



# An unusual Common Genet *Genetta genetta* latrine recorded in Sierra Nevada Natural Park, Spain

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## Abstract

Here I report on the unusual use of a covered water drain under an unpaved road as a latrine by Common Genets *Genetta genetta* in the Sierra Nevada Natural Park in Spain. The latrine contained more faeces than six other latrines located at more typical latrine sites (elevated rocks and stone walls). Camera-trapping detected at least two genets visiting the latrine on four occasions. Sheltered latrine sites such as this may increase the durability of scent marks due to reduced deterioration compared to less sheltered sites. Genets were recorded using the latrine soon after sunset; the latrine may have been close to a resting place.

**Keywords:** camera-trapping, civetry, faecal marking behaviour, intraspecific latrine sharing, latrine site selection, midden, Viverridae

## Resumen

Se describe el uso poco común de un paso de agua bloqueado bajo una pista sin asfaltar de coche como letrina por parte de la ginetas común *Genetta genetta* en el Parque Natural de Sierra Nevada en España. La letrina contenía más heces que otras seis letrinas ubicadas en sitios más típicos (rocas elevadas y paredes de piedra). Las cámaras trampa detectaron al menos dos ginetas diferentes visitando la letrina en cuatro ocasiones. Letrinas protegidas, como la descrita, pueden aumentar la durabilidad de las marcas de olor debido a un menor deterioro en comparación con sitios menos protegidos. Las ginetas usaron la letrina poco después de la puesta del sol; la letrina podría estar ubicada en las proximidades de un lugar de descanso de las ginetas.

**Palabras clave:** civeta, comportamiento de marcaje fecal, selección de sitio de defecación, trampeo fotográfico, uso compartido letrina, Viverrido

Information on latrine formation and use is lacking for most Viverridae species (Kingdon & Hoffman 2013). For African viverrids, information only exists for Ethiopian Genet *Genetta abyssinica*, Crested Genet *G. cristata*, Large-spotted Genet *G. maculata*, Aquatic Genet *G. piscivora*, African Civet *Civettictis civetta* and Servaline Genet *G. servalina* (Kingdon & Hoffman 2013). The species with more data about the use and formation of latrines is the Common Genet *Genetta genetta*, but most studies are in European countries despite most of its distribution being in Africa. Latrine sites selected by Common Genet are usually on top of prominent points or features such as rocks, trees, bird nests, walls or even small buildings (Roeder 1980, Cugnasse & Riols 1984, Palomares 1993, Barrientos 2006). The pattern of latrine use by Common Genets is relatively well-known and different latrines are not used with the same intensity (Costa & Santos-Reis 2002). Latrine use at the Iberian Peninsula is higher in February–March and November–December, coinciding with the mating and dispersing periods, respectively (Palomares 1993, Barrientos 2006). In Cork Oak *Quercus suber* woodlands of Portugal, genet latrines are more often found in areas with high understorey and a mix of habitat

types, low human disturbance and proximity to potential refuges (Espíritu-Santo et al. 2007), and in the scrubland areas of Doñana, latrines are more often found at the edges of patches of tall, dense shrubs (Palomares 1993).

Here I report on the frequent but rather rare and unusual use of a latrine in a small cavity formed by a covered water drain, blocked at one of its ends and under an unpaved road (Fig. 1). The drain seemed to be very old (probably several centuries) and in disuse; it was probably blocked after the unpaved road was built. The remaining cavity is 280 cm deep and 35 cm high at its end and 130 cm high and 40–45 cm wide at its entrance (Fig. 1). The cavity latrine was discovered at 861 m asl and only about 425 m away from the village of Abila (Almería province) at the north-east border of the Sierra Nevada Natural Park, in south-eastern Spain.

The cavity was at the edge of a human-made path in a moderately mountainous area. The path borders a small, normally dry, stream with dense riparian vegetation of bramble *Rubus*, wild rose *Rosa canina* agg., Tamarisk *Tamarix africana* and Aspen *Populus tremula*. The path and the latrine cavity are also near Olive *Olea europaea* groves and natural scrubland dominated

by *Anthyllis cytisoides* and *Helianthemum almeriense*, interspersed with ancient abandoned almond *Prunus dulcis* and Holm Oak *Quercus ilex* trees (Fig. 1).

