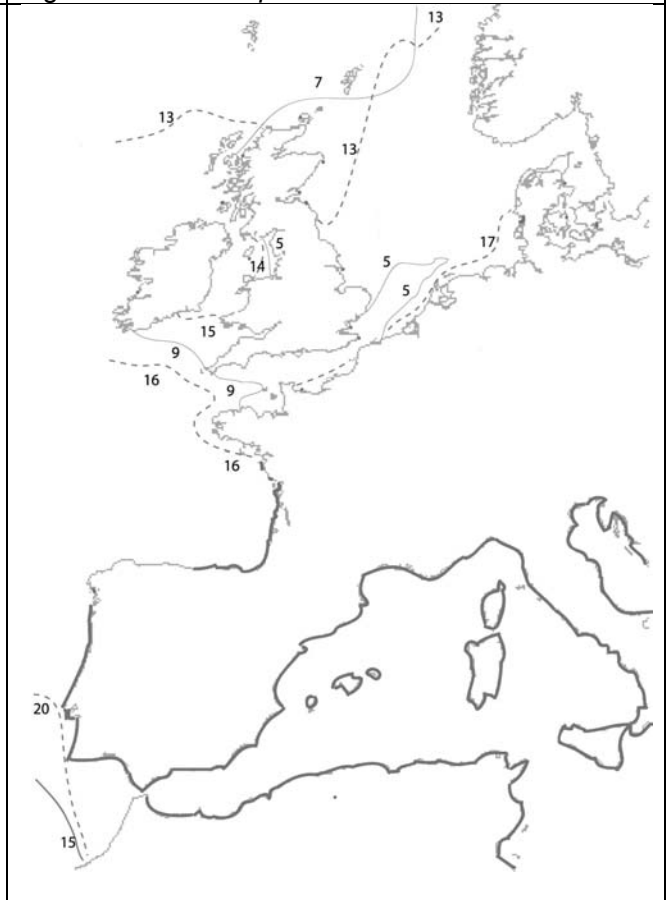


Figure 8. *Patella rustica*



Figure 9. *Gibbula umbilicalis*

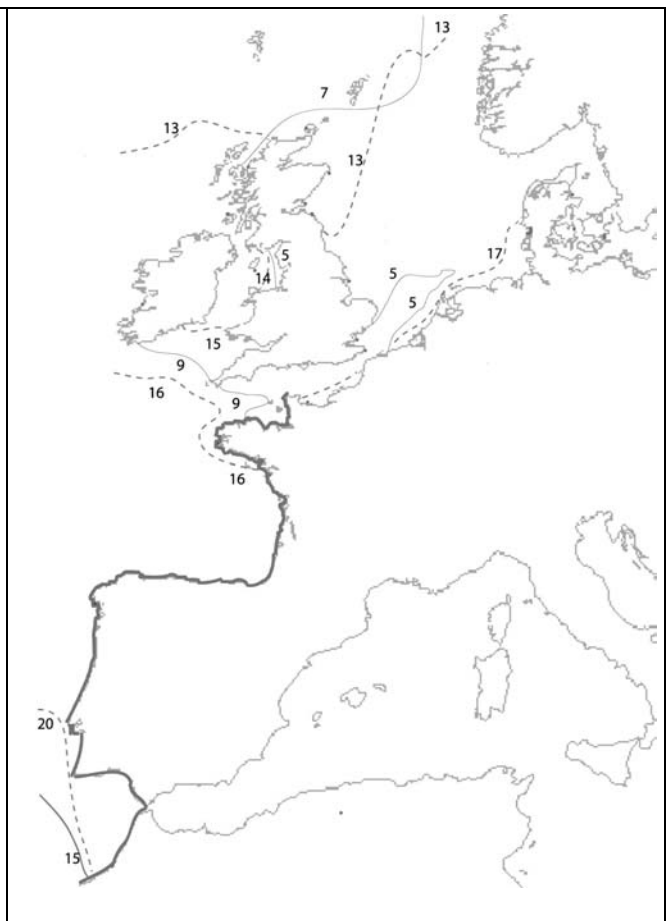


Figure 10. *Gibbula pennanti*



Figure 11. *Osilinus lineatus*

