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New breeding grounds of *Reticulitermes lucifugus* (Rossi) (Isoptera Rhinotermitidae) in Lombardy (Italy)

Abstract - Two colonies of *Reticulitermes lucifugus* (Rossi) were found in the province of Varese (Lombardy, Italy), infesting 3 houses.

Riassunto - Nuovi focolai di *Reticulitermes lucifugus* (Rossi) (Isoptera Rhinotermitidae) in Lombardia (Italia).

Viene riferito del rinvenimento di due focolai di *Reticulitermes lucifugus* (Rossi) in Lombardia, precisamente ad Olgiate Olona e Lonate Pozzolo (VA), con infestazione di 3 edifici.

Key words: Mediterranean termite, termites, wood pests.

In January 2008 several specimens of *Reticulitermes lucifugus* (Rossi) (Isoptera: Rhinotermitidae) were delivered at the Institute of Agricultural Entomology, at the University of Milan. They were collected in private houses in Olgiate Olona (N 45°37'07"; E 8°52'42") and in Lonate Pozzolo (N 45°34'56"; E 8°45'05") (province of Varese). The populations were 14 km far from each other. *R. lucifugus* is spread in all the Mediterranean area and it is well known in Italy, together with *Kalotermes flavicollis* (F.) and *Cryptotermes brevis* (Walker). In 2005, a termite of *Coptotermes* Wasmann genus (unclassified species) was found in a yacht, in a shipyard near Naples (Mancini & Priore, 2005).

R. lucifugus has been known in Italy since 1792, when it was described by Rossi, in Tuscany), although its spread is discontinuous, with isolated populations which are tens or hundreds kilometres far from each other (Ghidini, 1956; Marini *et al.*, 2004). The first presence in Lombardy was documented in Lodi, in 1959 (Springhetti & Visonà, 1959). Termites were found in a seasoning warehouse of cheese, infesting wood shelves and some round cheeses. Afterwards, termites were found in 1983 in Novate Milanese (Milan), in Brescia in 1984, and in Pavia in 1988 (Lozzia, 1990). About seven years ago, another infestation of *R. lucifugus* was observed on pasta, which came from a warehouse in Brescia. Thanks to the investigations, it was possible to verify that the pallet infested by termites, used to transport pasta, came from Campania and that infestation spread from wood to the pasta packaging (Fig. 1). However, it was an isolated episode, without any further consequence.

As far as the North of Italy, other findings took place in Veneto (Buonaventura, 1953; Gambaro, 1954; Jucci & Springhetti, 1957; Springhetti, 1957; 1958a; Zangheri, 1959; Rui, 1963), Friuli Venezia Giulia (Buonaventura, 1955; Springhetti 1958b; Zangheri, 1959; Clabassi *et al.*, 2001),



Fig. 1-4: 1, Infestation of *Reticulitermes lucifugus* on pasta; 2, Damages of *R. lucifugus* on wood flooring, after uplift and removal of the stair-carpet; 3, Evidence of termite damage to wooden beam, with hanging tubes; 4, Mud tubes constructed by termites on the internal wall of house.

Emilia Romagna (Springhetti 1965; Campadelli, 1987; 1988; 1996; 1997) and Liguria, where *R. lucifugus* was found for the first time in 1893, by Schneider, as referred by Capra (1948).

The inspections of the infested houses, as a consequence of recent records, allowed to verify the presence of stable multi year settlements of *R. lucifugus*. In Olgiate Olona, it was observed a large amount of damage to the wood of a detached house, surrounded by a garden, with various woody trees. The owner realized the presence of infestation when the door frame of the kitchen had a structural failure. Besides the door frames, the infestation was present on several baseboards (where a big quantity of fecal pellets and frass was noticed) and on the wood flooring of the ground floor (with the strips nailed down on joists), covered by a carpet. The termites dug a tunnel between the parquet and the lower side of the stair-carpet, made of rubber (Fig. 2). However, the inspection near the detached house did not allow to find out the place where the infestation had started; the infestation may have started from an old woodshed, which is no longer present. The owners said that in the previous years they periodically observed the presence of insects, described as “ants with wings”, but they were probably swarming termites.

The second infestation was localized in two detached houses in Lonate Pozzolo, sporadically used, far from each other more about 100 m, surrounded by a big park with different woody trees and some stumps. The door frames outside the buildings showed evidence of *R. lucifugus* damages; inside the infestation was widespread on the door frames, the baseboards, some shelves and on several wooden beams, with the presence of the typical shelter tubes (Fig. 3). Some tunnels made by a mixture of soil, feces and saliva were observed on a timber, on the inner walls and outside of houses (Fig. 4). In particular, in a cellar, the shelter tube of the termites joined the floor with the ceiling, passing to the upper floor; this tunnel was used by the termites to migrate from a floor to another. Also in this case it was impossible to trace the origin of the infestation, which may have been originated from woodshed, coming from different areas and used for manufacturing or heating.

All these findings highlight the adaptation capacity of *R. lucifugus* to live even where the climatic conditions are no more favourable for its development. If men transport this termite by accident, this insect is able to adapt itself to artificial conditions in order to survive and to proliferate. The infestations we observed started several years ago and since the two places are not so far, we cannot exclude the presence of other infestations in the neighbouring areas.

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