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Author: A. Chastagner M. Moinet G. Perez E. Roy K.D. McCoy O. Plantard A. Agoulon S. Bastian A. Butet Y. Rantier H. Verheyden N. Cèbe A. Leblond G. Vourc'h

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Prevalence of *Anaplasma phagocytophilum* in small rodents in France.

Chastagner A.[a*] chastagner.amelie@gmail.com, Moinet M.[b], Perez G.[d,f], Roy E.[a], McCoy K.D.[c], Plantard O.[d,e], Agoulon A.[d,e], Bastian S.[d,e], Butet A.[f], Rantier Y.[f], Verheyden H.[g], Cèbe N.[g], Leblond A.[a,h], Vourc'h G.[a]

[a] INRA, UR0346 Epidémiologie Animale, F-63122 Saint Genès Champanelle, France

[b] Anses, Nancy laboratory for rabies and wildlife, Wildlife Surveillance and Ecoepidemiology Unit (SEEpiAS), F-54220 Malzéville, France

[c] UMR 5290 MIVEGEC CNRS-IRD-UM, Centre IRD, F-34394 Montpellier, France

[d] INRA, UMR1300 Biologie, Epidémiologie et Analyse de Risque en santé animale, CS 40706, F-44307 Nantes, France

[e] LUNAM Université, Oniris, Ecole nationale vétérinaire, agroalimentaire et de l'alimentation Nantes-Atlantique, UMR BioEpAR, F-44307 Nantes, France

[f] CNRS, UMR 6553 ECOBIO, Université de Rennes 1, F-35042 Rennes, France

[g] CEFS, Université de Toulouse, INRA, F-31326 Castanet Tolosan, France

[h] Département Hippique, VetAgroSup, F-69280 Marcy L'Etoile, France

Abstract

Anaplasma phagocytophilum is an emerging zoonotic tick-borne pathogen affecting a wide range of mammals. Rodents are suspected to be natural reservoirs for this bacterium, but their role in the epidemiologic cycles affecting domestic animals and wild ungulates has not been demonstrated. This study aimed to improve our knowledge on *A. phagocytophilum* prevalence in *Apodemus sylvaticus*, *A. flavicollis* and *Myodes glareolus* using data collected in 2010 in one area in eastern France and in 2012-2013 in two others areas in western France. Rodents were captured in each site and infection was tested using qualitative real-time PCR assays on either blood or spleen samples. Prevalence showed high variability among sites. The highest prevalence was observed in the most eastern site (with an average infection rate of 22.8% across all species), whereas no rodent was found to be PCR positive in the south-west site and only 6.6% were positive in the north-west of France. Finally, a significant increase in prevalence was observed in autumn samples compared to spring samples in the north-west, but no change was found in the other two sites.

Keywords

Tick-borne disease; *Anaplasma*; rodent; prevalence; France