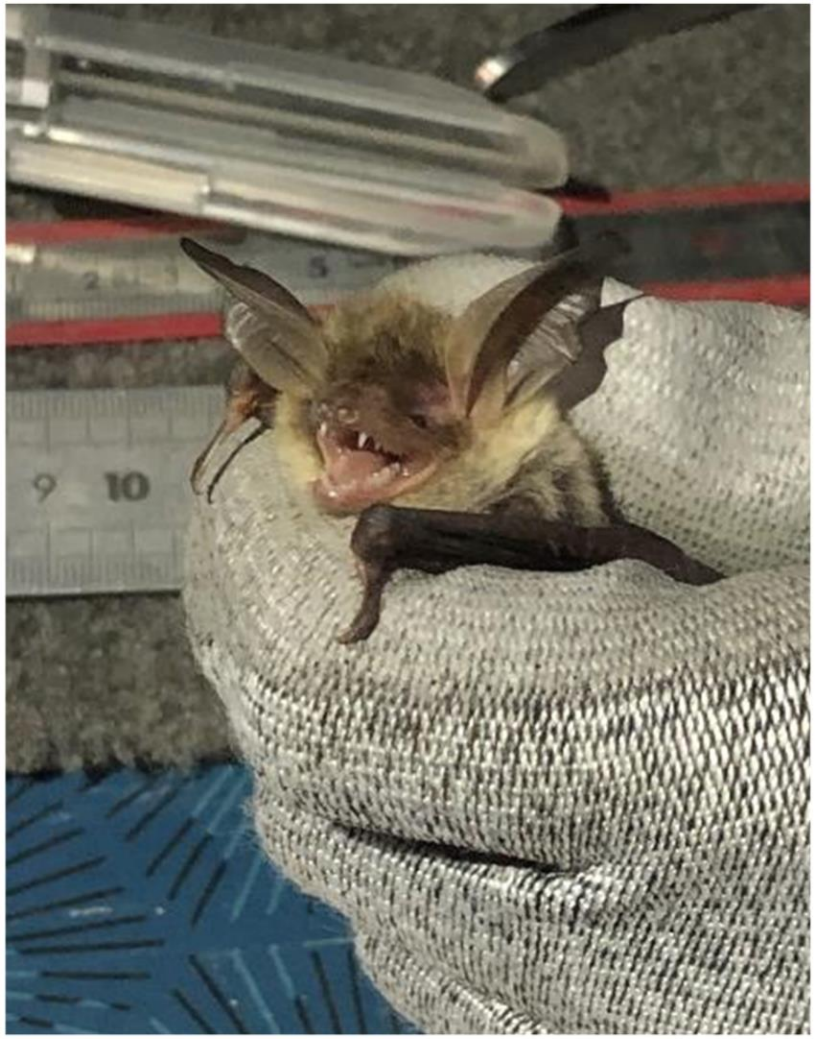
2- Bats:

predators of pests

Are bats our allies in the vineyards ?

- 2017: studies in Bordeaux (INRAE - LPO - CIVB) confirm **that bats are predators of moths** in the vineyards
(study of bat guano and ultrasound recording)

- 2019-2020: studies **to quantify the impact of bats**
(Counting of egg-laying and perforations of 100 bunches on 31 plots in the vineyard)

