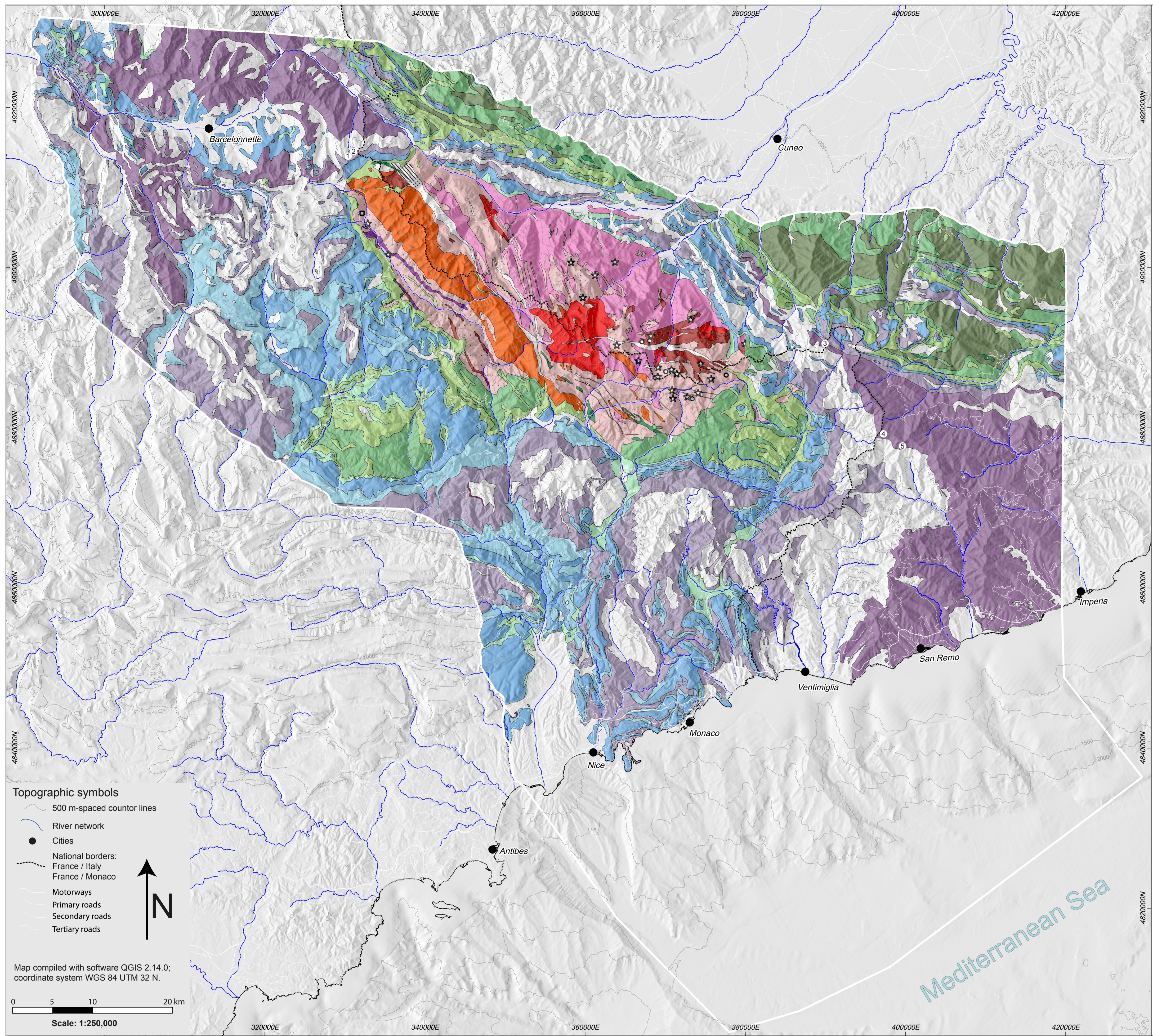


Event 6 -- Alpine subduction (100 - 45 Ma)



Legend of tectonic and petrogenetic events

6 -- Alpine subduction

- Late Cretaceous to early Eocene (100 - 45 Ma)*
- 6-1 Conglomerates, limestones, and red clay with mica (latest Cretaceous to middle Eocene, lacustrine and fluvial environments)
 - 6-2 Helminthoides Flysch (Cretaceous - Paleocene, subduction trench)
 - 6-3 Turbiditic limestones and marls (Late Cretaceous, turbidite basins)