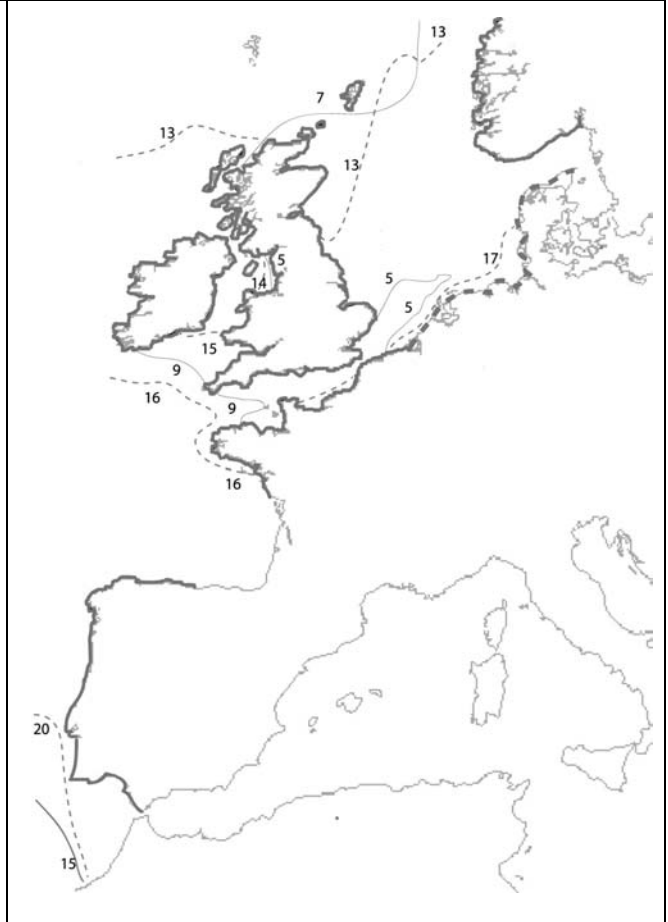


Figure 12. *Nucella lapillus*



Figure 13. *Littorina littorea*



Figure 14. *Littorina saxatilis agg.*

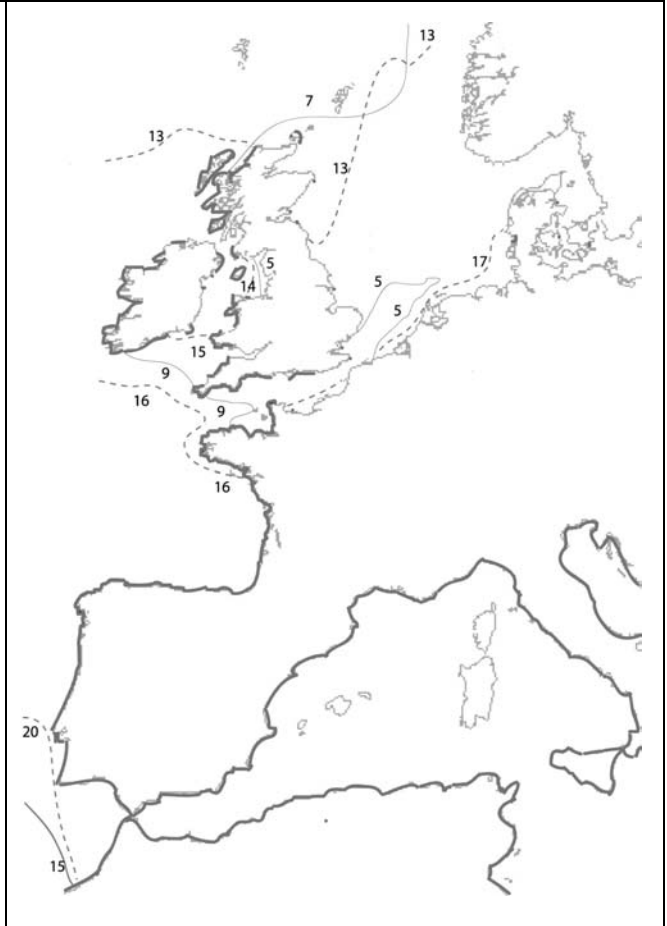


Figure 15. *Melaraphe neritoides*

