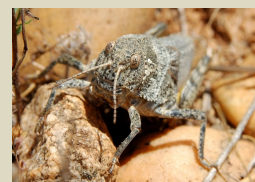


Endemic Crau grasshopper at risk !

Prionotropis hystrix rhodanica (Mediterranean, France)



L. Tatin / CEN PACA

The Crau steppe: a dry rangeland in France



N. Vincent-Martin / CEN PACA

Located in the Mediterranean, between Marseille and Montpellier, the Crau steppe consists of a 11 500 ha landscape originating from the old delta of the Durance river. This later brought a huge amount of stones from the Alps throughout this plain, so that stone cover averages 75%. Soil structure, Mediterranean climate and 4000 years of sheep grazing have shaped the landscape of what is the unique genuine steppe in France. Since 2001, an area of 7 500 ha has been classified as a National Nature Reserve mainly for steppe land birds conservation and sustaining traditional sheep grazing.



L. Tatin / CEN PACA



A. Wolff / CEN PACA

Crau grasshopper: large in size - but elusive

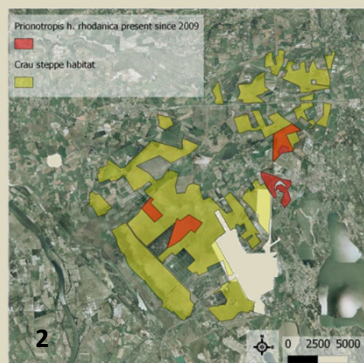
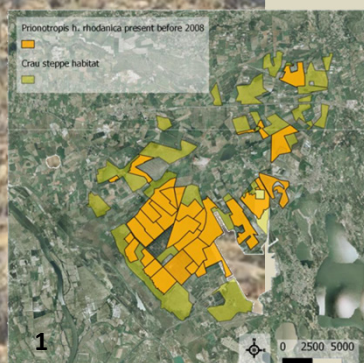
Belonging to Pamphagidae, the species is wingless and has a mean body length of 45 mm (females) and 31 mm (males). Its mobility is very low (mean: 20 m; max: 50 m in one season) and densities are also low (40 adults/ha and 130 juveniles/ha).

The animals are cryptic and stay without moving when disturbed. A preliminary Catch-Recapture study in 2011 has shown that detection probability is below 10%.



L. Tatin / CEN PACA

Evaluated as Critically Endangered



In 2012 a mapping project was started in order to estimate the area of occupancy of the species. Based on the 2011 Capture-Recapture data, we estimated effort allocation: two observers visiting 1 ha during one hour are able to detect densities > 12 individuals / ha. This means that absence cannot be distinguished from densities < 12 individuals / ha.

The data was used to estimate EOO (Extent Of Occurrence) and AOO (Area Of Occupancy), two parameters needed for evaluating the conservation status.

The species is now assessed as **CRITICALLY ENDANGERED** on the IUCN Red List of Threatened Species according to the red list criteria B1ab(i,ii,iii)+2ab(i,ii,iii) (ver 3.1).

Population decline is drastic ! The mapping project in 2012/13 has only identified four localities of this species of the 30 sites where the species was observed since 1979 (Fig 1: cumulative observations from 1979 to 2008, Fig 2: Records from 2012/13).

First step towards a conservation strategy



N. Vincent



A. Foucart / CIRAD



L. Tatin / CEN PACA

Main threats to this species are habitat destruction and fragmentation, but local extinction drivers are not well identified. As extinction risk is strong, it has been decided to collect data on habitat preferences, population sizes and test *in situ* rearing, and not waiting for local drivers identification and reduction. However, a precise conservation strategy is still needed to raise funds and design next conservation actions and studies.

In 2013, a test for breeding the species *in situ* was attempted. A total of 24 nymphs was captured and reared in a terrarium in order to prevent them from predation and harsh weather conditions. From this sample, 16 adults were released in two cages. A second sample of eight nymphs was captured and directly released in one cage, prevented from predation, but not from weather conditions. We hope to observe juveniles in spring 2014...