

HUMAN URINE DOES NOT PROTECT ACORNS AGAINST PREDATION BY THE WOOD MOUSE (*APODEMUS SYLVATICUS*)

Jorge Castro

Direct seeding is a revegetation method that can offer great advantages for forest restoration, but suffers the drawback of seed loss due to granivorous rodents. Thus, to make direct seeding a useful and scalable forest restoration method we need to find ways to protect seeds against rodents. Scents produced by carnivorous or omnivorous animals that elicit a fear response on rodents are a promising group of substances that can be used to protect seeds and that have demonstrated effectiveness in a number of cases. Here, I tested if human urine had a protective effect on holm oak (*Quercus ilex*) acorns against predation by mice. Human urine would be much easier and cheaper to obtain than the urine of other animals, providing the possibility, if effective, to scale the application of a repellent substance. I set up a field experiment in an area with high wood mouse (*Apodemus sylvaticus*) abundance and used eight urine donors. Neither urine nor donor had any effect on predation. Acorn removal was very fast and high, reaching 97.2 percent after 7 days. Video recording with camera traps showed that the wood mouse was the main predator, but the Eurasian jay (*Garrulus glandarius*) also removed acorns. I conclude that human urine is not useful as a repellent against mice and suggest efforts focus on finding other substances to repel seed predators.