5 -- Alpine rifting, development of passive margins, and ocean formation

- Jurassic to Early Cretaceous (201 - 100 Ma)*
- 5-2 Limestones and marly limestones, marls, sandstones, and marly limestones (Early Cretaceous, post-rift pelagic basins)
 - 5-3 Limestones and dolostones (Jurassic, syn-rift basins and structural highs)

4 -- Post-Variscan lithospheric thinning

- Permian to Late Triassic (299 - 201 Ma)*
- 4-1 Marlstones, dolostones, gypsum-anhydrite evaporites, and dissolution evaporitic breccias (Late Triassic, transgressive and regressive cycles)
 - 4-2 Evaporites, dolostones, and limestones (Middle Triassic, carbonate platforms and basins)
 - 4-3 Conglomerates, sandstones, arkose sandstones, pelites, and schists (Permian, intra-continental basins)
 - 4-4 Porphyroids (Permian, intra-continental basins)

3 -- Erosion / dismantling of the Variscan mountain chain

- Late Carboniferous (320 - 299 Ma)*
- 3-1 Mica-bearing sandstones, conglomerates, quartzites, and carbonaceous schists (late Carboniferous, immature continental basins)

2 -- Variscan collision

- Late Devonian to early Carboniferous (375 - 320 Ma)*
- 2-1 Granites
 - 2-2 Amphibolites
 - 2-3 Anatexites with cordierite
 - 2-4 Meta-granodiorites
 - 2-5 Migmatitic orthogneisses
 - 2-6 a. Migmatitic paragneisses; b. Migmatitic meta-greywackes

1 -- Variscan subduction

- Early Devonian (400 - 375 Ma)*
- 1-1 Serpentinites
 - 1-2 Eclogites
 - 1-3 Marbles

