Oxalis pes-caprae

Taxon	Family / Order / Phylum
Oxalis pes-caprae L.	Oxalidaceae / Oxalidales / Plantae

COMMON NAMES (English only)
Bermuda buttercup (U.K.)
Soursob (Australia)
Yellow sorrel, Sourgrass
Sour sorrel (South Africa)

SYNONYMS
Oxalis cernua Thunb.
Bolboxalis cernua (Thunb.) Small
Oxalis pleniflora Lanfranco
Oxalis cernua Thunb. var. *pleniflora* (Lowe) Sunding
Oxalis libica Viv.

SHORT DESCRIPTION
A short perennial herb forming large clonal colonies reproducing by annual bulbs. Flowering takes place between January and March, and is synchronous across the colony, producing spectacular displays of 1-5 pedicels with large cup-shaped bright yellow flowers with 5 yellow petals. Plants die back by late spring.

Close-up of *Oxalis pes-caprae*

Photo: Phil Lambdon

BIOLOGY/ECOLOGY

Dispersal mechanisms
The bulbs are dispersed by agricultural activity. They are also washed along gullies in rain or stream water.

Reproduction
It is a heterostylous species, with at least three forms known globally. The forms are not easily cross-pollinated and are not self-compatible. Only the short-styled form is common in Europe, which means that plants do not produce seeds and must rely on vegetative reproduction.

Known predators/herbivores
Mammals may graze the leaves and rodents consume bulbs.
Outside Europe, the noctuid moth *Klugeana philoxalis* Geertsema is a specialist feeder on *Oxalis* species, and the parasitic plant *Orobanche ramosa* L. (branched broomrape) widely uses it as a host in the Mediterranean.

Resistant stages (seeds, spores etc.)
Propagated by bulbs produced in the axils of long, white rhizomes.

HABITAT

Native (EUNIS code)
Similar to European habitats.

Habitat occupied in invaded range (EUNIS code)
Often extremely abundant in cultivated areas, especially where there is some shade from trees, such as olive and citrus groves or vineyards. Bulbs are often spread into secondary habitats that have some degree of disturbance such as riverbeds, ditches, dunes, ruderal areas, screes and degraded Mediterranean shrublands. C3: Littoral zone of inland surface waterbodies, F6: Garrigue, FA: Hedgerows, FB: Shrub plantations, H2: Screes, I1: Arable land

and market gardens, I2: Cultivated areas of gardens and parks, J2: Low density buildings, J5: Highly artificial man-made waters and associated structures.

Habitat requirements

Prefers warm, light soils and remains sensitive to frost, which limits the distribution to southern Europe and below 700 m. Abundance often declines following the cessation of cultivation, although it may persist for some years in fallow or abandoned fields.