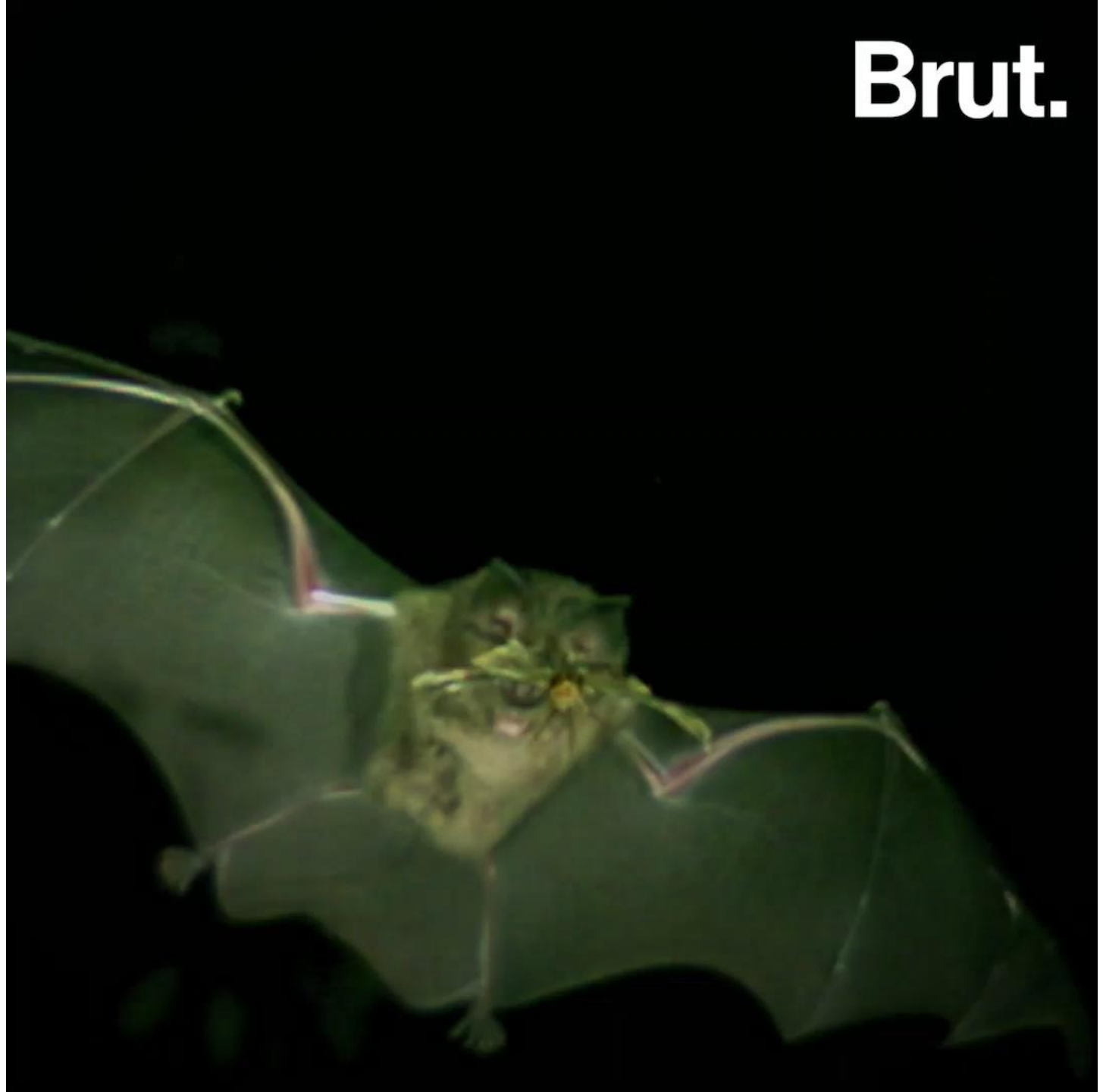


The profil of our bats

(*exclusively insectivores*)

- Great diversity of bats that predate vine pests:
  - 19 of the 22 species listed in Gironde are active in the vineyards
  - About 10 species are very regular in the vineyard

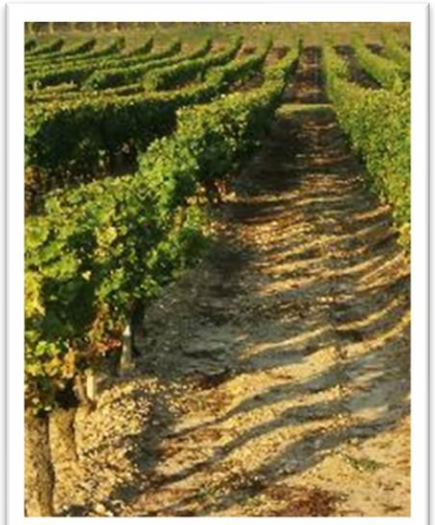
- A bat eats between 500 and 1500 insects per night (more like 2000 for suckling bats)


Brut.