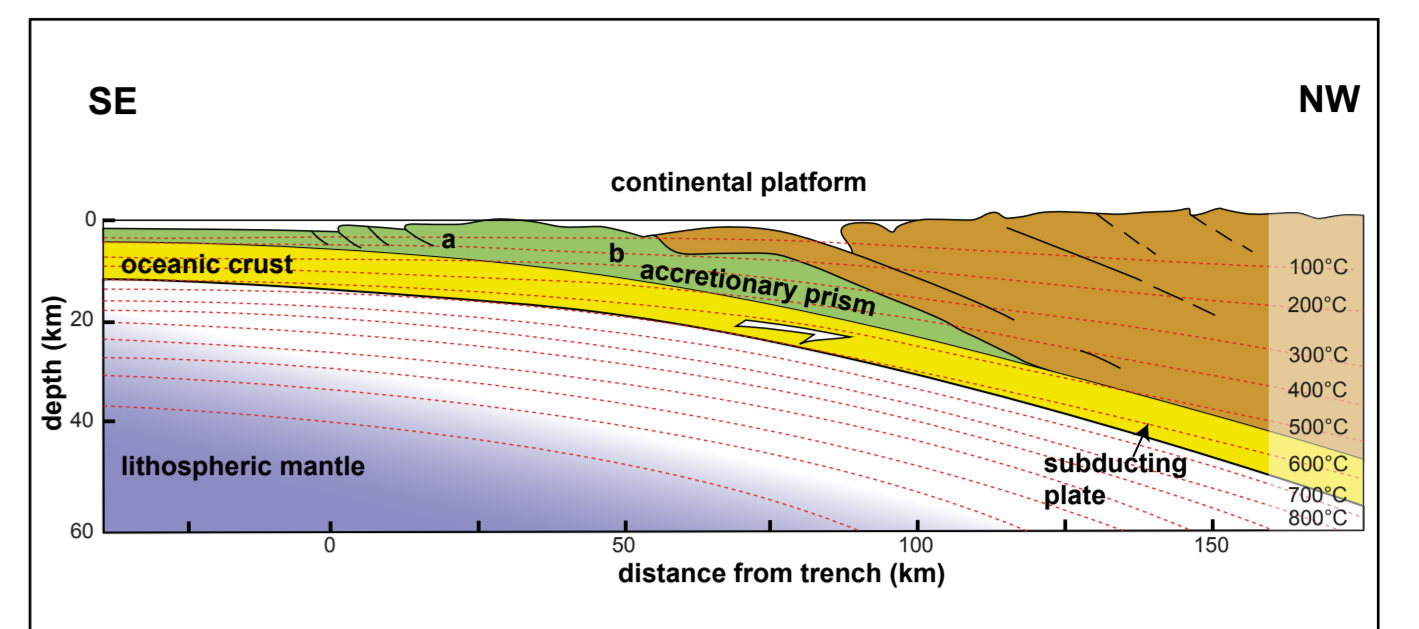


Fig. 6: Lithospheric plate scale representation of the Alpine oceanic subduction system displaying the tectonic accumulation of an accretionary prism in the trench of the subducting slab (b); the tectono-sedimentary prism involves mainly turbidite deposits of the Helminthoides Flysch. This is also the case in the sedimentary sequences at Mt. Saccarello; in figure a) Helminthoides Flysch.



Fig. 5 - A Bouma-type depositional sequence in the San Remo Helminthoides Flysch showing typical carbonatic layers and a basal siliciclastic layer; Valle Argentina, Triora, Event 6.