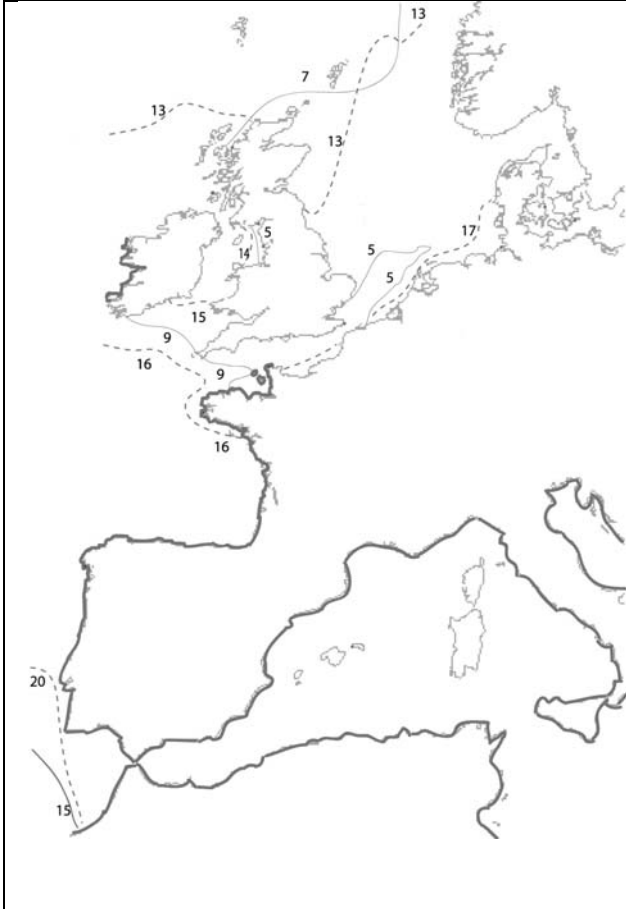


Figure 16. *Anemonia viridis*

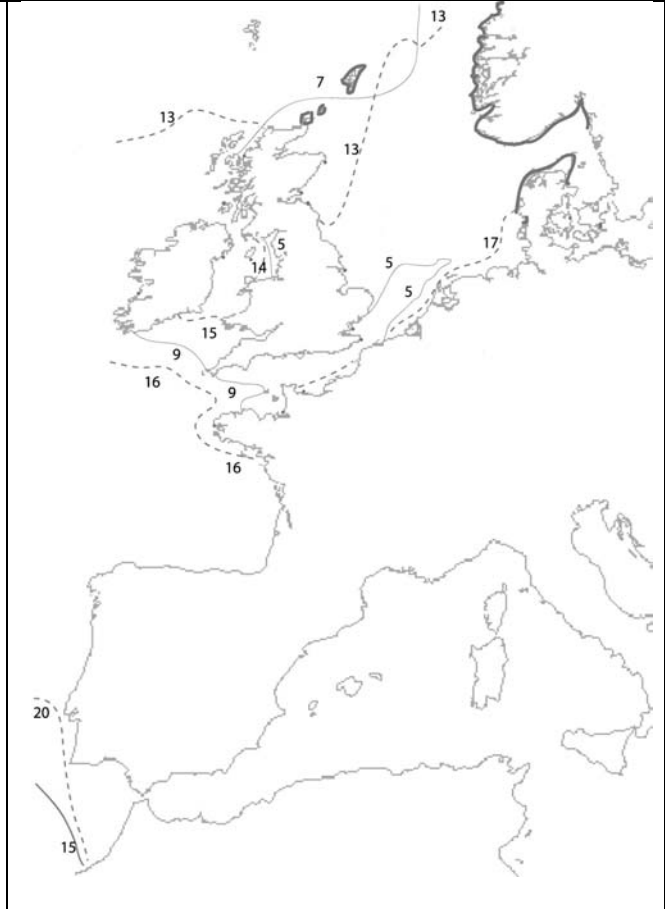


Figure 17. *Paracentrotus lividus*

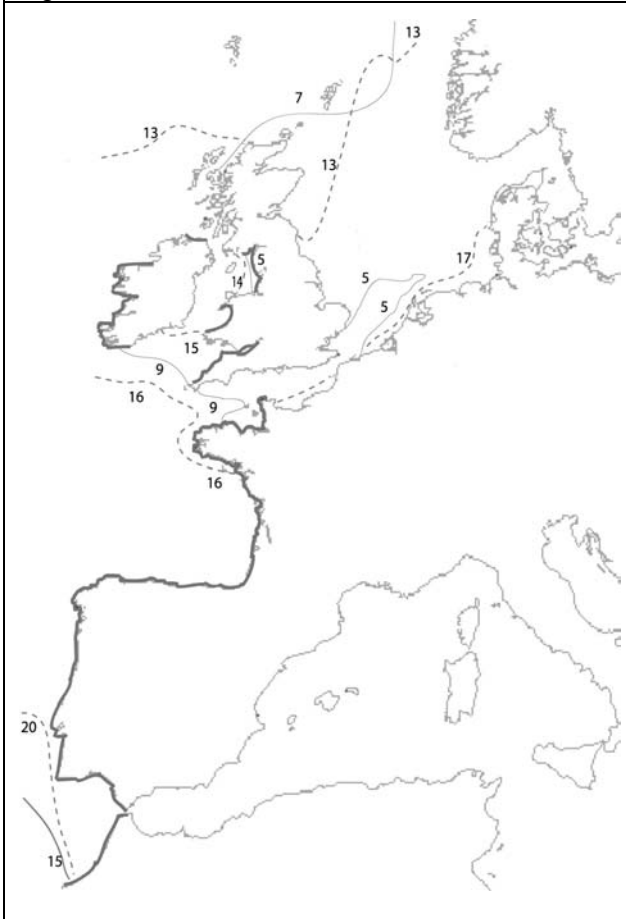


Figure 18. *Strongylocentrotus droebachiensis*

