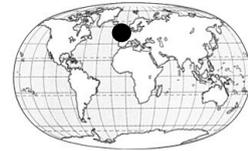


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ISLANDS AND INVASIONS: A MEDITERRANEAN ODYSSEY

The ecology of islands is intimately associated with biological invasions. The species composition and community structure of islands is widely recognised to be a function of colonisation rates and it follows that where these have been accelerated by human activities, biological invasions will also play a significant role. Current understanding of the extent, character and consequences of the invasion of islands by non-native species is drawn largely from studies of tropical oceanic islands especially Hawaii. This paper aims to address this imbalance by focusing on the invasion by non-native plants of islands in the Mediterranean Basin. Mediterranean climate regions are particularly susceptible to biological invasions although New World ecosystems appear more susceptible than those of the Mediterranean Basin. Nevertheless, whereas the proportion of the flora of the Mediterranean Basin composed of non-natives has been estimated at only 1%, it is substantially higher for Mediterranean islands. The impact of exotic plants on biodiversity remains poorly documented in the Mediterranean Basin. Several non-native plants are weeds of major economic significance, others may also be hosts of plant pathogens. Both the intensive planting of exotic species and agricultural abandonment significantly increase the risk of invasion by feral crops. Non-native plants may impact on human and animal health, and may have profound environmental consequences, exacting a significant toll on ecosystems. The problems of invasive species are often viewed as those of disturbed and anthropogenic habitats rather than intact ecosystems. However, a unique element of indigenous Mediterranean biodiversity is the anthropogenic component, a distinct subflora that evolved in the Mediterranean. These species occur in varying associations in fields, pastures and on roadsides: habitats typically invaded by non-native plant species.

keywords: biodiversity, biogeography, exotic plant species, Mediterranean Basin