DISTRIBUTION

Native Range

Cape region of South Africa

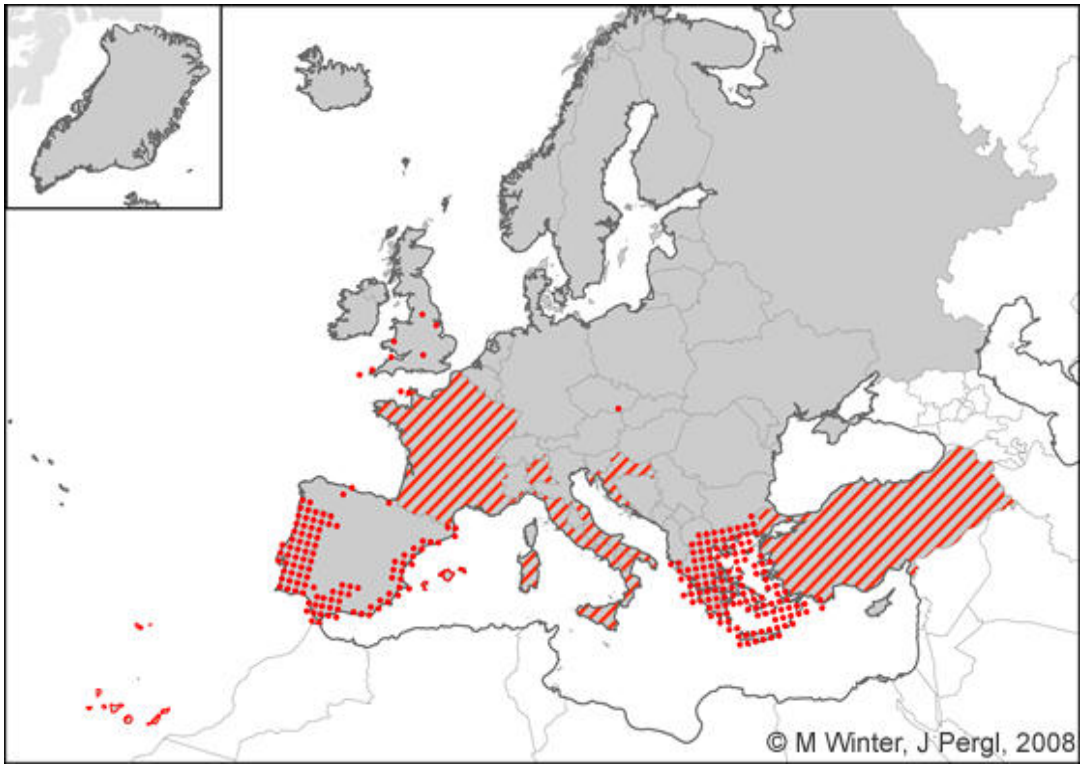
Known Introduced Range

Has spread widely across southern Europe, North Africa and southwest Asia, particularly the Mediterranean region, but also extends to Pakistan and India. Has been recorded throughout Australia, the South Island of New Zealand, Japan and China. In the Americas, it is present in California, Arizona and Florida, and also from western South America.

Trend

Stable, but may expand northwards in Europe due to global warming.

MAP (European distribution)



Legend

	Known in country		Known in CGRS square		Known in sea

INTRODUCTION PATHWAY

Oxalis pes-caprae was first brought to Europe (London) in 1757 and reached habitable Mediterranean areas via Sicily in 1796, Sardinia by 1859 and Crete by 1883. Early introductions were generally as ornamental plants, but it is no longer common in cultivation and subsequent spread has been through soil movement in agriculture, horticulture and gardening.

IMPACT

Ecosystem Impact

It can suppress other ruderal weedy species. This is a serious problem where the arable flora is of conservation value, as over much of the Mediterranean old fields.

Health and Social Impact

The massive floral displays in spring attract tourists to the Mediterranean.

Economic Impact

The leaves contain large quantities of toxic oxalates, and in grassy areas the species can therefore be a danger to livestock. Significant losses of cattle and sheep have been recorded from some pastoral regions (e.g. Sardinia and Menorca). In annual crops, it can be a significant pest, reducing yields and becoming a nuisance during harvesting. Where olives are hand-picked from the ground, the foliage interferes with visibility and snags netting. Under certain circumstances there may be some agronomic benefit to infestations, in that they prevent the establishment of other weeds leaving the soil bare by summer, and the flowers provide forage for honeybees.

MANAGEMENT

Prevention

Prevention of soil contamination is essential.

Mechanical

Grazing by pigs or turkeys, which consume the bulbs, may sometimes be practical. Soil ploughing in January can reduce plan growth and bulb production.

Chemical

Pre-emergence treatments with glyphosate or sulphonyl urea-based herbicides (e.g. chlorosulfon, metsulfuron-methyl, triasulfuron, oxyfluorfen) are generally effective, although these must be used in moderately large doses in order to not affect crop performance or the native flora. It is resistant to certain classes of chemical such as dinitroanilines.

Biological

None.

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