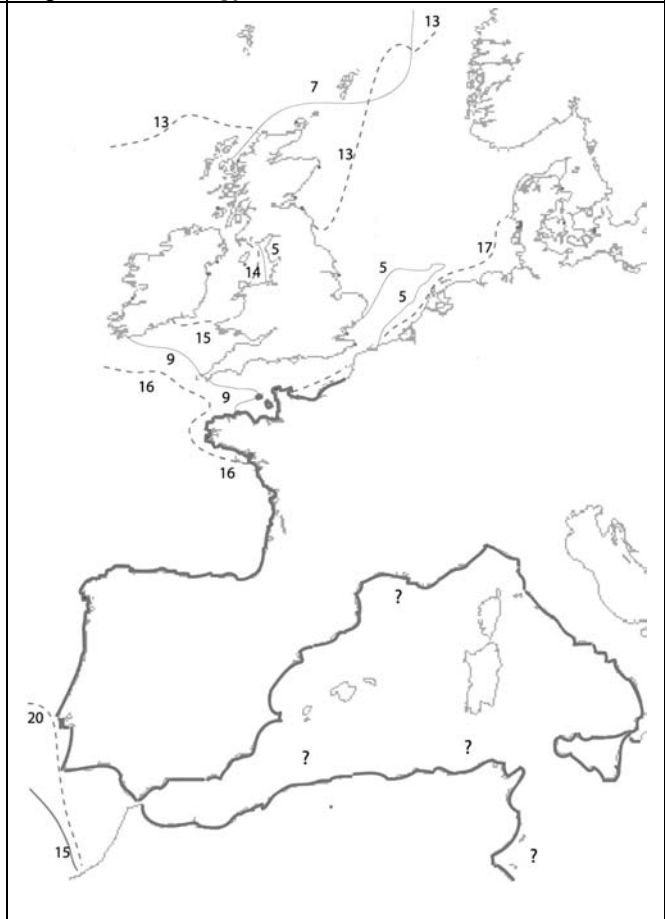


Figure 19. *Sabellaria alveolata*



Figure 20. *Clibanarius erythropus*



Figure 21. *Laminaria hyperborea*

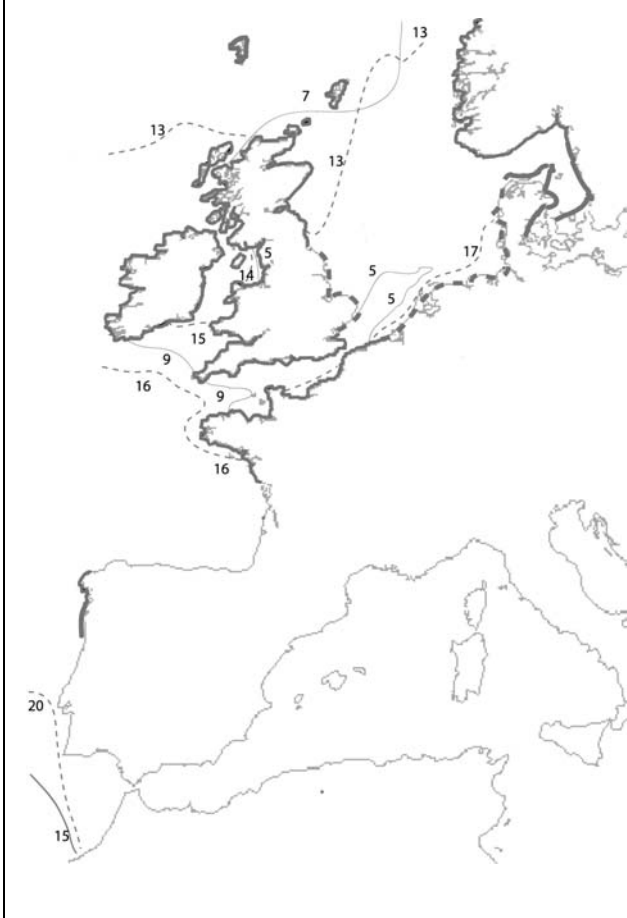


Figure 22. *Laminaria digitata*