The findings

Activities of the bats : clearly linked with the structure of the vineyards

The presence of bats is more intense in grassy plots



Weak level of activity

Medium level of activity

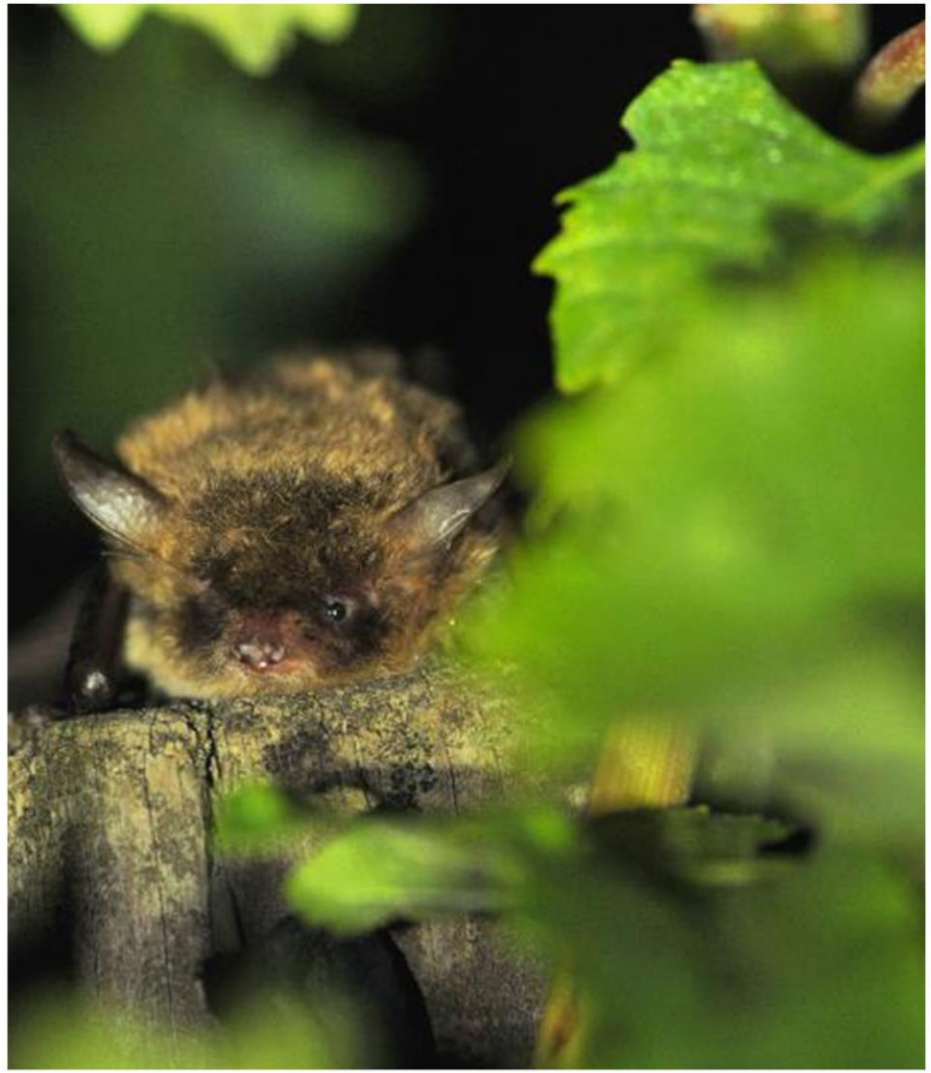
High level of activity

The beneficial impacts of the bats

- Bats have a significant effect on perforations: they reduce perforations by 14% on average, up to 50% on some plots.

- Second effect: the presence of bats exerts a pressure/stress that limits the increase of pest population in the vineyard

Bats make it possible to keep pest populations low enough for winegrowers not to have to apply additional treatments.

