

Identification of threats and population dynamics of *Helianthemum caput-felis* Boiss. in the main population of the Iberian Peninsula (south of the province of Alicante, Spain)

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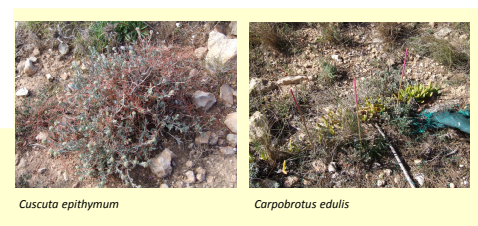
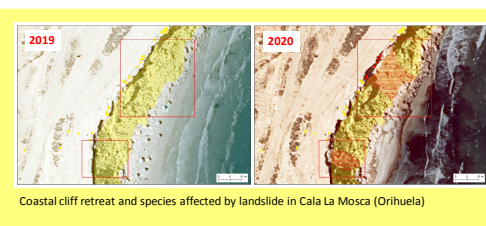
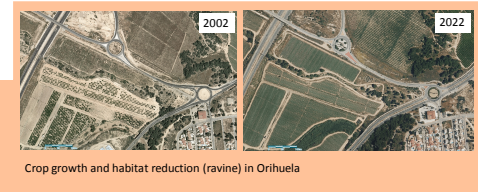
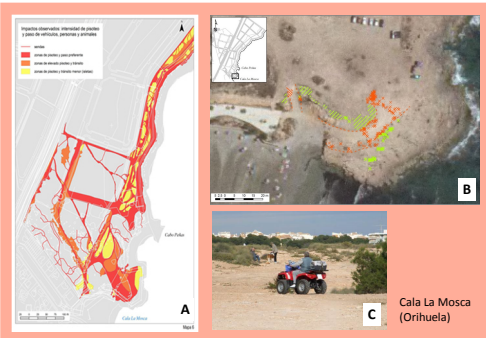
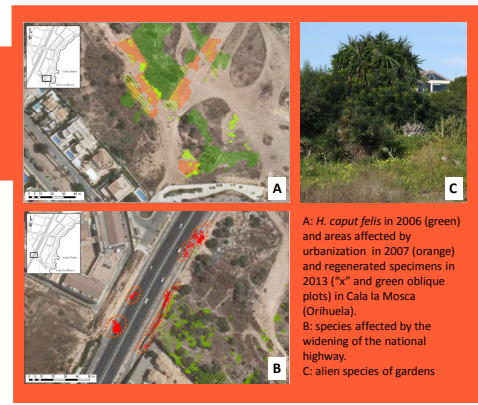
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The cystaceous *Helianthemum caput-felis* Boiss. is a plant endemic to the western Mediterranean. Its area of distribution is located in the southeast of the Iberian Peninsula (northern and southern coast of the province of Alicante), Balearic Islands, Melilla, Sardinia and northern Algeria and Morocco. In an area such as the Mediterranean, its exclusively coastal distribution has subjected the populations of this plant to an increasing number of threats, mainly derived from human activity. The processes of habitat alteration have been very intense in areas with tourist pressure and major changes in land use. This has led to a change in its threat category according to the IUCN criteria, from Vulnerable to Endangered.

Since 2006, the research group Medspai of the University of Alicante has been systematically monitoring the populations in the south of the province of Alicante.

The collection of field data and the monitoring of several populations during fifteen years has allowed us to identify the main threats affecting *H. caput-felis* and their temporal evolution.

ANTHROPOGENIC HAZARDS	
PROCESSES	EFFECTS
Urbanisation and infrastructure	-Reduction-elimination of the species and its habitat -Habitat artificialisation -Fragmentation of populations -Plant competition with alien species
Waterfront development (management): -seafront promenades -landscaping -access to beaches	-Reduction-elimination of the species and its habitat -Habitat artificialisation -Fragmentation of populations -Plant competition with alien species
Frequency (leisure/recreation): -vehicle traffic (C) -parking (A) -trampling of people and domestic animals (A, C)	-Degradation of the species and its habitat - Fragmentation of populations - Reduction-elimination of the species and its habitat
Agriculture	-Reduction-elimination of the species and its habitat -Habitat artificialisation -Fragmentation of populations
NATURAL HAZARDS	
Geomorphological dynamics	-Fragmentation of populations -Extreme fluctuations -Reduction-elimination of the species and its habitat
Plant dynamics & parasitism	-Competition with native species -Fragmentation of populations -Reduction-elimination of the species and its habitat -Mortality of individuals



The first and main threats are anthropogenic, derived from urbanization, development of the coastline, road infrastructures, frequentation (of people and vehicles) related to tourism and leisure and, to a lesser extent, agriculture. Natural threats have also been detected, derived from geomorphological dynamics (erosion and landslides) and plant dynamics (competition with native species and invasive flora). For each of these threats, real examples are presented that allow us to qualitatively and quantitatively assess the alteration and elimination of the habitat. These results are fundamental for designing actions to reduce the impact of these threats in the short and medium term

Bibliography

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Medspai is a research group from the University of Alicante, that has been mapping the distribution of the *Helianthemum caput-felis* (and other species) since 2006, helping to integrate the conservation of the species and its habitat in urbanization projects.

Visit the Medspai research group web and institutional repository:

