A pilot network of flora and fauna micro-reserves on dry stone walls
2010

Introduction

Dry stone walls\(^1\) are popular as field boundaries for the shelter they provide for farm animals. They also provide varied habitats and microclimates for flora and fauna. There is an exposed, humid, cold north side, and a sheltered, dryer, warm south side. The top is windswept, but the bottom is sheltered. Inside it can be dry and snug, with perhaps a trickle of water. A dry stone wall is supplied with holes, nooks and crannies, affording hideaways for a myriad of humble insects and their eggs—spiders, woodlice, springtails, millipedes, bees and wasps. Among the leaf-filled footings and fillings protection is offered to toads, mice, hedgehogs. In areas with less trees, the wall offers a perch or view point, and can form an ideal plucking platform for birds of prey.

When combining the wall with an earth bank on top, there opens an endless opportunity for wild flowers and herbs.

To some wildlife, semi-dereliction is more attractive than a tightly-built wall since there are more sheltered spaces and more is covered in soil. However such a state is relatively short-lived. Once reduced to less than half its height, a wall’s habitat value is considerably reduced.

The habitation of a wall can take only a few days (for fast moving animals and plants), to decades. This depends also of the material used. New stones are absent of fungi, lichen, but old used stones can already have a form of habitation. A faster process is to bring to a wall some flora and fauna, in the expectation they will settle. This is sometimes used when an old habitat is endangered, and it is necessary to create a new habitat.

---

\(^1\) Dry stone walls are walls costructed of two horizontal structures of overlapping stones, usually with interconnecting stone to keep them together and sometimes with capping stone bridging the top. The space between is filled with smaller stones. No mortar is used in the Construction.
What is a microclimate?

Flora and fauna microclimates are micro reserves of a small, specific place within an area as contrasted with the climate of the entire area. On dry stone walls a variety of more than 200 species are present on a small surface. Even on a area of only 1 square metre, such variety is evident. Depending if a wall is a retaining wall or a freestanding wall, the amount of plants and animals can differ. These climates are communities in themselves, or function as parts of more inclusive networks of a number of different communities. When they disappear, most of the species settled on the wall will go with them, because of their unique character of living conditions.

An important feature of the walls as microclimate, is that they can be linked as channels between communities which allow species to spread geographically, rather than becoming isolated and dying out.

Aim of microclimate
The micro reserves encompass areas of small surface (minimum of 1 m²) for in situ conservation and management of threatened and rare flora and fauna. The aim is:

1. to protect a selected sample of each of the main populations of the rarest, endemic or most threatened species;
2. establish a permanent monitoring system to record and evaluate long-term population fluctuations and tendencies.
3. increase environmental awareness activities (reintroductions of species, in situ management, environmental education).

Figure 3 a dry stone wall as part of the landscape