

Living along a Pliocene Tuscan coast: terrestrial, freshwater and marine vertebrates from La Serra quarry (Tuscany)

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For centuries, the Plio-Pleistocene deposits of Tuscany (central Italy) have been the location of prime discoveries of fossil vertebrates. Though such finds have significantly contributed to international vertebrate palaeontology, many of these historical finds lack precise stratigraphic whereabouts; furthermore, correlations between continental and marine assemblages have always been difficult, thus hampering integrative palaeoecological reconstructions. Here, we provide a preliminary characterization of the vertebrate assemblage from La Serra quarry (Pisa Province, Tuscany), where the exposed Pliocene sediments are arranged into a transgressive-regressive cycle that testifies to coastal marshes, deltaic-estuarine environments, semi-protected lagoons and shoreface settings. The vertebrate assemblage from these deposits features some fifteen species of mammals, reptiles and fishes. Mammals are mostly represented by isolated remains referable both to juvenile and adult individuals of Proboscidae indet., a small-sized Cervinae, a large-sized Cervidae, and *Sus* cf. *S. arvernensis*. The proboscideans are represented by large-size vertebrae and ribs. Cervidae are documented by isolated teeth and some postcrania that resemble the late Ruscinian Cervinae. The suid is represented by a juvenile specimen, smaller than *Sus strozzii* and *Propotamochoerus provincialis*, and closer to the relatively small-size suid from the Baccinello V3 fauna. The fish remains include dental and dermal elements of *Carcharhinus* cf. *perezi*, *Carcharias taurus*, *Carcharodon carcharias*, *Galeocerdo cuvier*, *Myliobatis* sp., *Dasyatidae*? Indet. (including the longest tail spine ever reported from the fossil and Recent records), *Sparidae* indet., and *Tetraodontidae* indet. The turtles are represented by a cervical vertebra of *Chelonioides* indet. as well as by plastral and carapacial elements of *Mauremys* sp. and *Testudo* sensu lato. By including terrestrial, freshwater, and marine forms, the vertebrate assemblage from La Serra represents an ideal scenario for providing a synoptic glimpse into a Pliocene paralic ecosystem of Tuscany, as well as for elaborating novel correlations between terrestrial, freshwater and marine vertebrate assemblages.