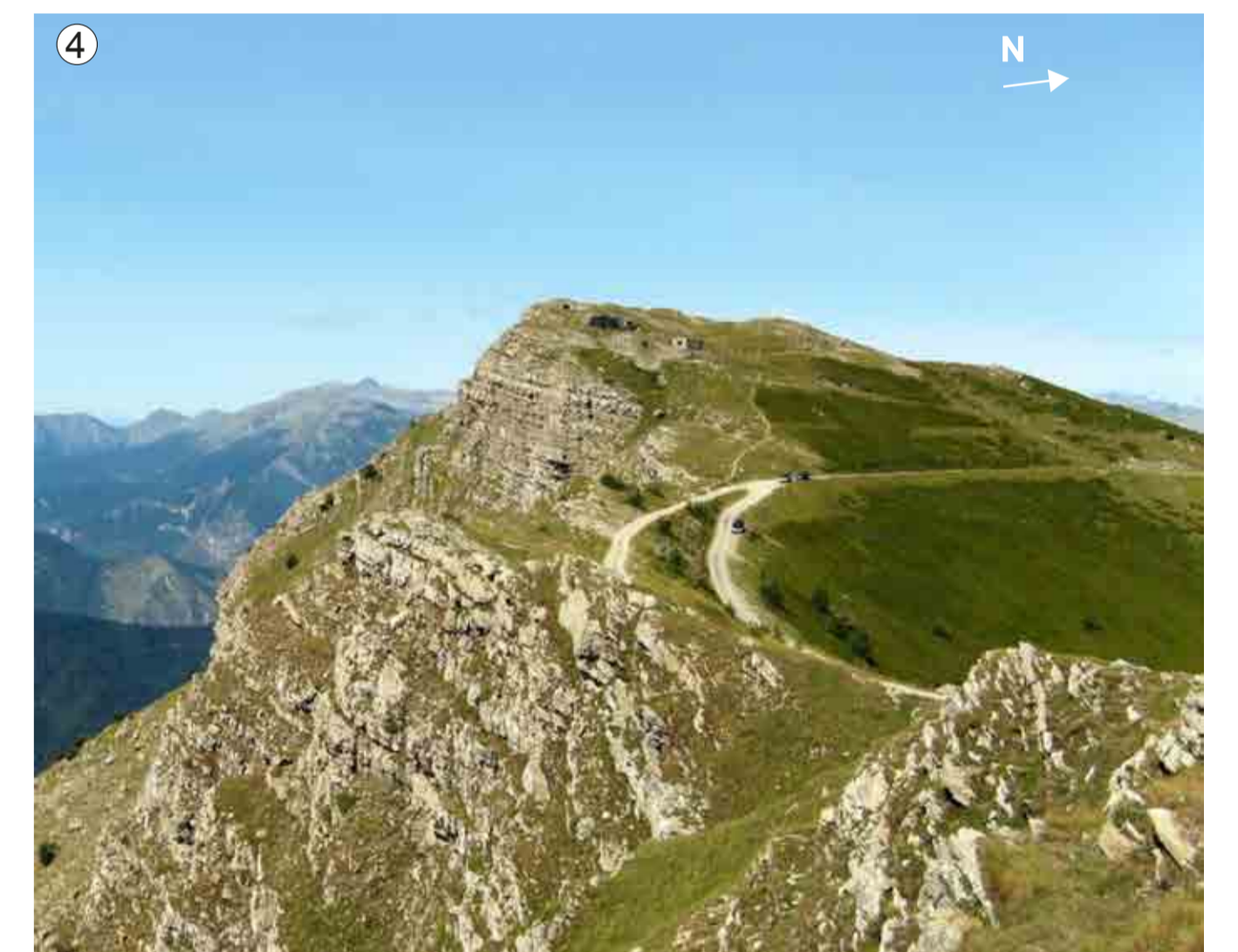


Fig. 4 - Large scale Alpine folding of Bordighera Sandstones of the Sanremo-Monte Saccarello Unit of Helminthoides Flysch (b in Fig.6; Giammarino et al., 2010), Event 6.

Localisation of the area of interest (red polygon) within Europe and across national (France, Italy, and Monaco), regional, and provincial borders.

