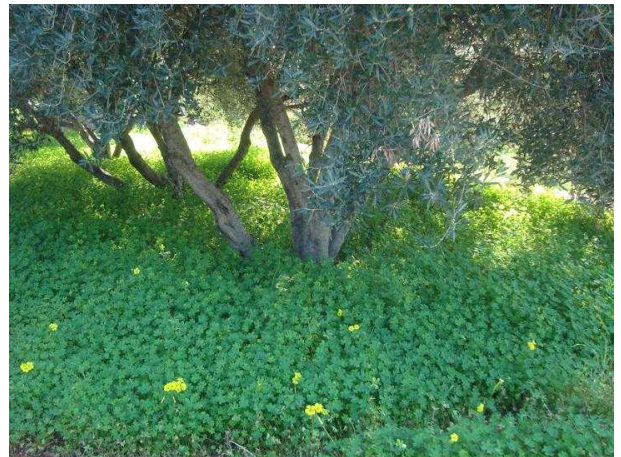



**Informationen zur Umwelt und für Naturreisende auf Kreta:**  
 Information about the Environment and for travellers in Crete:

**Sourgrass or Soursop (*Oxalis pes-caprae*)**  
**[and it's parasite (*Orobanche ramosa* subsp. *mutelii*)]**


Those who visited Crete during the months December to April could not have overlooked this plant. The Sourgrass is here the all-determining part of the landscape during the flowering season (December to May), in particular on its preferred location in the arable land under (olive) tree crops (see fig.).



In the free encyclopaedia Wikipedia ([[http://en.wikipedia.org/wiki/Oxalis\\_pes-caprae](http://en.wikipedia.org/wiki/Oxalis_pes-caprae)]) is written: “*Oxalis pes-caprae* (Bermuda buttercup, African wood-sorrel, Bermuda sorrel, Buttercup oxalis, Cape sorrel, English weed, Goat's-foot, Sourgrass, Soursob and Soursop) is a species of tristylous flowering plant in the wood sorrel family *Oxalidaceae*.” The Latin epithet means “goats foot” and probably refers to the short, bilobated pinnate leaves.



Sourgrass is a perennial, herbaceous plant. The plant reaches heights between 10 and 50 centimetres. The leaf rosette consists of up to 20 cm long stalked, clover-like, three pinnate leaf sheets (see fig.). The single leaflets are deeply wrong heart-shaped and hairy on the underside.

On the long stalked, umbellate inflorescence (see fig.) are six to twelve funnel-shaped flowers. The buds are nodding, later the flowers are upright. The hermaphrodite, five numbered flowers are about 1.5 cm in diameter. The five petals are free. The five 2 to 2.5 centimetres long, lemon yellow petals are connate at their base. The variety of *Oxalis pes-caprae* var. *pleniflora* Lowe has filled flowers. There are two circles with five stamens. Five carpels are connate to a superior ovary.



The reproduction of the population occurring in the Mediterranean takes place only by breeding bulbils, which sit at the rhizome, because of the three possible flower shapes with different long styles or stamens only one is reached in the Mediterranean region, and thus pollination is impossible. Therefore hardly capsules are formed in the Mediterranean. This is an invasive plant in many parts of the world.

Nodding Sourgrass actually originates from South Africa and was introduced to Malta probably in the early 19<sup>th</sup>



Century by CARLO GIACINTO, a Genoese monk and former curator of Floriana, the Botanical Gardens at Malta. Within just a few decades it spread out over Malta, then the remaining Mediterranean and even at the Atlantic coast of Europe along to the South of Devon, where it is naturalized since then. It is also naturalized at the Canary Islands, Azores and Madeira. In Malta the parasite *Orobanche ramosa* subsp. *mutelii* has become specialized on the Sourgrass as its host.

The **parasitic plants** *Orobanche* are set to just a few plant species or families, on which they live as parasite. G. BLAICH (see [<http://www.guenther-blaich.de/pflgs.php?par=orob&lan=d>]) introduce some of them on his internet side, e.g. **fig. left** *Orobanche mutelii*, which is also named *Orobanche ramosa* subsp. *mutelii* [hemp and/or branching broomrape], it parasitically lives at different compositae, umbellifer and in particular at the Sourgrass common in the Mediterranean, **fig. right**.



Records of Nikandros of Colophon <sup>\*)</sup> called *Oxalis* generally as a sour-tasting plant already about 150 BC.

Since ancient times the **Sourgrass** was also used as medicinal plant. The fresh herb collected during the heyday was applied in a paste as external cure and corrosive agent, e.g. at ulcer. It was bruised and used as extract internally for liver damage and indigestion as well as heartburn.

Until the invention of proceedings for the synthetic production of oxalic acid <sup>\*\*)</sup> the plant was also of particular interest for the technology and chemistry. The oxalic acid salt contained in it was primarily used in the textile dye-works. They had to collect about 75 kg leaves for the manufacture of 500gr acid at that time; this would correspond to a content of 0.66% in the fresh mass.

<sup>\*)</sup> **Nikandros** (Νίκανδρος; also *Nikander*) [197? BC in Colophon, Ionien; † 130? BC in Pergamum?], was a Greek Doctor and Poet.

<sup>\*\*)</sup> Details to **Oxalic acid** can be found at: [[http://en.wikipedia.org/wiki/Oxalic\\_acid](http://en.wikipedia.org/wiki/Oxalic_acid)].