



HAL
open science

Eradications as scientific experiments: first attempt to eradicate two major invasive taxa, *Rattus rattus* and *Carpobrotus* spp. from a Mediterranean island

Lise Ruffino, Elise Krebs, Annie Aboucaya, Laurence Affre, Alain Barcelo, Nathalie Bigeard, Lenka Brousset, Elise Buisson, H el ene De M eringo, Damien Fourcy, et al.

► To cite this version:

Lise Ruffino, Elise Krebs, Annie Aboucaya, Laurence Affre, Alain Barcelo, et al.. Eradications as scientific experiments: first attempt to eradicate two major invasive taxa, *Rattus rattus* and *Carpobrotus* spp. from a Mediterranean island. 9. European Vertebrate Pest t Management Conference, Sep 2013, Turku, Finland. hal-02749108

HAL Id: hal-02749108

<https://hal.inrae.fr/hal-02749108>

Submitted on 3 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destin ee au d ep ot et  a la diffusion de documents scientifiques de niveau recherche, publi es ou non,  emanant des  tablissements d'enseignement et de recherche fran ais ou  trangers, des laboratoires publics ou priv es.

O29. Eradications as scientific experiments: first attempt to eradicate two major invasive taxa, *Rattus rattus* and *Carpobrotus spp.* from a Mediterranean island

Lise Ruffino¹, Elise Krebs², Annie Aboucaya⁴, Laurence Affre², Alain Barcelo⁴, Nathalie Bigeard⁴, Lenka Brousset², Elise Buisson², Hélène Deméringo², Damien Fourcy³, Pascal Gillet⁴, Yannick Limousin⁴, Olivier Lorvelec³, Frédéric Médail², Jean-Yves Meunier², Michel Pascal³, Aurelie Passetti², Philippe Ponel², François Rifflet⁴, Eric Vidal⁵

¹The University of Turku, Turku, Finland, ²Mediterranean Institute for Biodiversity and marine and continental Ecology (IMBE), UMR CNRS 7263/IRD 237/AMU, Aix-en-Provence, France, ³National Institute for Agronomic Research (INRA), UMR 0985 INRA, Rennes, France, ⁴Port-Cros National Park, Hyères, France, ⁵Mediterranean Institute for Biodiversity and marine and continental Ecology (IMBE), UMR CNRS 7263/IRD 237/AMU, Nouméa, New Caledonia

Black rats *Rattus rattus* and mat-forming iceplants *Carpobrotus spp.* are two major invasive taxa on Mediterranean islands. Their cumulative impacts on native flora and fauna disturb the functioning of island ecosystems and are of major concern for the preservation of rare native species. In 2010, a ten-year restoration project was launched by the National Park of Port-Cros, France, on the natural reserve of Bagaud Island (58ha), with the aim of eradicating, for the first time, both black rats and *Carpobrotus spp.* With the long-term monitoring of various native plants and animals, Bagaud Island will become a reference study site for scientific purposes and, eventually, a sanctuary for wildlife in the Mediterranean. The methods used to eradicate both taxa were adapted to the dense vegetation covering the island, and to the phenology and sensitivity of native species. A total of 1,921 rats were first removed by trapping, which allowed the use of a limited amount of poison (bromadiolone) in the second phase of the eradication. The removal of *Carpobrotus spp.* was conducted by manual uprooting of a total area of 19,000 m². Biosecurity measures have been set up to prevent any risk of reinvasion of both taxa. So far, no evidence of the presence of black rats has been observed on the island. The monitoring of native wildlife is currently conducted and the recovery of long-lived vulnerable species (e.g. shearwaters and petrels) is expected to be slow.

O30. Eradication of rodents and rabbits from sub-Antarctic Macquarie Island

Keith Springer

Tasmania Parks and Wildlife Service, Hobart, Tasmania, Australia

The presence of invasive vertebrate species on sub-Antarctic Macquarie Island has had devastating impacts on the island's flora, fauna and landforms. Previous eradication projects removed weka *Gallirallus australis* by 1989 and feral cats *Felis catus* by 2001. European rabbits *Oryctolagus cuniculus* have been subject to control efforts since the 1960s. Subsequent plans to eradicate rodents and rabbits recognised that the remaining pest species could be targeted simultaneously due to commonalities in eradication methodology. Funding of AUD\$24.7M was secured in 2007 for a multi-year project based on aerial baiting targeting rabbits and rodents, followed by hunting surviving rabbits with ground-based techniques. Planning commenced for a 2010 toxic bait application however this was abandoned due to shipping delays and poor weather. Concerns over non-target species mortality resulting from the limited baiting undertaken in 2010 led to renewed consideration of mitigation options. Rabbit Haemorrhagic Disease Virus (RHDV) was used in February 2011 to reduce the pre-baiting rabbit population and thus minimise toxic rabbit carcasses available to scavenging seabirds. Aerial baiting resumed in May 2011 and completed by July 2011. The rabbit hunting phase commenced in August 2011 using hunters and dogs and is on-going, with 13 rabbits located by December 2011. Rodent detection dogs are currently deployed to assist in determining rodent eradication success. No rodents have been detected post-baiting. The estimated rabbit population has been reduced from over 150,000 to undetectable levels. Two years after baiting vegetation recovery is already evident and increased burrow and surface nesting seabird activity has been observed.