The latrine was discovered on 26 March 2018, and was revisited twice in 2019 (April and December) and in 2020 (April and August) and four times in 2021 (February, March, June and September) and in 2022 (January, February, March and April). In each visit, I estimated the approximate number of total faeces present in the latrine. On its discovery, in March 2018, more than 50 faeces were counted in the cavity and 5–7 faeces on the ground on one of the steps of the adjacent path (approximately 1.5 m from the cavity). The cavity latrine seemed frequently in use; relatively fresh faeces were recorded at all visits. In the cavity, more than 50 faeces were always observed at any visit, including fresh faeces, but on the adjacent steps of the path, fresh faeces were only detected once, in March 2022. I set up two camera-traps three times (March 2021, February 2022 and March 2022), focused on the cavity latrine and the defecation site on the adjacent path, for five, four and six days, respectively.

One or more genets were camera-trapped inside the cavity and/or in the cavity entrance on four occa-

sions: three times in March 2021 and once in March 2022. No genet was photographed during the camera-trapping in February 2022. At least two of the three camera-trap encounters in March 2021 involved different individuals. Genets were recorded visiting the cavity latrine at 25, 40 and 405 minutes after sunset (video: <http://hdl.handle.net/10261/295635>). These timings suggest that the genets might have been resting close to the cavity latrine. On the three occasions that the genets were filmed visiting the latrine, defecation was recorded and these visits, including defecation, lasted 23, 29 and 46 seconds (see video). The fourth occasion was not filmed; only a photographic record is available and defecation was not recorded.

In March 2018, I searched for more latrines in the area, which were again revisited in March 2022. On each visit, I estimated the number of faeces present in the latrines. The other six genet latrines were found at distances of between 0.3 and 3 km from the cavity latrine. Within Sierra Nevada Natural Park and its surroundings, there are no other species defecating in sites similar to those used by genets; identification that these were genet latrines was based on visual identification of the faeces. All of these six latrines occurred at more typical latrine sites for genets (four



**Fig. 1.** (a, b) Interior and (c) exterior (c) of the Common Genet (*Genetta genetta*) cavity latrine found near Abla, Almería province, Spain. Note the large quantity of fresh dark faeces at the latrine. (d) Panoramic view of the area where the cavity latrine (white arrow) was recorded. The latrine bordered Olive crops, riparian vegetation and short scrubland, and was close to Abla village. The stepped path (white line) passes directly beside the entrance of the blocked water passage under an unpaved car road, now used by the genets as a latrine.



were on rock elevations and two were on the top of walls) and were at 848–1185 m asl. Two of these six latrines were in permanent tree crops, one was at the edge of crops and natural habitat, and three were in natural habitats (short scrubland, interspersed with Holm Oak trees). These six latrines were at unprotected open sites and contained between 5 and 20 faeces. All six of these latrines were still active when revisited in March 2022. Similar to the cavity latrine, these other latrines were located close to landmarks and potential resources (refuges and hunting habitats) for genets.

These six latrine sites represented more typical areas for genet latrines but contained far fewer faeces than the cavity latrine. The underground condition of the cavity latrine may have preserved faeces – as well as scent marks – from decomposition, which might make them especially attractive to genets.

The cavity latrine was close to riparian vegetation, cropland and short scrubland, offering places to rest and hunt (Palomares & Delibes 1994, Espíritu-Santo et al. 2007, Camps 2011). The other six latrines detected were in close proximity to similar habitats. Similar to our findings, for other carnivores it has been found that the placement of latrines is linked to the use of trails, the presence of landmarks and/or proximity to potential resources (Kingdon & Hoffman 2013, Buesching & Jordan 2022).

Genets are predominantly nocturnal (Palomares & Delibes 1994) and the timing of their visits to the cavity latrine suggests that they had to be sleeping close to the latrine during the day. The latrine function might be to signal ownership of the resting site (Buesching & Jordan 2022).

Finally, it is interesting to note the short amount of time that all recorded genets spent in the cavity latrine – always less than one minute – and that in three out of the four recorded occasions in which genets visited the latrine they defecated. Short visits to latrines might be common behaviour in carnivores (e.g. King et al. 2017, Yoshida & Saito 2022).

More is known about latrine formation and use among Common Genet and African Civet than among many other species of viverrids (Kingdon & Hoffman 2013). Details about temporal usage patterns, individual visit and contribution patterns and the chemical content of the signal are only available for the Common Genet and are also lacking for most carnivore species. A more complete framework for the study of latrines is now available (see Buesching & Jordan 2022).

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