

Project partner: Sóller Botanic Garden Foundation

Island

Balearic Islands (Mallorca)

Species name (Family)

Isoetes histrix Bory & Durieu and *Isoetes duriei* Bory (Isoetaceae)

Common name

isòet espinós; isòet (local name)

land quillwort; quillwort (English name)

Plant description

- ✓ Small herb with a trilobed underground stem; leaves are linear and thin, arranged in basal rosette. Sporangia are found at leaves base and are covered by its veil. Trilete megaspores and monolete microspores. Both species can be distinguished by the ornamentation of its megaspores.
- ✓ Pteridophyte, spore producing plants. Water dispersion. Dry-season deciduous. It is a geophyte which its phenology is from January to May.
- ✓ Temporarily waterlogged or flooded decarbonated soils. Populations are found between 200 – 400 meters over sea level.

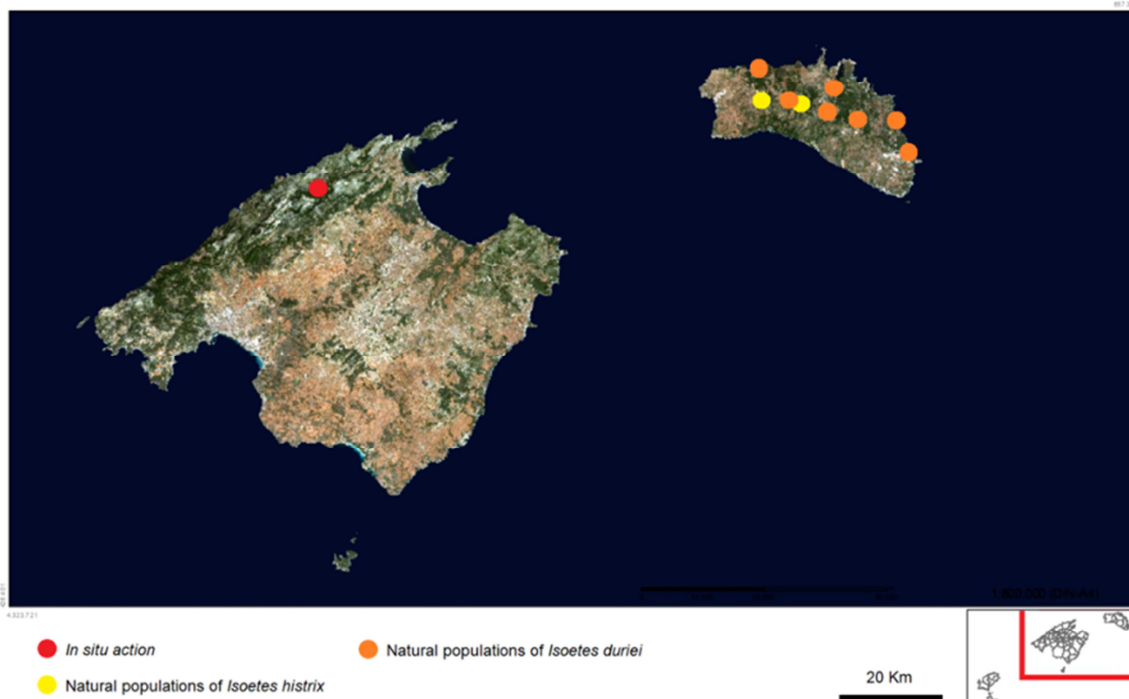
Distribution

Both taxa have a Circun-mediterranean distribution; and *I. histrix* lives as well in Great Britain.

In the islands, *I. histrix* lives in Mallorca, Minorca, Sardinia and Crete.

And *I. duriei* in Mallorca, Minorca, Corsica, Sardinia and Sicily,

Map



Legal status

Mallorca's population of *I. histrix* is considered as Vulnerable, in the Balearic Catalogue of Endangered Plants and "Near Threatened" by the Regional red list of Balearic Plants.

Both taxa are protected by Habitat Directive (3170, Mediterranean temporary ponds)

Main threats and conservation status

According to the IUCN classification scheme, main threats are due to:

2. Agriculture

2.1. Annual & perennial non-timber crops

2.1.2. Small holder farming: crop planted for food of animals of the farmer (sheeps)

7. Natural System modifications:

7.2. Dams & water management/use

7.2.3. abstraction of surface water for agricultural use.

11. Climate change & severe weather

11.2. Droughts.

12.1 Other threats: the small number of populations (only one in Mallorca)

Conservation actions carried out in the CARE-MEDIFLORA project

Mallorca's population is found at Serra de Tramuntana (Clot d'Albarca) at the North of the Island. This population occurs inside a small agricultural field in a private land.

Conservation actions carried out:

- Verbal agreement with the owners to border the population to avoid working the field with machines and as well manage the cattle (sheep).
- Slow fences to border the population but allow the cattle with a managing plan.
- Clean the stream of competition species like *Scirpus* spp.
- Delimitation of the both species to map its abundance and distribution for a good monitoring.
- Developed *Ex-situ* reproduction techniques to establish a living plant collection in Soler Botanic Garden.
- Translocation of some individuals of *I. histrix* to the second stream in the same location.

Photos

