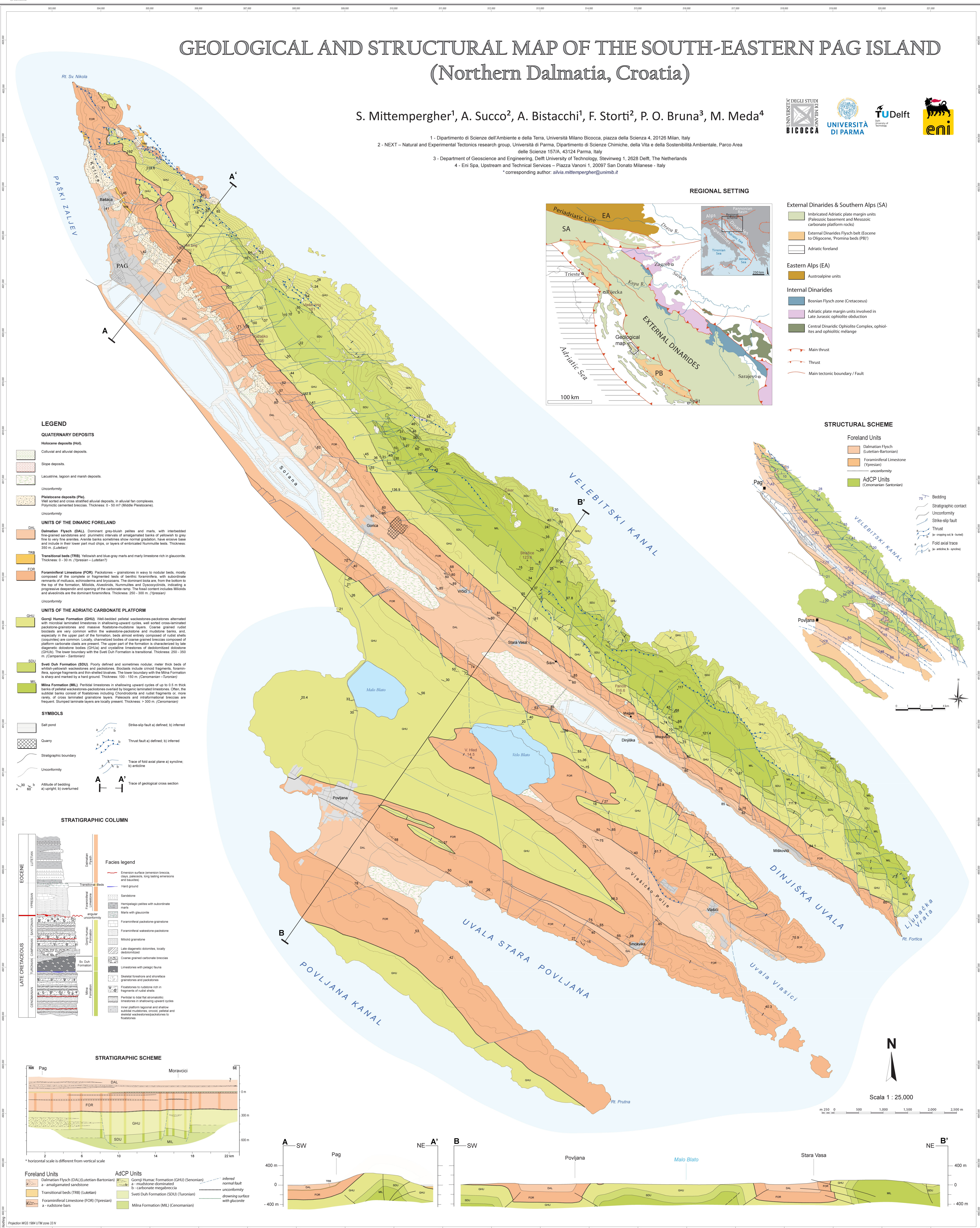
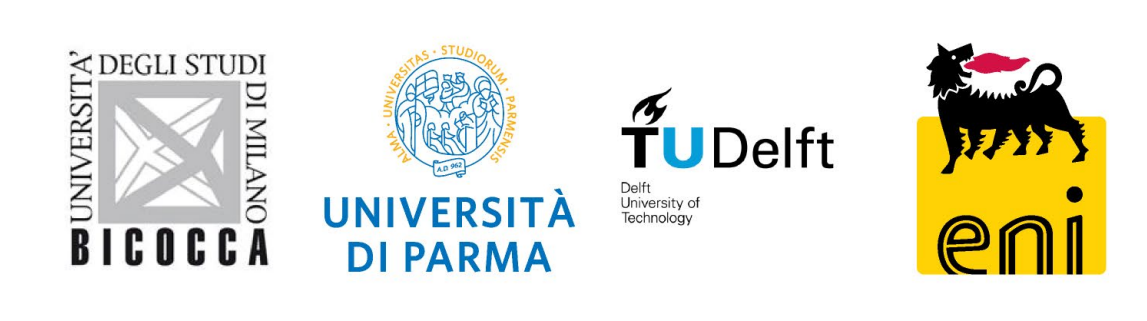




