

***New data on stratigraphy and low metamorphism of the col deTende unit, Maritim Alps.
Geodynamical implications**

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The purpose of this work was to bring new data and a new interpretation of the palaeogeographical and geodynamical evolution of the unit of col de Tende (Tende pass unit). This research is based on a field work campaign of 4 months involving the detailed mapping of a 25 km² region, detailed stratigraphic (fig.1) and tectonic (fig.2) observations and sampling for laboratory studies. The field work was followed by the study of the low metamorphism by XRD illite cristallinity (fig.3). The study also included a bibliographical compilation of the literature. The unit of col de Tende is located in the southwestern Alps, 60 km north from Nice. The unit is lying between two major domains: the Subalpine domain and the the Briançonnais-Ligure domain.

Oxfordian syntectonic breccias, Lower-middle Cretaceous conglomerate and Tertiary flysch permits to constrain palaeogeographical and geodynamical models. New data about the metamorphism, using the XRD illite cristallinity, gives temperatures of 350°C and an estimated burial of 15 km for the col deTende unit. The col de Tende unit recorded an active extensive tectonic during the Oxfordian-Berriasian.

This is shown by tectonic breccias and growth-faults. The calcareous conglomerates in continuity with the breccias give evidences for a continental sedimentation, due to an uplift of the unit. Subsidence is observed during the Late Cretaceous. We assign these events (tectonic subsidence, thermal uplift and thermal subsidence) to the opening of the Valais Ocean as an answer to the opening of the North-Atlantic Ocean. The thermal subsidence comes to an end during the Palaeocene. No sedimentation is recorded during the Palaeocene-Lower Eocene. An erosional contact between Upper Cretaceous marls and an Upper Eocene conglomerate suggests an uplift during the Palaeocene-Lower Eocene. The Tertiary formations show the evolution of a fore-land basin (nummulitic limestones, marls and wildflyschs). We assign the Palaeocene uplift to the flexural bulge of the subducting European plate below the Adria plate.

The accretion of the col de Tende unit in the Valaisan prism took place during the Priabonian. This event is marked by a wildflysch containing blocks of Briançonnais origin which testify the closure of the Valais Ocean and the beginning of the European continental subduction. Correlation with tectonic cross-sections imply an ultimate Tertiary extensive phase. The burial of the col de Tende unit is situated between 35 Ma (age of the wildflysch) and 32 Ma (metamorphism's age of external massifs). Stratigraphical evidence shows that the col de Tende unit was located on the northern shoulder of the Valais Ocean, that means on the southern limit of the European plate. This position permits to give an Ultradauphinois label to the col de Tende unit. The restoration and the modelisation of the flexural basin for the Priabonien locate the col de Tende unit 50 kilometres north from Genoa.