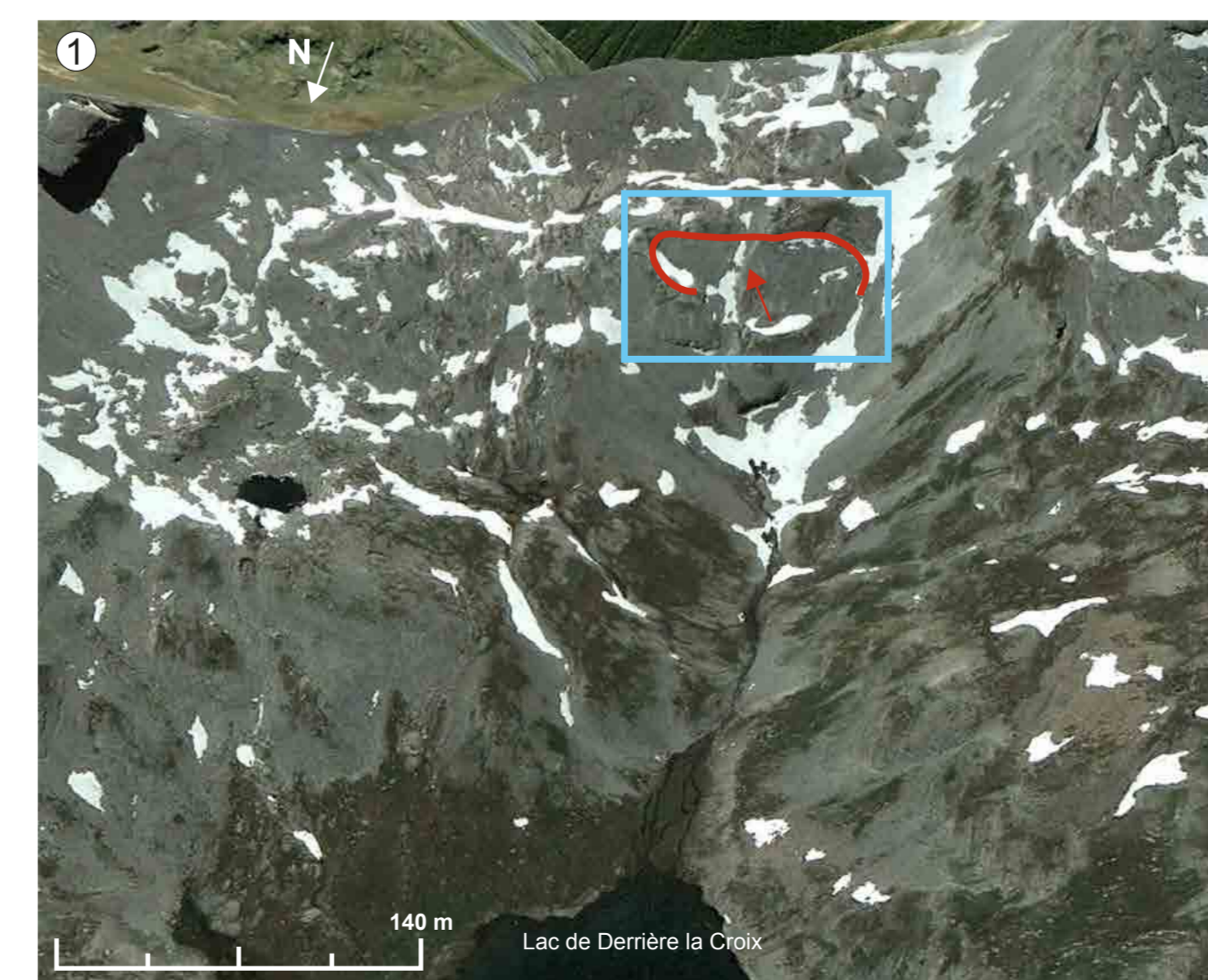
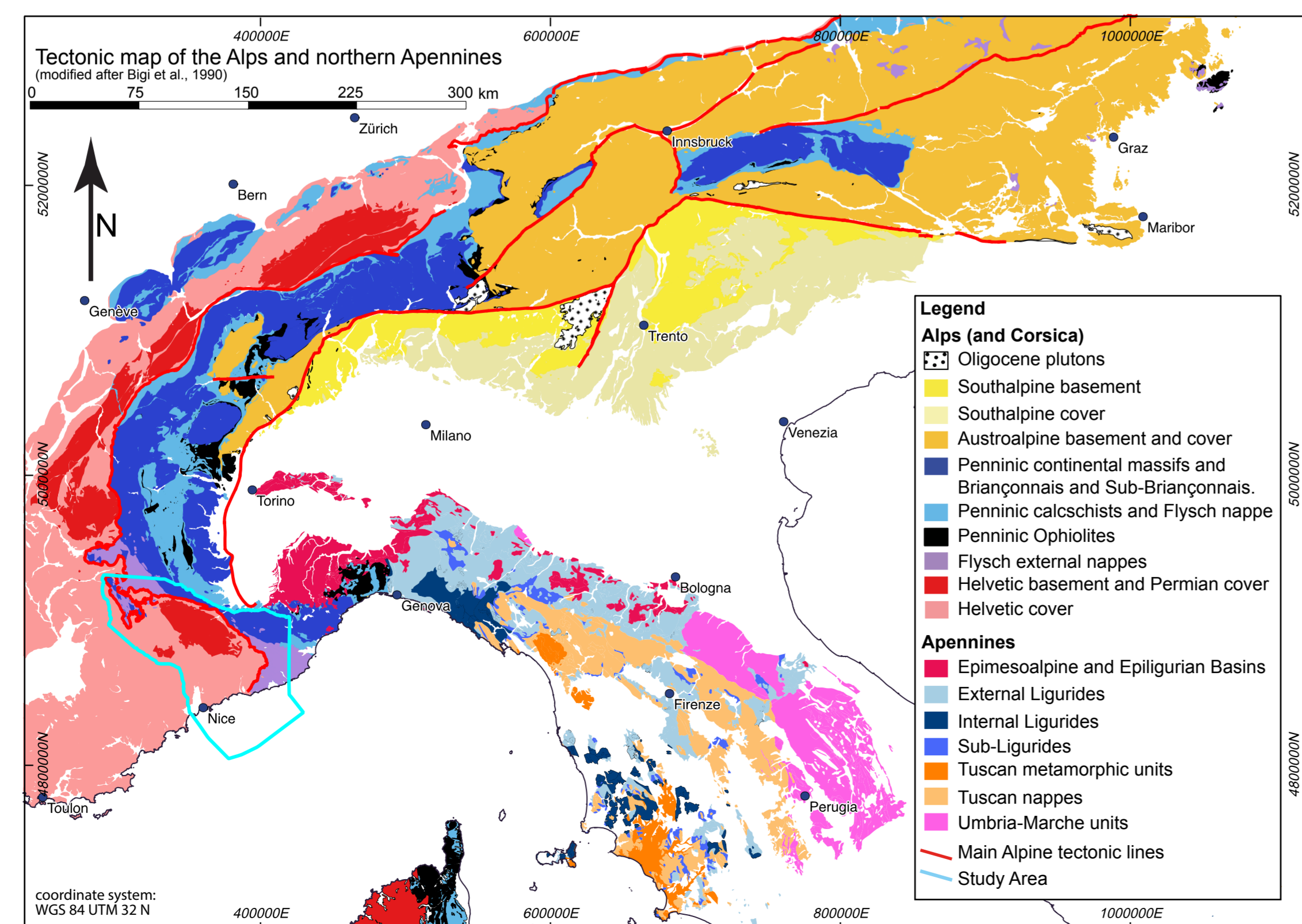