Figure 23. *Laminaria saccharina*



Figure 24. *Alaria esculenta*

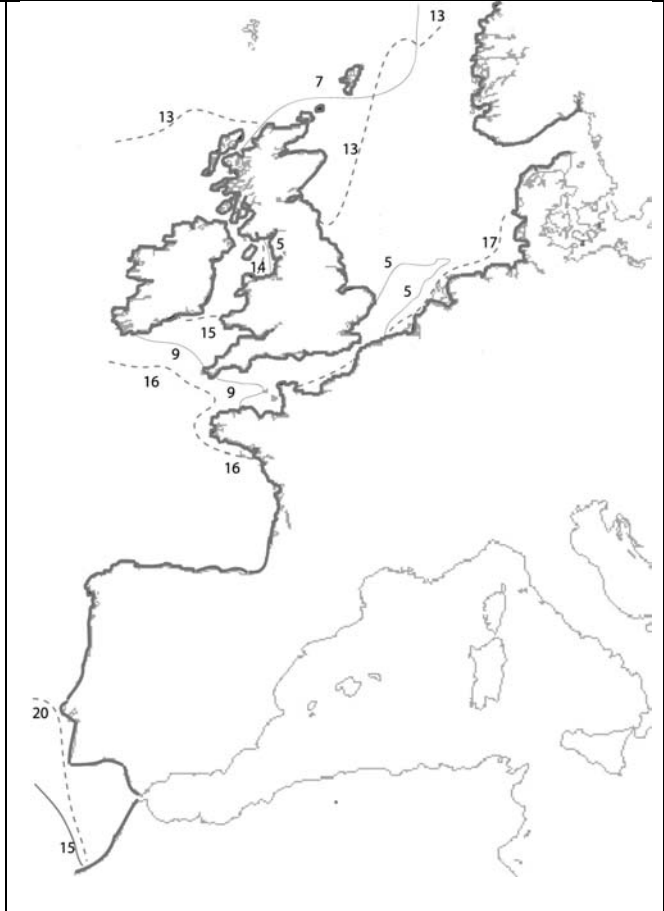


Figure 25. *Fucus serratus*



Figure 26. *Fucus spiralis*



Figure 27. *Fucus vesiculosus*



Figure 28. *Fucus distichus*

