AN ANOMALOUS AMOUNT OF MUD IN A BLACKBIRD *Turdus merula* NEST

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Riassunto – **Una quantità anomala di fango in un nido di Merlo *Turdus merula*.** Si riporta il rinvenimento di un nido di Merlo con struttura anomala: tutta la coppa esterna è risultata coperta da uno spesso strato di fango che rendeva il nido molto più pesante (>1400 g) rispetto a quanto noto da letteratura (<250 g). Si accenna ai fattori che potrebbero aver indotto questo comportamento.

Birds' nests exhibit a considerable amount of plasticity in their size and construction (Biddle *et al.*, 2016). The most used materials for build nests are twigs, roots, leaves, mosses, feathers, and dry grass (Mainwaring *et al.*, 2014a). Mud is a less used materials in this regard: less than 5% of birds uses mud for build nests (Rowley, 1969).

Among passerines, mud is found within nests of all European species of trushes, including Common Blackbird (*Turdus merula*; e.g., Biddle *et al.*, 2015; for nest structure, see: Møller, 1990; Cresswell, 1997; Wysocki *et al.*, 2015).

In this note, we report the observation of a nest attributable to the Common Blackbird (the only species of trush, Turdidae, nesting locally), composed of a very anomalous quantity of mud.

Nest was found (June 2022) near Tarsia (Cosenza, Southern Italy, 609089.71 E – 4386421.95 N; 195 m a.s.l.; buffer zone of 'Lago di Tarsia' nature reserve), on a shrub of *Spartium junceum* (at about 1.5 m from the ground) surrounded from sparse Olive trees and herbaceous thermo-xerophilous vegetation with *Ferula communis* (Southern side of a suburban hill, periodically burned; for details of study area: Brusco *et al.*, 2022; Fig. 1).

Although the size measures (internal cup: 19.5 cm; height: 18 cm; circumference: 75 cm) fell within the ranges known for nests of this species (Mainwaring *et al.*, 2014b), the muddy mass made the nest anomalous for the weight (1435 g), much higher (by almost six times) than known (e.g.: weight range between 177 and 241 g, among them 131-143 g in mud; Mainwaring *et al.*, 2014b). The mud was located all in the outer nest, masking any other materials, and forming an armor that completely wrapped the part of the nest made up of twigs, roots and others occurring in the inner cup (Fig. 1).

Nest size and composition can depend on different factors, both local (e.g., density of predators; vegetation, local environmental factors: Weidinger, 1990; Grégoire *et al.*, 2013; Wysocki *et al.*, 2015; Kucherenko & Ivanovskaya, 2020) and at larger scale

(biogeographical: latitude may affect the size: Mainwaring *et al.*, 2014b; Biddle *et al.*, 2016; climate: larger nests are constructed during colder periods: Wysocki *et al.*, 2015).

Mud in nests has different roles: for example, this material has a key role in maintaining the structural integrity of the nest during incubation and chick rearing (Biddle *et al.*, 2015). Moreover, adding to feathers and leaves, it may increase the thermal insulation (Deeming & Jarvis, 2023), and the camouflage into vegetation (Kucherenko & Ivanovskaya, 2020). Finally, experience of individual birds building the nest may be a further factor (e.g., inexperienced females construct smaller nests; Wysocki *et al.*, 2015).

We hypothesize that the anomalous amount of mud in this nest, mainly located in the external side (outer nest), may be assigned to one or more of these factors: *in primis*, the need of support the nest structure located on a shrub in a poor vegetated area (for example, increasing thermal insulation in presence of strong winds occurring in this exposed hill side).

Although in this phase, we did not consider analyzing the characteristics of single nest components, further analyses could dismantle the nest (now preserved in the Natural History Museum of the 'Lago di Tarsia e Foce Crati' nature reserves – 'Protected Areas of Calabria' Dioramas Section'), so investigating, for example, the mud weight and its chemical composition (e.g., to check the occurrence of polysaccharides from the bird's saliva, incorporated within the mud wall: see Silva *et al.*, 2010, for House Martin, *Delichon urbicum*).

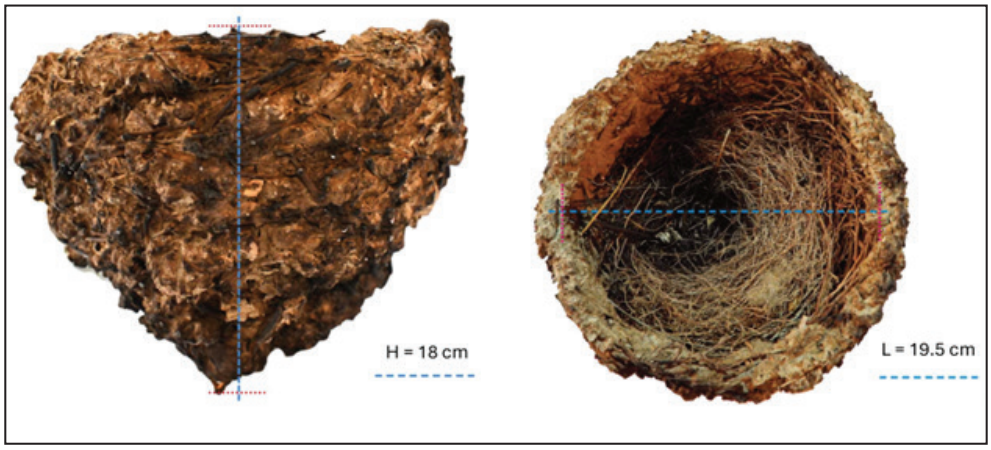

Figure 1. The nest of Common Blackbird (*Turdus merula*) with an anomalous amount of mud covering all the outer sides. H: height; L: length.

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