

NEW MALACOLOGICAL DATA FROM THE VILLAFRANCHIAN UPPER COMPLEX IN THE ALESSANDRIA
BASIN

Gianolla D.*, Irace A.**, Monegato G.**, Tema E.***, Martinetto E.***

* GIRMM - Gruppo Informale di Ricerche Micropaleontologiche e Malacologiche. daniele.gianolla@uniroma1.it

** CNR - IGG of Turin

*** Dep. of Earth Science, Turin University

The Plio-Pleistocene succession in the Villafranchian type-area of central Piedmont is divided in two main complexes (Carraro, 1996; Vigna et al. 2010). If the “Lower complex” is well known for fossils and chronology (Ciangherotti et al., 2007), in the whole North-Western Italy few data are still available for the “Upper complex”. Recent integrated stratigraphic studies (magnetostratigraphy, plant macrofossil, freshwater molluscs) in the Alessandria Basin revealed new perspectives to define the chronological attribution of the “Upper complex” (Irace *et al.*, 2012).

The studied succession consists of alluvial plain fine-grained sediments of Piacenzian age (“Lower complex”) followed by coarse grained fluvial deposits of the “Upper Complex”, referred to as the “Maranzana synthem” (MRZ). Irace *et al.* (2012) suggested a Piacenzian-Pleistocene age for this succession. Piacenzian layers and MRZ are both unconformably followed by terraced fluvial deposits related to the Bormida River, tentatively ascribed to the Middle Pleistocene. The MRZ is subdivided into three unconformity bounded units (from the bottom MRZ1, 2, 3), made up of coarse sands and gravels. Several fine-grained lenses, related to abandoned channels, also occur.

For malacology 13 samples have been kept: three samples has been collected from the Piacenzian unit and the others from five clayey and silty lenses in MRZ.

In the Piacenzian layers the recorded malacofauna resembles to that typical of the “Villafranchian - Lower Complex” of Piedmont, as documented by Ciangherotti et al. (2007). An ecological trend has been detected, from the bottom (still water assemblages, yielding species like *Valvata piscinalis* (Müller) and *Pisidium personatum* Malm, together with some gyrogonites of *Chara* sp., Ostracoda and pharyngeal teeth of Cyprinidae fishes) to the top (characterized by wood taxa, such as *Vitrea* cf. *transsylvanica* (Clessin), *Discus* sp. and *Helicodonta* sp.). One specimen of Vertigininae indet. is still under study for identification. Species like *Carychium pseudotetrodon* Strauch have been used for the biochronological constrains.

In the MRZ1 the malacological assemblage is dominated by the detritivore, invasive, aquatic species *V. piscinalis*, accompanied by the species *Radix* cf. *peregra* (Müller), *Gyraulus laevis* (Alder) and the bivalve *P. personatum*. In its complex the fossil assemblage, also yielding several gyrogonites of *Chara* sp. and valves of Ostracods, reveals an environment of still waters, with abundant plant remains.

In the lower part of MRZ2 some fragmented specimens attributed to the extinct species *Tournouerina belnensis* (Delafond & Depéret) have been recorded. This is the first record of this species in North-Western Italy, lacking in the malacofauna of the “Villafranchian - Lower Complex” (Ciangherotti et al., 2007). Rising up in the MRZ2, samples yield some Villafranchian land snails, such as *Gastrocopta moravica* (Petrbok), *Polloneria pliocenica* (Sacco) and *C. pseudotetrodon*.

In the MRZ3 the malacological assemblages resulted really poor in molluscs and does not yield any marker taxon. An ecological trend is tentatively recorded, to wet forest, containing *Oxychilus* sp., to still water, with *Radix* cf. *peregra* (Müller), *G. laevis*, *Bithynia* sp. *Acroloxus* cf. *lacustris* (Linnaeus).

References

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