



Agir pour  
la biodiversité



# Collisions faune-véhicules : compter, étudier et prédire

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Encadrement de thèse  
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Co-encadrant : Julien Girard-Claudon (LPO AuRA)



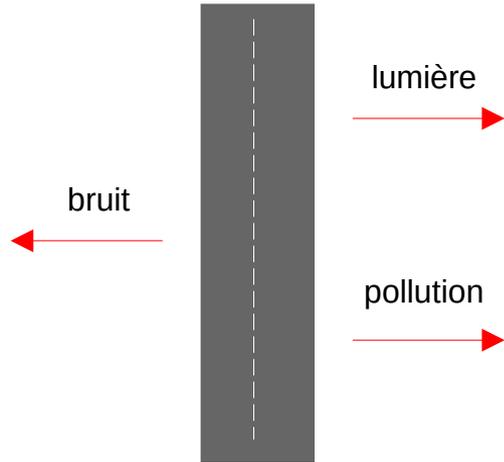


# Fragmentation des habitats



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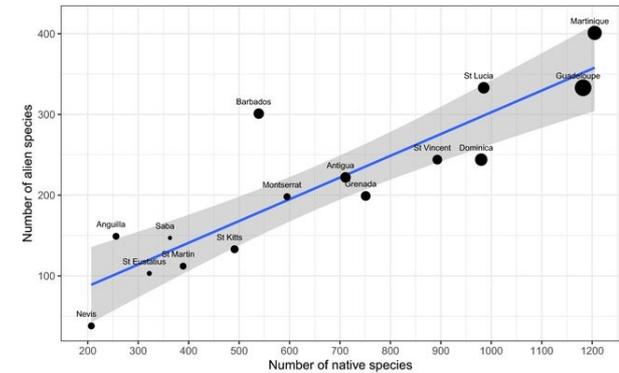
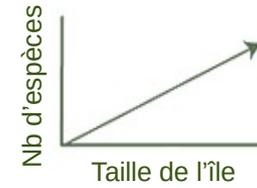
## Rayonnement écologique des routes



Touzot et al. 2003  
Troianowski et al. 2017

## Biogéographie des îles

« plus le patch est petit, plus il est pauvre en biodiversité »