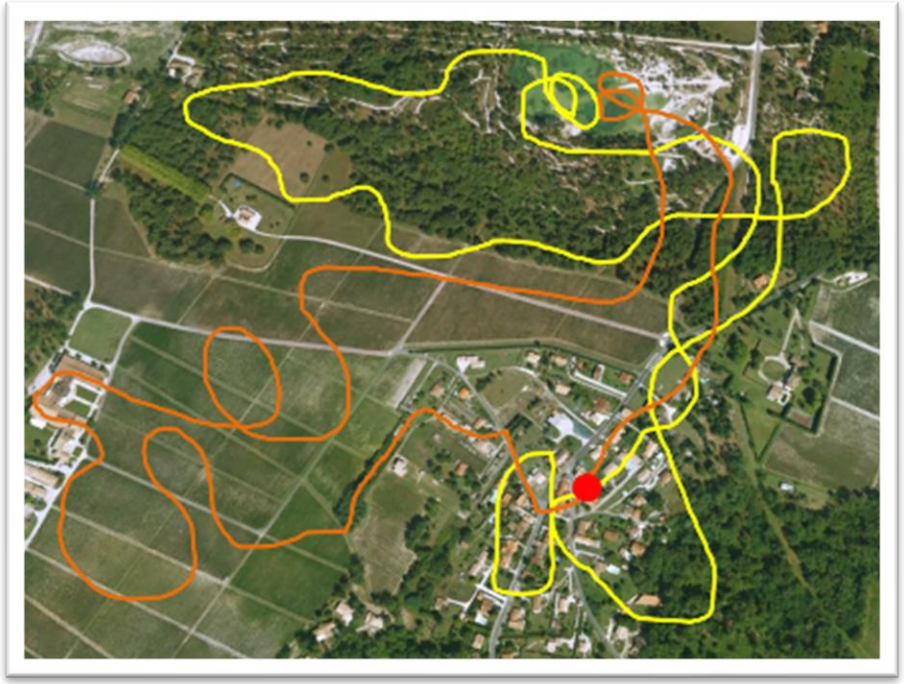


How to attract more bats ?

Bats are wild and protected animals : can’t be raised or re-introduced but favorable measures can improve their presence.

At the plot level

- Through the implementation of agro ecological infrastructures : water point, grassy strip, trees and forests… and also old abandoned buildings
- Adapting viticultural practices (grassing)

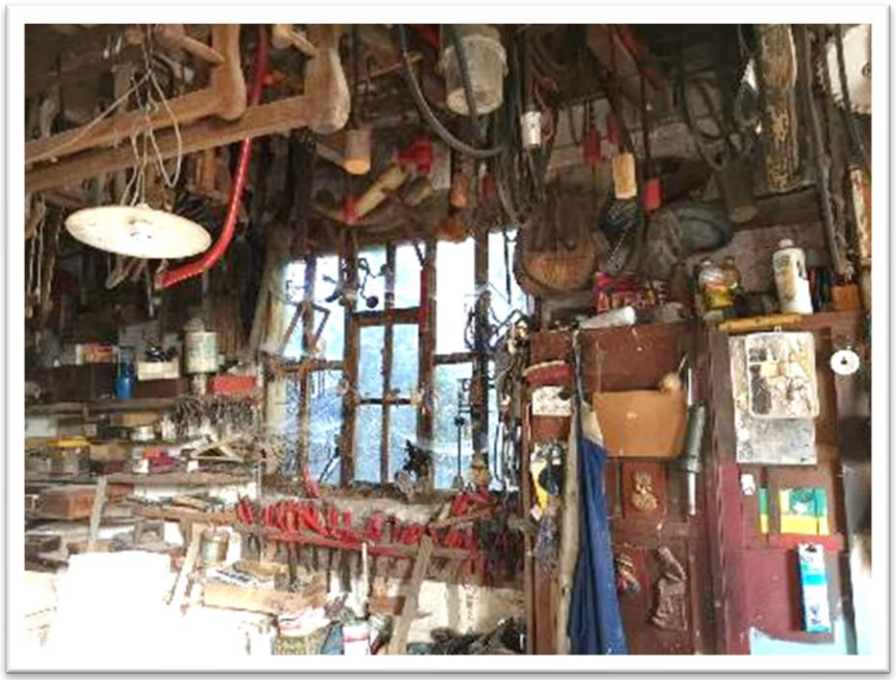


On a more global scale (e.g. AOC level)

Organise so that bats can have sufficient food resources all year round (outside the "season" of the grape worm)

Case study: Greedy bats of Château Puyanché

- Pipistrelles are the most popular bats species in our vineyard
- Sleeping in the former home and cellar



Specific trees/hedges planted to drive them into our vines

A real predator for butterflies