

Impact Of Changes In Land Using On Orthoptera In Languedoc Roussillon

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Global changes have an impact on the species habitats and their uses. Some regions, as Languedoc in the Mediterranean basin, experiment for a long time an important human pressure, in particular an important fall of agricultural practices. We expect to know if changes in land use, encouraging the opening or closure of the vegetation, could have an impact on Orthoptera populations. We chose three Calliptaminae species living in different habitats and with different dispersion capacities: *Calliptamus barbarus*, *C. italicus* and *C. wattenwylianus*. Using molecular markers and a GIS-based vegetation model, we want to improve our knowledge on the genetic differentiation as well as on the dispersion capacities of these Calliptaminae. We sampled 1200 individuals from the three species, on two sites (72 km²) distant of 40 kilometres. Five microsatellite markers have been developed. In total, we isolated 12 polymorphic markers, among which four amplified on the three species, five on *C. barbarus* and three on *C. italicus*. Associated to spatial characterisation of the environment, these new markers may allow us to develop spatial genetic studies on this genus and to have a better evaluation of their dangerousness.

Keyword: land use, Orthoptera, genetic, dispersion