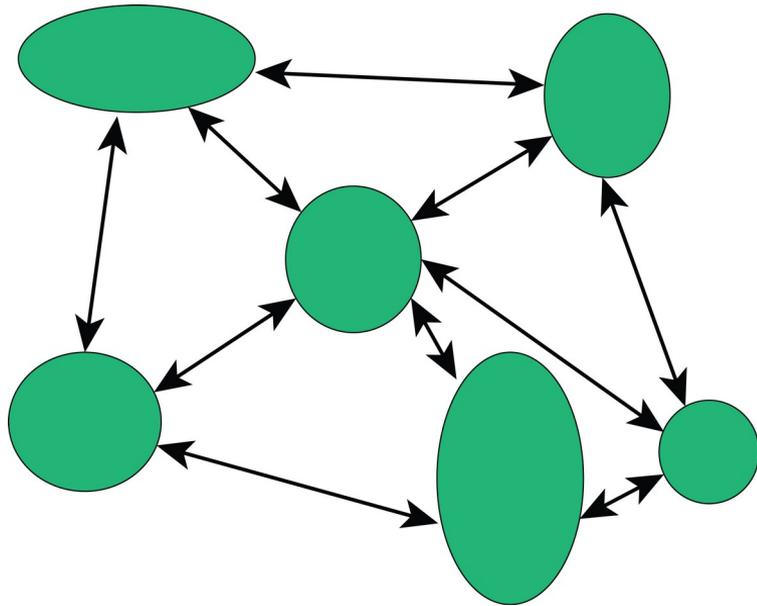


Rojas-Sandoval et al. 2020

# Fragmentation des habitats

## *Effet de sauvetage démographique*

Sauvetage d'une population en déclin par l'arrivée d'immigrants



## *Consanguinité (sauvetage génétique)*



# Importance des continuités écologiques



# Fragmentation des habitats par les routes

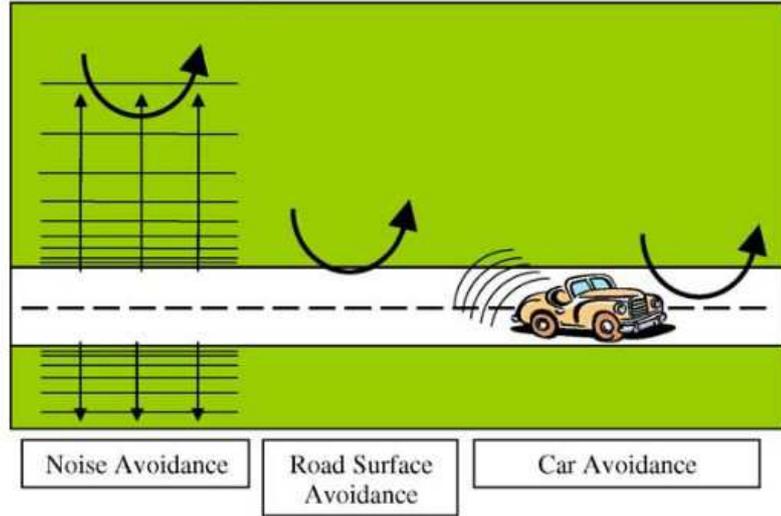


Fig. 2. Three components of road avoidance behavior. “*Noise avoidance*” is avoidance of the road from a long distance according to traffic emissions such as noise, light, or smell. “*Road surface avoidance*” is a short distance avoidance due to lack of cover and to the character of embankment and pavement which is different from natural habitat. “*Car avoidance*” includes perceiving single cars that are approaching the location where the animal wants to cross the road.