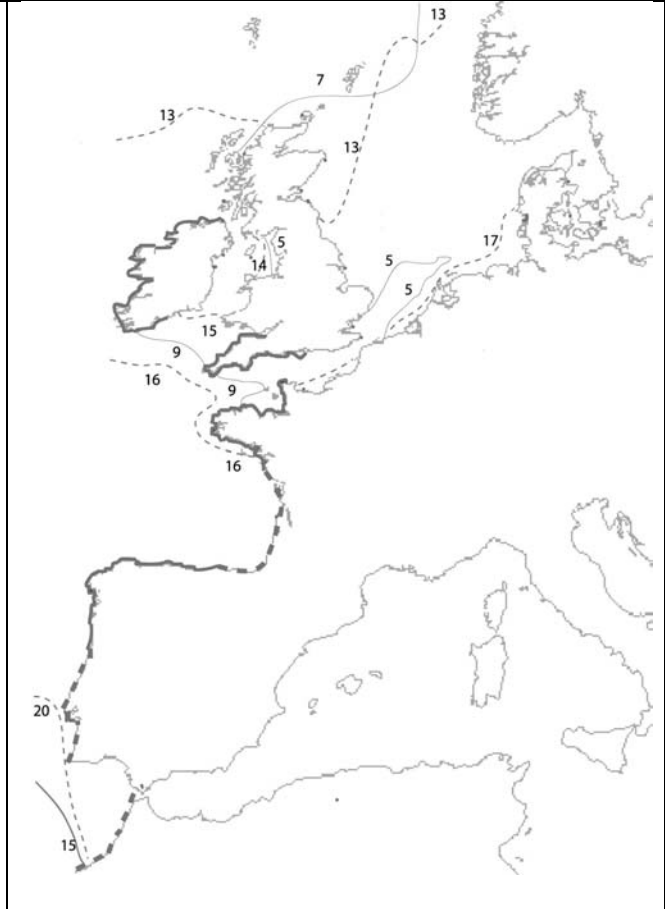


Figure 29. *Ascophyllum nodosum*



Figure 30. *Bifurcaria bifurcata*

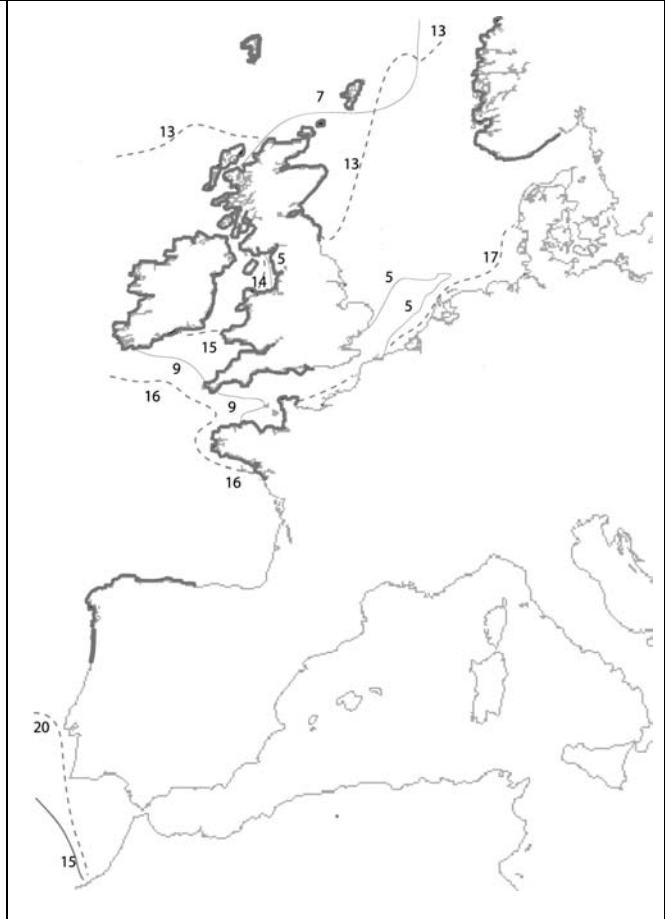


Figure 31. *Sargassum muticum*

Figure 32. *Himantalia elongata*