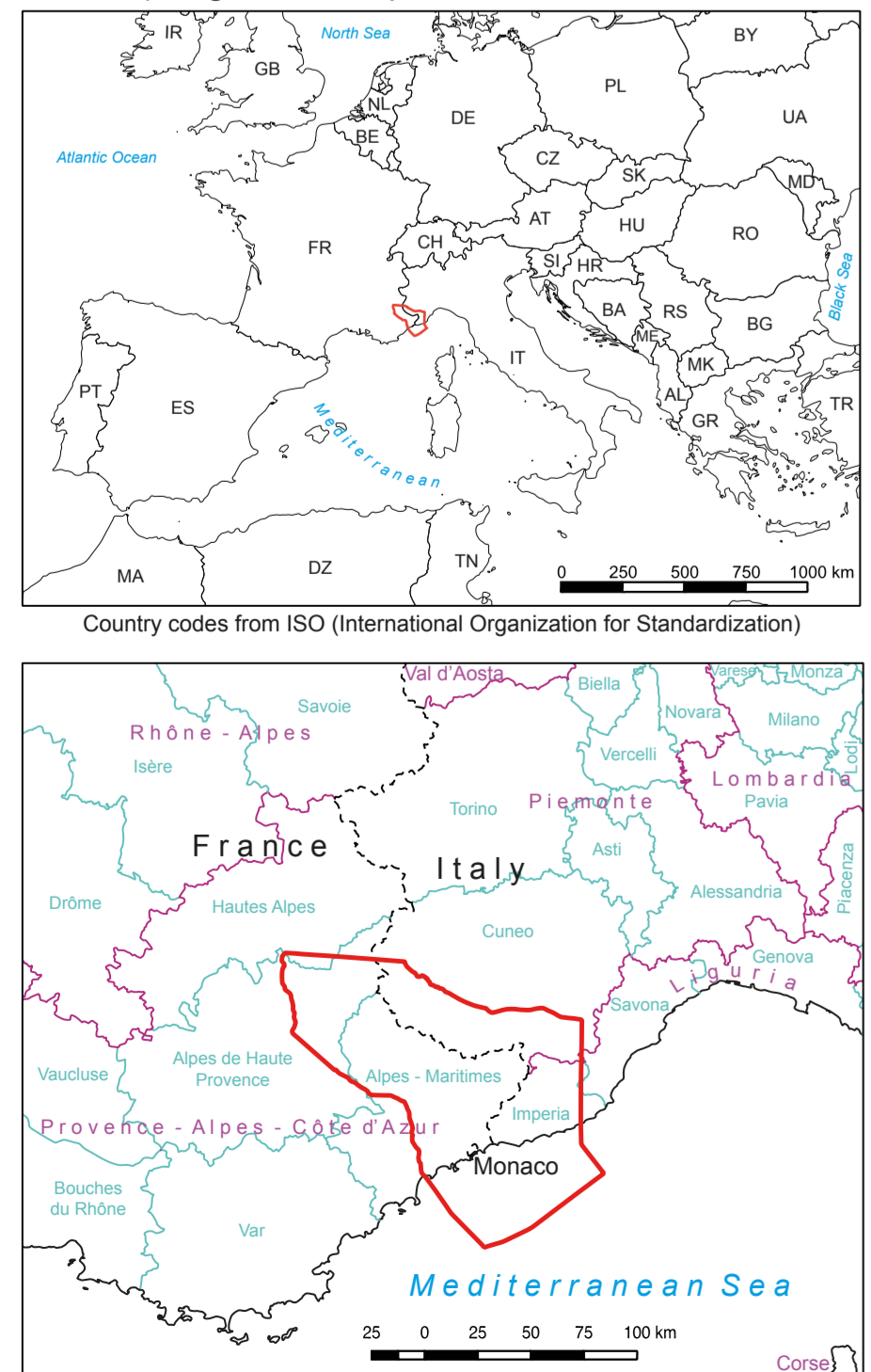


