

Arthropods on mummies in the Catacombe dei Cappuccini in Palermo, Italy

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In July 2012, over several days and nights, our team examined 622 mummies in the basement of the Capuchin monastery in Palermo, with corpses dating back mostly between the 17th to 20th century. The mummies passed through different, mixed stages of decay, even though their decompositional end state is mummification.

Except mummy PriNb27 which did not have a head, we found that most heads were skeletonized, i.e., not mummified. There were no statistical differences in the type of decay between mummies of males, females, monks, regular priests nor between the mummies of persons with other occupations (lawyers etc.). We found insect remains on 260 mummies, yet no evidence of blowfly remains (Calliphoridae) which are usually very common in early decomposition. Instead, we found others arthropods typical for corpses, e.g., *Hydrotaea ignava* (Harris, 1780) (Diptera: Muscidae), *Fannia scalaris* (Fabricius, 1794) (Diptera: Fanniidae), *Conicera tibialis* Schmitz, 1925 (Diptera: Phoridae), *Leptocera* sp. (Diptera: Sphaeroceridae), *Necrobia rufipes* (De Geer, 1775) (Coleoptera: Cleridae), *Gibbium psylloides* (Czenpinski, 1778) (Coleoptera: Ptinidae), *Oryzaephilus surinamensis* (Linnaeus, 1758) (Coleoptera: Silvanidae), Alysinae (Hymenoptera: Braconidae), *Tinea pellionella* (Linnaeus, 1758) (Lepidoptera: Tineidae) and some pseudoscorpions (Pseudoscorpionida, Arachnida).

Only 260 of the 622 mummies showed signs (skin lesions) that may, from our experience with decomposing bodies, have been caused by insect activity. Comparing males, females, virgins, monks, priests, and the members of other professions, only priests and virgins showed a significant difference in insect colonization patterns (Wilcoxon). This may be due to very different methods of mummification.