# First record of three alien termite species (Insecta: Isoptera) in Belgium

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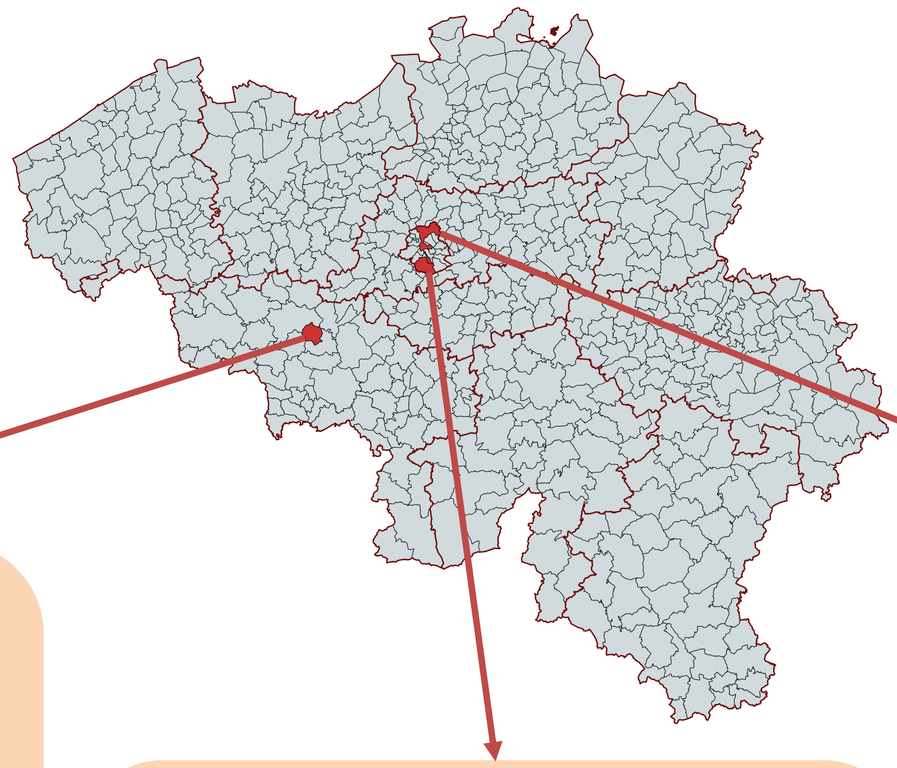
The presence of subterranean termites (Family Rhinotermitidae) and drywood termites (Family Kalotermitidae) poses significant challenges since they can cause substantial damage to buildings and other wooden structures, posing safety risks and leading to economic losses. Some species within these families exhibit high levels of destructiveness and have become invasive in numerous regions worldwide. Introductions or expansions of termite populations often result from the importation of infested wood, plants, or soils.

**DNA analysis**

DNA was extracted from collected specimens and DNA barcoding was performed by sequencing COI (658 bp fragment, Folmer *et al*. 1994 and 661 bp fragment Lo *et al.* 2004) and COII (749 bp fragment, Ghesini *et al.* 2020).



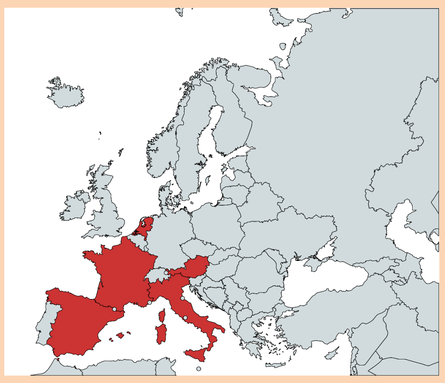
**Termite identification**

The termites collected from a greenhouse and adjoining garden in Brugelette were identified as *Reticulitermes flavipes* (eastern subterranean termite), from a house in Uccle as *Reticulitermes banyulensis*, and those found in an apartment in Brussels as *Cryptotermes brevis* (powderpost termite).

## *Reticulitermes flavipes*

Photo by Judy Gallagher [CC BY 2.0]

Distribution in Europe

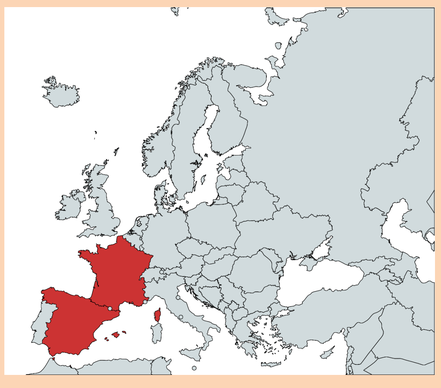


- Considered invasive
- Native distribution: eastern USA
- Detected in Belgium: 2022 (Brugellette)

## *Reticulitermes banyulensis*

Photo by Hans Hillewaert [CC BY-NC-ND 2.0]

Distribution in Europe

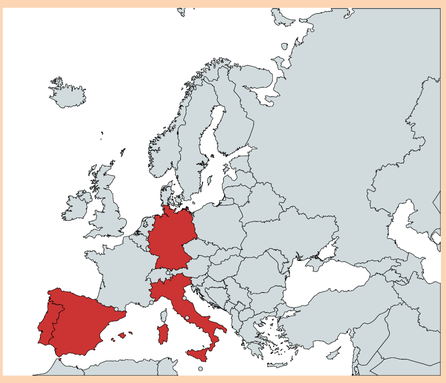


- NOT considered invasive
- Native distribution: southern France & Spain
- Detected in Belgium: 2022 (Uccle)

## *Cryptotermes brevis*

Photo by Davidmoradelpozo [CC BY-SA 3.0]

Distribution in Europe



- Considered invasive
- Native distribution: South America
- Detected in Belgium: 2020 (Brussels)

*Reticulitermes banyulensis* and *Cryptotermes brevis* thrive only in warm climates, so the risk of spreading or establishing nests outdoors in Belgium is low. Both infestations likely resulted from importing infested wood from tropical areas. The *Reticulitermes flavipes* infestation is more worrisome as this species is better adapted to the Belgian climate, and it is known to spread to outdoor areas. While there is no immediate cause for concern, the infestation area should be monitored closely to limited the further spread of this species.

**More info & pdf**

SCAN ME

Folmer O, Black M, Hoeh W, Lutz R, Vrijenhoek R (1994) DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. *Molecular Marine Biology and Biotechnology* 3: 294–299, Ghesini S, Müller G, Marini M (2020) First record of the subterranean termite *Reticulitermes grassei* in Switzerland. *Bulletin of Insectology* 73(1): 149–151, Lo N, Kitade O, Miura T, Constantino R, Matsumoto T (2004) Molecular phylogeny of the Rhinotermitidae. *Insectes Sociaux* 51: 365–371,

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