

***Carpobrotus edulis* (ice plant)**



Perennial creeping subshrub, with very fleshy leaves and large pink or yellow flowers.

Scientific name: *Carpobrotus edulis* (L.) N. E. Br.

Common names: ice plant, iceplant, highway iceplant, Hottentot fig, sea fig

Family: *Aizoaceae*

Status in Portugal: invasive species (listed in the annex I of Decreto-Lei n° 565/99, 21 December)

Risk Assessment score: 23

Synonymy: *Mesembryanthemum edule* L.

Last update: 10/07/2014

How to recognise it

Perennial creeping subshrub; succulent, with stems that may reach several meters, and rooting from their nodes.

Leaves: fleshy, erect or erect-patent, oblong, with 4-13 x 1-1,6 cm with an equilateral triangular cross section and an acute apex.

Flowers: from 8-10 cm diameter, solitary, yellow or pink/purple; yellow stamens.

Fruits: fleshy, with an ovoid shape, edible. Initially, they are green, becoming purple in maturation, staying on the plant for many months. The seeds, very small (1 mm long), are black.

Flowering: March to June.



Close-up of fleshy leaves

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Similar species

Carpobrotus acinaciformis (L.) L. Bolus (elands sourfig) is similar, but the leaves have an isosceles triangular cross section.

Characteristics that aid invasion

It propagates vegetatively by fragments, sprouting vigorously after cutting.

It also reproduces by seed, producing many seeds (each fruit has between 1000 and 1800 seeds), which are dispersed by small mammals.

ORIGIN AND DISTRIBUTION

Native distribution area

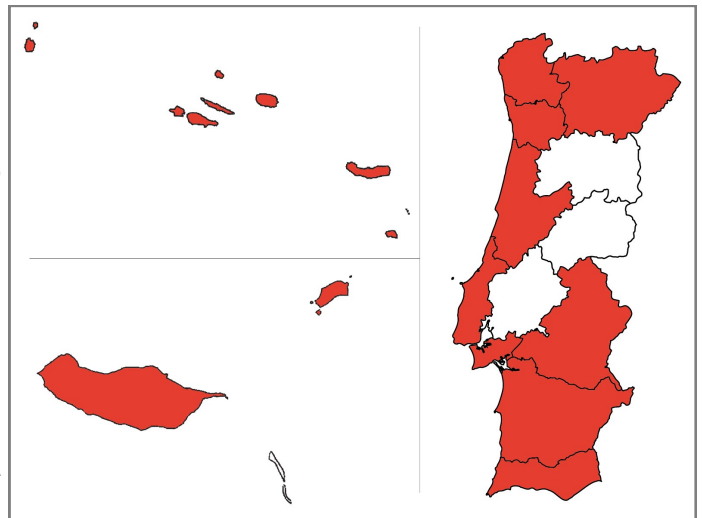
South Africa (Cape region).

Distribution in Portugal

Mainland Portugal (Minho, Trás-os-Montes, Douro Litoral, Beira Litoral, Estremadura, Alto Alentejo, Baixo Alentejo, Algarve), Azores archipelago (all islands), Madeira archipelago (Madeira and Porto Santo islands).

Places where the species is invasive

Southern Europe (Spain and France), western USA (California), New Zealand, North Africa.



Introduction reasons

For ornamental purposes. Frequently cultivated in the past, to stabilise dunes and slopes.

Preferential invasion environments

Coastal dunes, dunar belts and areas near the slopes where it was planted.

It thrives both in dry areas and in humid ones.

IMPACTS

Impacts on ecosystems

It forms impenetrable mats that cover extensive areas, hampering the development of native vegetation.

It promotes soil acidification, a process that favours its own growth.

Economic impacts

High costs in applying control measures.

Natura 2000 network habitats more subject to impacts

- Vegetated sea cliffs of the Atlantic and Baltic coasts (1230);

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- Vegetated sea cliffs of the Mediterranean coasts with endemic *Limonium* spp. (1240);
- Shifting dunes along the shoreline with *Ammophila arenaria* («white dunes») (2120);
- Fixed coastal dunes with herbaceous vegetation («grey dunes») (2130);
- Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) (2150);
- Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) (2170);
- Humid dune slacks (2190);
- *Malcolmietalia* dune grasslands (2230);
- Coastal dunes with *Juniperus* spp. (2250);
- *Cisto-Lavenduletalia* dune sclerophyllous scrubs (2260);
- Wooded dunes with *Pinus pinea* and/or *Pinus pinaster* (2270);
- Inland dunes with open *Corynephorus* and *Agrostis* grasslands (2330);
- *Cistus palhinhae* formations on maritime wet heaths (5140);
- West Mediterranean clifftop phrygnas (*Astragalo-Plantaginetum subulatae*) (5410).

CONTROL

Controlling an invasive species demands a well-planned management, which includes the determination of the invaded area, identifying the causes of invasion, assessing the impacts, defining the intervention priorities, selecting the adequate control methodologies and their application. Afterwards it is fundamental to monitor the efficiency of the methodologies and recuperation of the intervened area as to perform, whenever necessary, the follow-up control.

The control methodologies used for *Carpobrotus edulis* include:

Physical control

Hand pulling (preferential methodology). In sandy substrates, where it is most frequent, hand pulling is normally easy at any time. In more compacted substrates, hand pulling must be during the rainy season as to facilitate the removal of the root system. It should be guaranteed that there are no large fragments left in the ground, which root easily and originate new invasion foci.

After being hand pulled, the plants should be removed to a “safe” place, where they are left to dry, preferentially covered in a black plastic as to accelerate their destruction/degradation. Alternatively, they may be left on site, but with the roots faced up, without any contact with the substrate.

Chemical control

Foliar application of herbicide. Spray with herbicide (active principle: glyphosate) limiting the exposure to the target species.

For additional information, visit the webpage www.invasoras.pt and/or contact us at invader@uc.pt

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