

WOODLICE OF THE ISLES OF SCILLY

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INTRODUCTION

The Isles of Scilly are an archipelago lying 27 miles (43 km) W.S.W. of Land's End, Cornwall (Fig. 1). Today, five major islands are inhabited, St. Mary's, Tresco, St. Martins, Bryher and St. Agnes, although other islands have been inhabited in the past. Of about 150 smaller islands, rocks and reefs, 40 are vegetated. The total exposed land surface at H.W.N.T. is approximately 3,900 acres (1,600 ha). They are composed entirely of granite over which are deposits of blown sand, alluvium and head.

GEOGRAPHY AND CLIMATE

The Scilly Isles were last connected to the mainland during the Mid-Pleistocene and during the glacial advances the environment must have been extremely unsuitable for many of the isopods found on the islands at present, the ice sheet having reached Scilly on at least one occasion (Scourse 1986). In addition, the changes in sea level associated with the glacial advances and retreats resulted in the islands being at times all part of a larger island and at other times virtually all submerged. The rise of the sea after the last advance probably split St. Agnes and Annet away from the rest of the Scilly land mass during the Bronze age. The subsequent rise in sea level has fragmented the remaining super-island into the present islands. This was a gradual process and is thought not to have been completed until the Middle Ages (Fowler & Thomas 1979).

The present climate is very mild, much milder than the mainland. Regular rainfall and sea fogs maintain a high humidity. There is a virtual absence of snow, and frosts are limited to fewer than five days a year. For 350 days a year, the air temperature is in excess of 5 °C. A comprehensive summary of climatic conditions is given in Lousley (1971).

VEGETATION

Compared with the mainland, habitat types are limited. The coastal environment is obviously well represented with bare