Jaeger et al. 2005



# Collisions routières



~200 million / an



~30 million / an



~0.2 million / an



~1 million / an

Grilo et al. 2020  
Manneri, 2002



115 million € / an

Vignon & Barbarreau, 2008

10 % des  
populations  
d'étude



# Collisions routières



**Sex-ratio**

Burgstahler et al. 2023



**Age**



Mumme et al. 2000



survie des populations

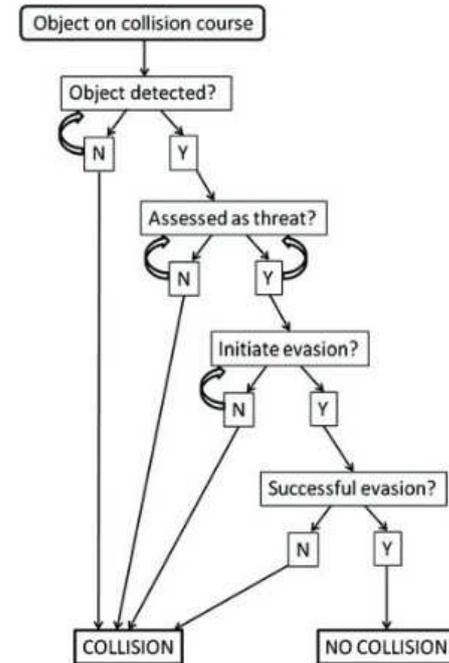
# Collisions routières

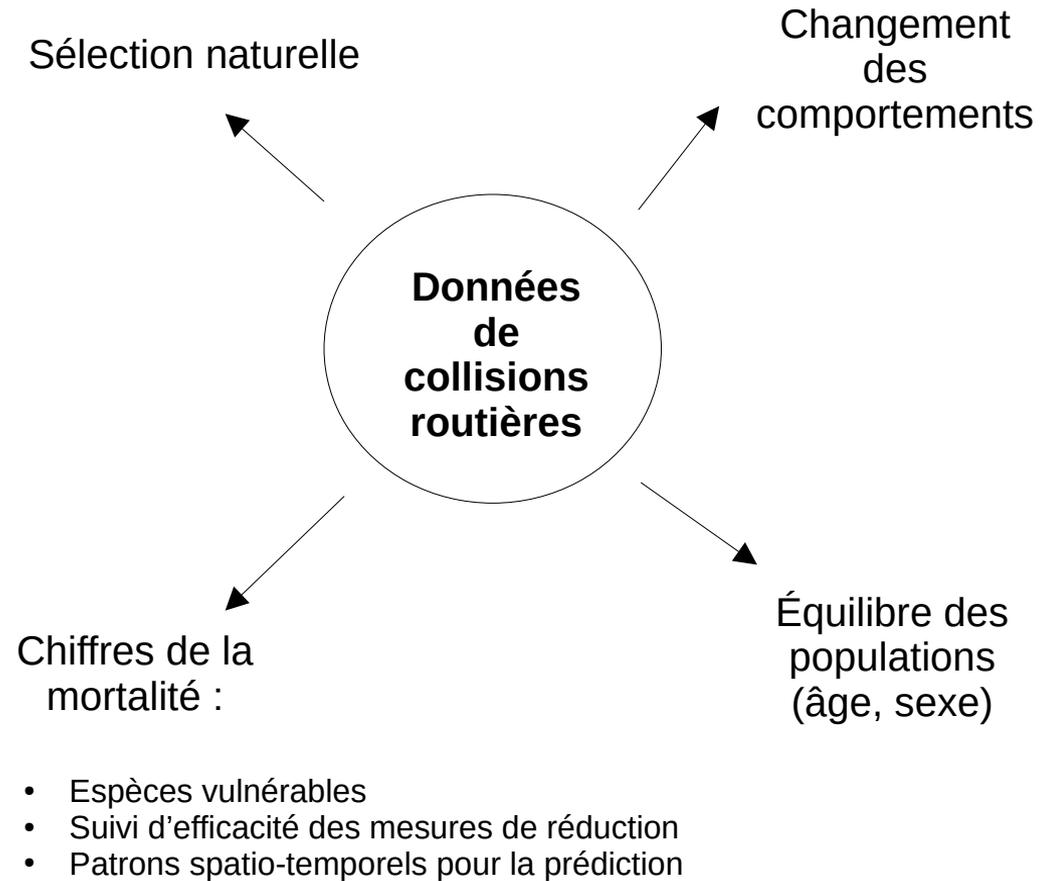
## *Sélection naturelle*

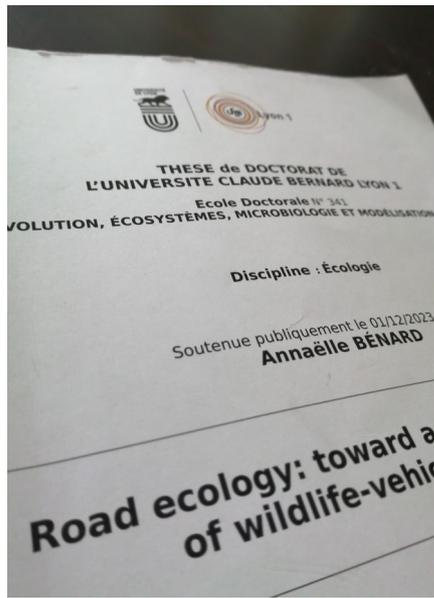


Brown & Bomberger Brown 2013

## *Adaptations comportementales*







Estimations mortalité AuRA 2022



Traffic and weather influence on small wildlife carcass persistence time on roads

Annaëlle Bénéard<sup>a</sup>, Christophe Bonenfant<sup>b</sup>, Thierry Lengagne<sup>c</sup>

A biologically realistic model to predict wildlife-vehicle collision risks

Annaëlle Bénéard, Thierry Lengagne, Christophe Bonenfant  
doi: <https://doi.org/10.1101/2023.02.15.528614>



6557  
[1089,208 852]



9004  
[1308,378 197]



1654  
[249,64 065]



504 119  
[234 550, 3 million]