Fig. 1 - Location of the slump-scar and calcareous turbidites shown in Fig. 2 (A-D). The red line highlights the slump-scar and the red arrow indicates the termination with overlap of calcareous turbidites. Details of the blue rectangle are shown in Fig.2; upper Lauzanier Valley, Google Earth image, Event 6.

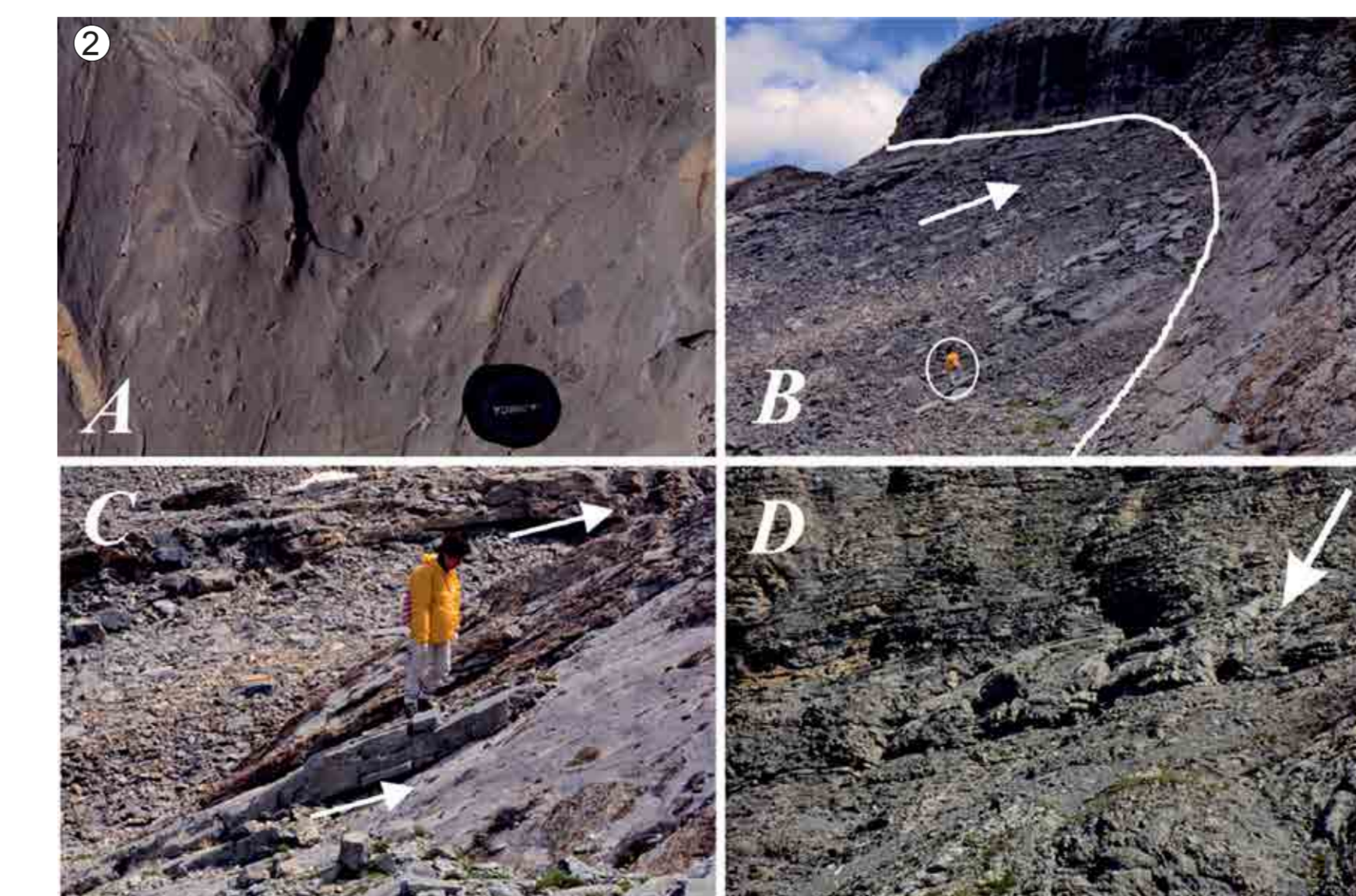


Fig. 2 - Details of the framed area in Fig. 1. Upper Cretaceous turbidite limestones (Puric limestone). A: base of slope redeposited limestone; B: slump-scar cut into the base of slope deposits; C: Cenomanian calcareous turbidites overlapping the slump-scar; D: syngenetic slump folds within the turbidite succession. Lauzanier Valley, France (modified from Fig.4 in Bersezio et al., 2002), Event 6.