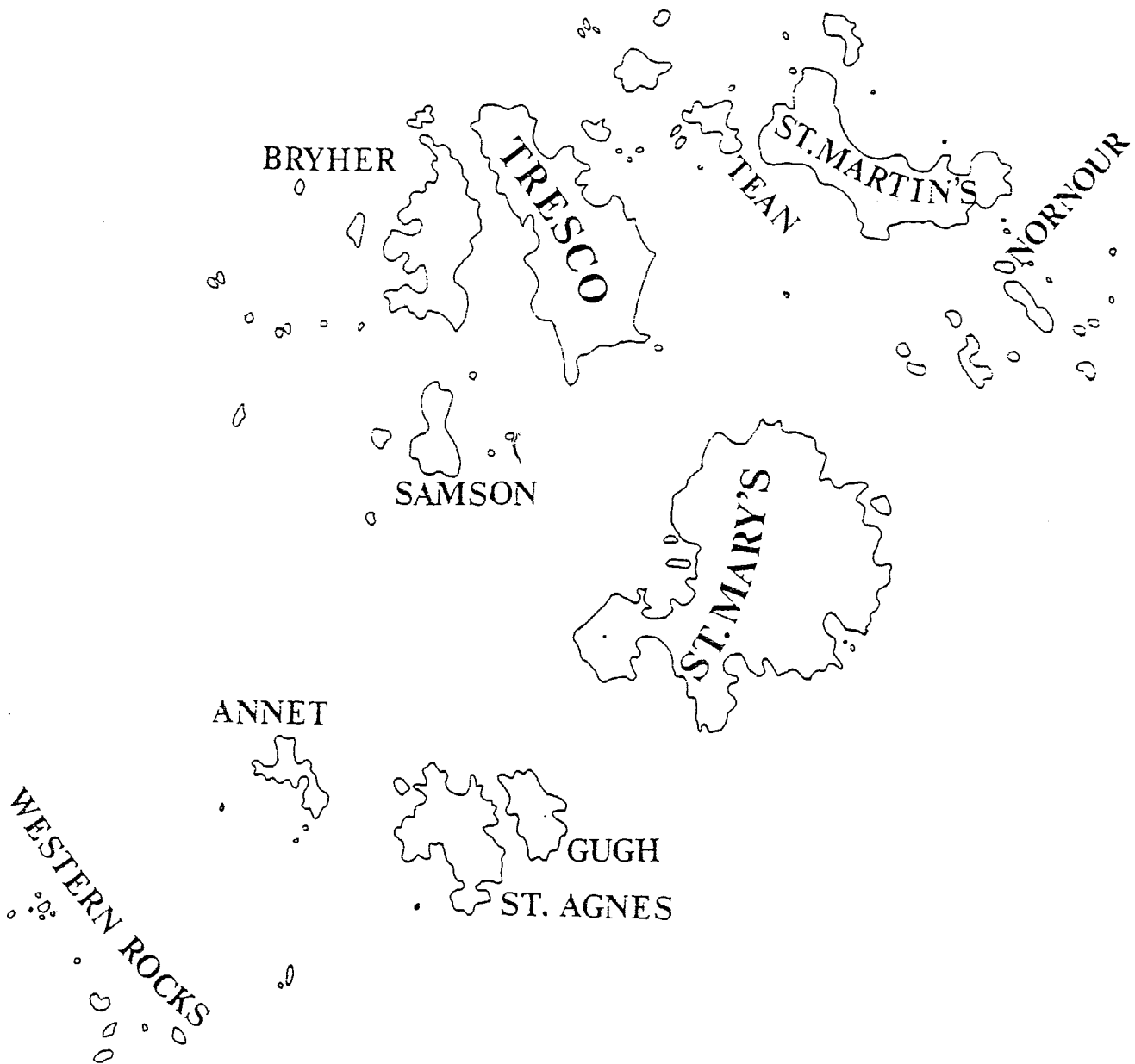


Fig. 1 : The Isles of Scilly

granite cliffs, boulder and shingle beaches, sandy beaches and dunes. Many of the small rocks have a sparse littoral flora and Annet is unusual in being almost entirely covered with tall mounds of thrift (Armeria maritima). Natural woodland is absent although it was certainly present during the Bronze Age and may have lasted until much later. There are small amounts of neglected elm (Ulmus sp.) coppice on St. Mary's as well as willow (Salix sp.) thickets in wetter areas. Conifer shelter belts have been planted on St. Mary's and Tresco. Tresco also has ornamental woodland planted in and around the Abbey Gardens. There are large areas of Western Maritime Heath dominated by stunted heather (Calluna vulgaris) on all the major islands and some areas are dominated by bracken (Pteridium aquilinum), bramble (Rubus sp.) and bluebell (Endymion non-scriptus). The cultivated areas are small fields bounded by stone walls, often with shelter strips of Pittosporum crassifolium, an introduced shrub.

In 1835, Augustus Smith started to build his ornamental garden on Tresco. This led to the importation of exotic plants from all over the world, especially from the southern hemisphere (Lousley 1971).

FAUNA

The isopod fauna of the islands is slightly impoverished compared with that of the mainland but it includes one exotic species which has been accidentally introduced from outside Britain. At the maximum extent of the ice advance, the fauna must have been small. Some species may have arrived naturally from warmer refugia further south but in the absence of proof of such refugia it seems likely that many, if not most, species now present owe their introduction to human agency. This has been proposed as the most likely method of arrival for other creatures such as the Scilly shrew (Crocidura suaveolens) (Corbet 1961).

In theory it should be possible to date the arrival of some species from their presence or absence on certain islands, e.g. any species which is not present on all of the major islands (excluding the St. Agnes group) is likely to have arrived after the Middle Ages. However, subsequent inter-island introductions and recent extinctions would confuse the issue. Only when sufficient data has been collected from all of the major islands will it be possible to test the theory.

WOODLICE COLLECTED FROM SCILLY

The species described below were collected in the Autumn of 1982, 1983 and 1984, and the Spring of 1985 and 1986. Most specimens were collected by the authors but other material was collected by A.J. Stones and R. Image. To date, 16 species of terrestrial isopod have been collected from Scilly (Table 1).

	St. Mary's	St. Agnes	Trusco	Bryher	St. Martin's	Teun	Gugh	Annet	Nornour
<i>Armadillidium album</i>						●			
<i>A. vulgare</i>	●	●	●	●	●	●	●	●	●
<i>Chaetophiloscia</i> sp.			●						
<i>Cylisticus convexus</i>	●								
<i>Halophiloscia couchi</i>			●						
<i>Ligia oceanica</i>	●	●	●	●	●	●	●	●	●
<i>Miktoniscus patiencei</i>	●						●	●	●
<i>Oniscus asellus</i>	●	●	●	●	●	●	●	●	●
<i>Philoscia muscorum</i>	●	●	●	●	●	●	●	●	●
<i>Platyerthrus hoffmannseggii</i>	●	●				●			
<i>Porcellio dilatatus</i>	●	●	●	●	●				
<i>P. scaber</i>	●	●	●	●	●	●	●	●	●
<i>P. spinicornis</i>	●								
<i>Forcellionides cingendus</i>	●	●	●	●	●	●	●	●	●
<i>Trichoniscus pusillus</i>	●			●					
<i>Trichoniscoides saercoensis</i>	●						●		●

Table 1 : Woodlice collected from the Isles of Scilly

1. Ligia oceanica

This species is common, occurring on the rocky shores of all islands so far visited.

2. Miktoniscus patiencei

This supra-littoral species has been collected from four islands since 1985. It inhabits soil-filled cracks in the coastal granite from sea level to the cliff tops. It has also been sieved from coarse granite gravel along with Trichoniscoides saeroeensis.

3. Trichoniscoides saeroeensis

This has been collected from three islands and occurs in the same microhabitats as Miktoniscus patiencei

4. Trichoniscus pusillus

Despite its abundance elsewhere in Britain, this species has only been collected twice, once from St. Mary's and once from St. Martins. This scarcity appears to be genuine and it seems likely that the thin acid soils which cover much of the island are not suitable for this species.

5. Halophiloscia couchi

Collected once from the stony shore at Old Grimsby, Tresco in 1986. It may well have been overlooked elsewhere.

6. Oniscus asellus

Common, found on all islands visited.

7. Philoscia muscorum

Common, found on all islands visited.

8. Platyarthrus hoffmannseggi

So far collected from ants' nests on St. Marys (where it is widespread), St. Agnes and Tean. Despite much searching it has been found nowhere else.

9. Armadillidium album

Two individuals were collected from an area of blown sand on Tean in 1985 and two more from the strandline in 1986. There are several miles of potentially suitable shorelines on other islands where this species could occur.

10. Armadillidium vulgare

Common, collected on all islands visited.

11. Cylisticus convexus

A single specimen was collected from a coastal rubbish tip on St. Marys in 1985 by A.J. Stones.

12. Porcellio dilatatus

This species is common on the five inhabited islands but has not been found elsewhere.

13. Porcellio scaber

Common on all five islands visited.

14. Porcellio spinicornis

A single specimen was collected in 1984 from the bath of a holiday flat in Hugh Town, St. Mary's.

15. Porcellionides cingendus

Common on all islands visited, particularly in grassland.

16. Chaetophiloscia sp.

On Tresco, there is a species of this genus which is capable of living out of doors. One specimen was collected just outside the Gardens in 1985 and another in the gardens in 1986. Unfortunately both specimens have been females and thus cannot be attributed to a species. It is hoped that a male specimen will be obtained in the future.

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