

ERADICATION VERSUS LOCAL CONTROL OF *RATTUS RATTUS* ON
TYRRHENIAN ISLANDS: ECOLOGICAL ASPECTS, FIELD
TECHNIQUES AND ECONOMICS

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As generally recognized, commensal rodents are considered major threats in island ecosystems, due to the ecological impact they have on communities. Thus, in recent years, a considerable effort has been carried out in many parts of the world in order to eradicate introduced rodent species from islands. On Mediterranean islands, the Black rat (*Rattus rattus*) is considered by far the major pest species, because of its impact especially on plant, bird, and invertebrate communities. In this study we present results from eradication or local control projects on ten Tyrrhenian islands performed in the last six years. Eradication projects were carried out in eight islands with area ranging from 0.5 to 239 ha. Density of rat population was estimated on the larger island (Giannutri) by a removal trapping, where eradication activities are still ongoing. When eradication was considered unfeasible or a longer time was necessary, local control was performed in order to protect nesting of colonial seabirds. All the above control activities were performed by using commercial rodent baits, containing anticoagulant rodenticides (both brodifacoum and bromadiolone at 0.005%). In order to minimize risks for non-target species, rodent baits were placed into tamper-resistant bait stations. In the larger island, a pulsed-baiting method was used, with four bait administrations. Reproductive success of colonial birds was assessed on five islands, showing the benefits deriving from both the eradication and local control of rat populations. Furthermore, lizard populations on some islands exhibited a sudden increase in density.