

First reliable record of *Oryctes nasicornis* (Linnaeus, 1758) (Col.: Scarabaeidae, Dynastinae) in Val de San Román (León, España)

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Abstract: The European rhinoceros beetle *Oryctes nasicornis* (Linnaeus, 1758) (Col.: Scarabaeidae, Dynastinae) is widespread in Europe but patchily recorded in the Iberian Peninsula, where populations have declined due to habitat loss and changing agricultural practices. In August 2024, two specimens were found in Val de San Román (León, Spain), the first local record in five years. This new data highlights the persistence of the species in favorable microhabitats and reinforces the need to maintain monitoring programs and integrate records from citizen science to assess its conservation status.

Key words: Coleoptera, Scarabaeidae, Dynastinae, *Oryctes nasicornis*, rhinoceros beetle, distribution, León, Spain, Iberian Peninsula.

Resumen: Primer registro documentado de *Oryctes nasicornis* (Linnaeus, 1758) (Col.: Scarabaeidae: Dynastinae) en Val de San Román (León, España). El escarabajo rinoceronte europeo *Oryctes nasicornis* (Linnaeus, 1758) (Col.: Scarabaeidae, Dynastinae) presenta una amplia distribución en Europa, aunque en la Península Ibérica su presencia es irregular y sus poblaciones muestran signos de regresión asociados a la pérdida de hábitats y a transformaciones en las prácticas agrícolas. En agosto de 2024 se encontraron dos ejemplares en Val de San Román (León, España), constituyendo el primer registro local en los últimos cinco años. Este nuevo dato evidencia la persistencia de la especie en microhábitats favorables y refuerza la necesidad de mantener programas de seguimiento y de integrar registros procedentes de la ciencia ciudadana para evaluar su estado de conservación.

Palabras clave: Coleoptera, Scarabaeidae, Dynastinae, *Oryctes nasicornis*, escarabajo rinoceronte, distribución, León, España, Península Ibérica.

Recibido: 21 de junio de 2025

Publicado on-line: 10 de septiembre de 2025

Aceptado: 11 de julio de 2025

The European rhinoceros beetle, *Oryctes nasicornis* (Linnaeus, 1758) (Coleoptera: Scarabaeidae, Dynastinae) is distributed widely across much of continental Europe, including the Iberian Peninsula, although it appears to be locally absent or at least under-recorded in certain regions (LÓPEZ-COLÓN, 2003; MARTÍNEZ GARCÍA, 2012; LÓPEZ-NÚÑEZ & ROJO, 2024).

In Spain and Portugal, the species is most frequently reported from central and southern areas, with more sporadic records in the north-west, in Galicia and León. Its distribution is strongly influenced by the availability of suitable habitats and substrate conditions (LÓPEZ-COLÓN, 2003; MARTÍNEZ GARCÍA, 2012; LÓPEZ-NÚÑEZ & ROJO, 2024). *Oryctes nasicornis* appears to have been primarily a woodland species developing in well-rotted large roots, stumps and trunks of a range of trees, but it has proved able to exploit near analogue synanthropic environments, particularly warm, decomposing organic matter. These include heaps of sawdust, manure and compost piles, decaying timber in agricultural or peri-urban areas in parkland (LÓPEZ-COLÓN, 2003; MARTÍNEZ GARCÍA, 2012; LÓPEZ-NÚÑEZ & ROJO, 2024). That this association is of some antiquity is indicated by fossil records from oak bark

tannery waste in a fifteenth century pit at Stralsund on the Baltic coast of Germany (ANSORGE & FRENZEL, 2005).

In recent decades, local populations of *O. nasicornis* in parts of Iberia appear to have declined, probably due to modern forest management, and agricultural practices, largely the loss of larger dead wood and the reduction of traditional composting methods (LÓPEZ-COLÓN, 2003; MARTÍNEZ GARCÍA, 2012; LÓPEZ-NÚÑEZ & ROJO, 2024). Despite this, isolated sightings, suggest that microhabitats favourable to the species still persist. The strong association with organic substrates and its ability to thrive in disturbed environments underscore its ecological resilience, even in landscapes increasingly modified by human activity.

Continued monitoring and the integration of the designated citizen science records are essential for assessing the true extent of its current distribution and for guiding potential conservation measures (LÓPEZ-COLÓN, 2003; MARTÍNEZ GARCÍA, 2012; LÓPEZ-NÚÑEZ & ROJO, 2024).

Two specimens of *Oryctes nasicornis* were captured in August 2024 on the kerb next to decaying wood in a farmer's field near Val de San Román, León (Fig. 1). Local farmers reported that *O. nasicornis* had not been observed in the area for at least five years, coinciding with a broader decline in large scarabaeids, particularly dung-rolling beetles (PANADÈS I BLAS & BUCKLAND, 2023).

The species' apparent previous absence from Val de San Román may be attributed to changes in agricultural practices, habitat loss, and climatic shifts. This new record suggests that, despite the overall decline in scarabaeid abundance, environmental conditions may still be suitable for *O. nasicornis* to persist. Further surveys are required to determine whether a stable population exists and to assess ongoing changes in local beetle diversity.

The species have been recorded on the global citizen science platform Inaturalist under <https://www.inaturalist.org/observations/183477718>.



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