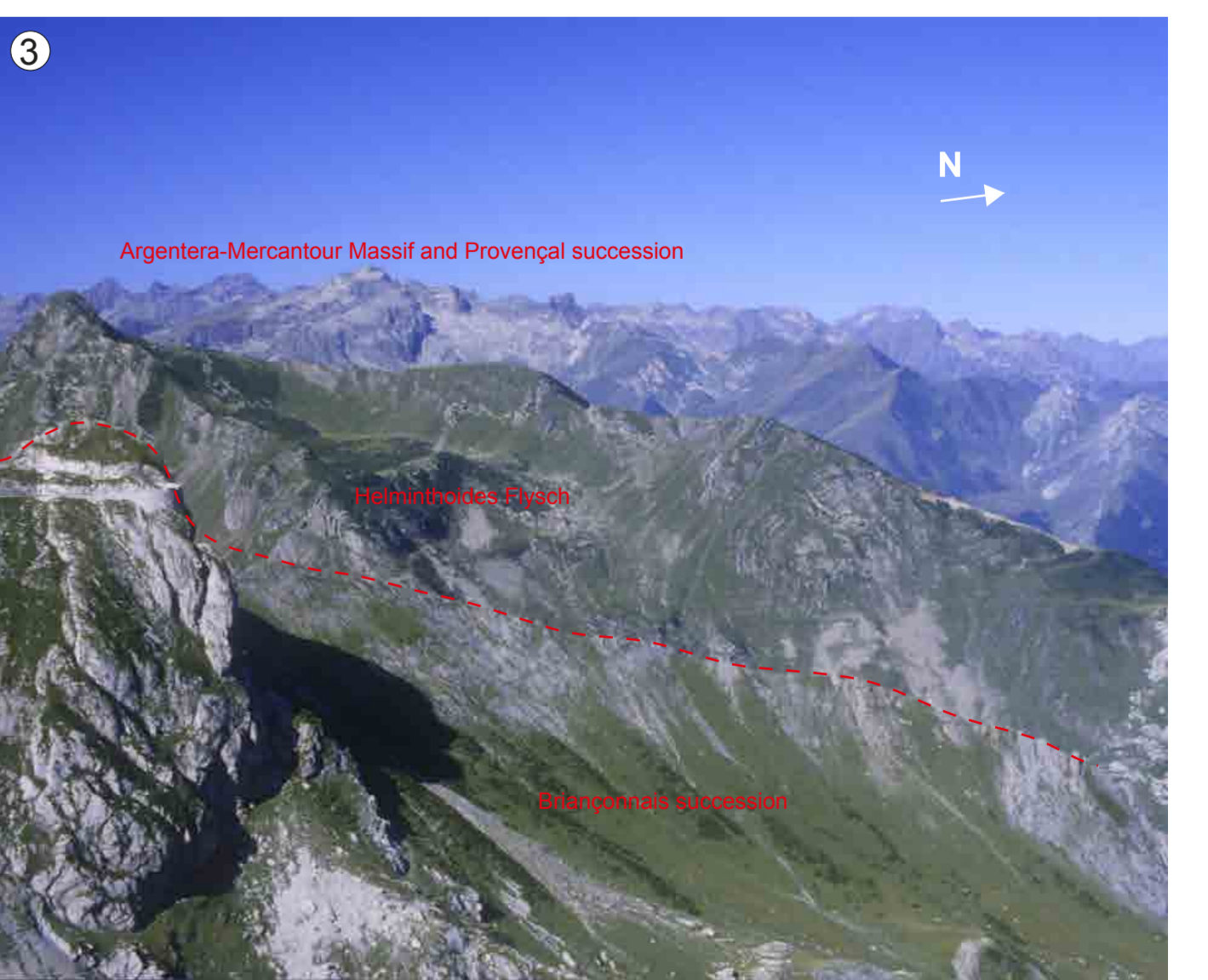


Fig. 3 - Briançonnais zone sediments and Helminthoides Flysch Unit, deformed during the Alpine collision tectonic event, Stage 7; view of the Argentera-Mercantour Massif to the west, from Mt. Saint Sauveur, Event 6.