Use of water troughs by the wild red-legged partridge, *Alectoris rufa*, in the south of France

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Use of water troughs as management tool for wild fauna

- Widespread throughout the world (conservation, game species)
- Especially in areas of water stress (deserts and hot regions)
The questions of the study

Use of water troughs by the wild red-legged partridge
(Borrâlho et al. 1998; Gaudiosso-Lacasa et al. 2010; Sánchez-García et al. 2012)

Temporal Use
⇒ Description of the daily and annual patterns of Use
⇒ Effects of weather parameters
  (temperature, wind, rainfall, vegetation water content)

Spatial Use
⇒ Description of structure of vegetation near Water troughs
⇒ Effects of structure of vegetation parameters in a radius of 30m
  (shrub cover around water points as well as habitat types)
Study area

- Private estate of 815Ha
- French Mediterranean area
- 83% natural vegetation, 17% crops
- No permanent water
- Between 49 and 115 breeding pairs during the study

1) Lawns and natural pastures
2) Agricultural land with natural vegetation
3) Conifer and leaf forests
4) Vineyard
Sampling design

- 22 water troughs monitored by camera-traps
- Random selection of sites
- Assessment of vegetation cover in a radius of 30 m (vertical & horizontal obscurity, shrub canopy cover)
- Permanent monitoring for 2.5 years

(From 28 June 2012 to 14 November 2014)

Camera positioned at 1.5m (Bushnell® trophy cam, Moultrie® Game Spy M-80)
The maximum daily temperature is the most important variable.

Our results do not show an effect of the “vegetation water content”
The most important environmental variable was the habitat.

When the percentage of shrub cover 2.5 m around the water trough increases, the use of water troughs decreases.
Management device

- Water troughs are used by Wild Red-legged partridge when the maximal daily temperatures increase above 25 °c
  - Fill water troughs only in summer

- To be used the water troughs must be correctly positioned
  - Put water troughs in regularly frequented areas with a tree or shrub cover not too important in a radius of 2.5m
Conclusion

- This work demonstrates that water troughs are used in South of France.
- It does not prejudge the importance of the presence of water on the dynamics of red-legged partridge populations.
Thank you for your attention!

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