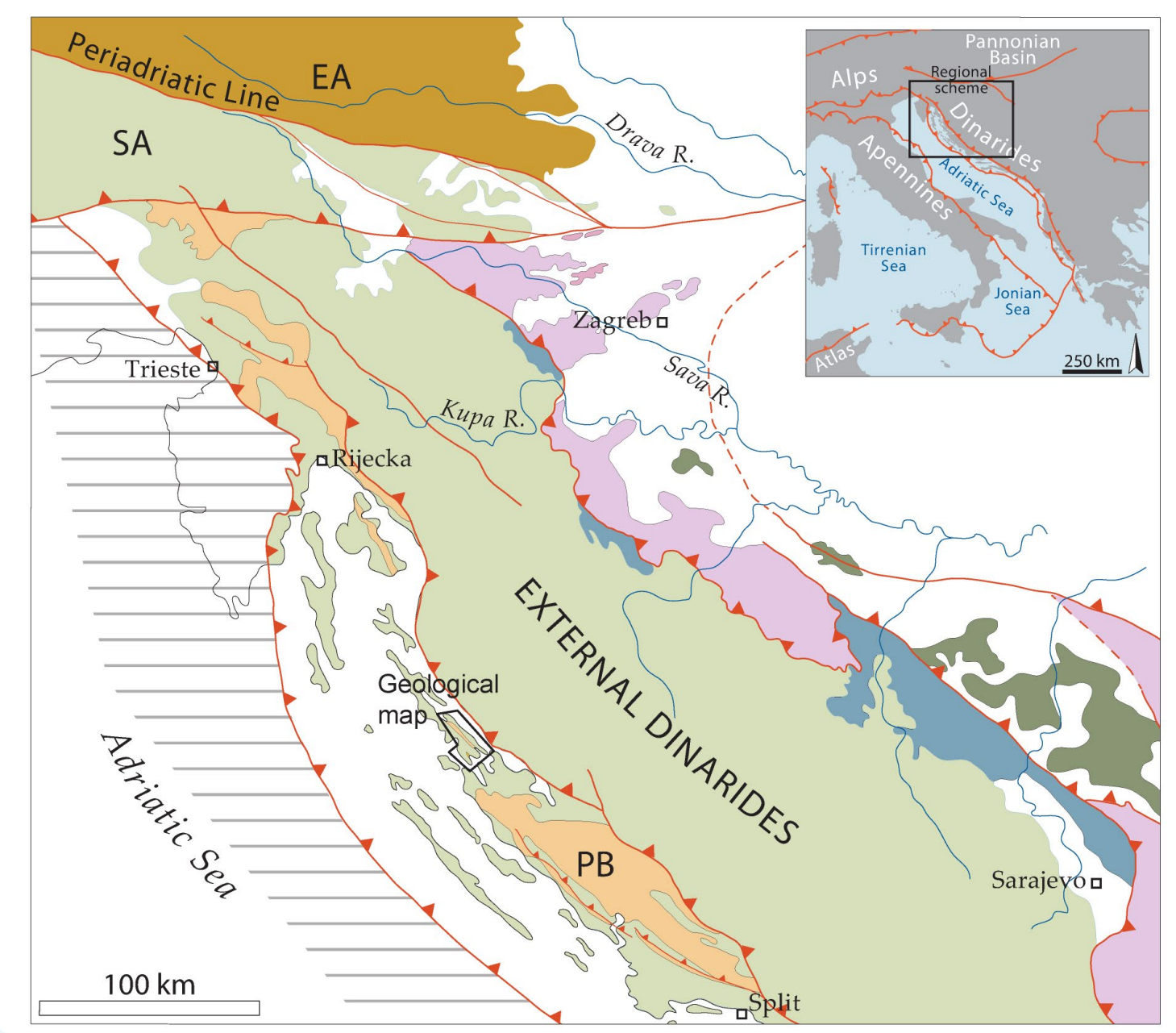
GEOLOGICAL AND STRUCTURAL MAP OF THE SOUTH-EASTERN PAG ISLAND (Northern Dalmatia, Croatia)

S. Mitterperger¹, A. Succo², A. Bistacchi¹, F. Storti², P. O. Bruna³, M. Meda⁴

1 - Dipartimento di Scienze dell' Ambiente e della Terra, Università Milano Bicocca, piazza della Scienza 4, 20126 Milan, Italy
 2 - NEXT – Natural and Experimental Tectonics research group, Università di Parma, Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Parco Area delle Scienze 157/A, 43124 Parma, Italy
 3 - Department of Geoscience and Engineering, Delft University of Technology, Stevinweg 1, 2628 Delft, The Netherlands
 4 - Eni Spa, Upstream and Technical Services – Piazza Vanoni 1, 20097 San Donato Milanese - Italy
 * corresponding author: silvia.mitterperger@unimib.it



REGIONAL SETTING



- External Dinarides & Southern Alps (SA)**
- Imbricated Adriatic plate margin units (Paleozoic basement and Mesozoic carbonate platform rocks)
 - External Dinarides Flysch belt (Eocene to Oligocene, Promina beds (PB))
 - Adriatic foreland
- Eastern Alps (EA)**
- Austroalpine units
- Internal Dinarides**
- Bosnian Flysch zone (Cretaceous)
 - Adriatic plate margin units involved in Late Jurassic ophiolite obduction
 - Central Dinaric Ophiolite Complex, ophiolites and ophiolitic mélange
- Main thrust
 Thrust
 Main tectonic boundary / Fault

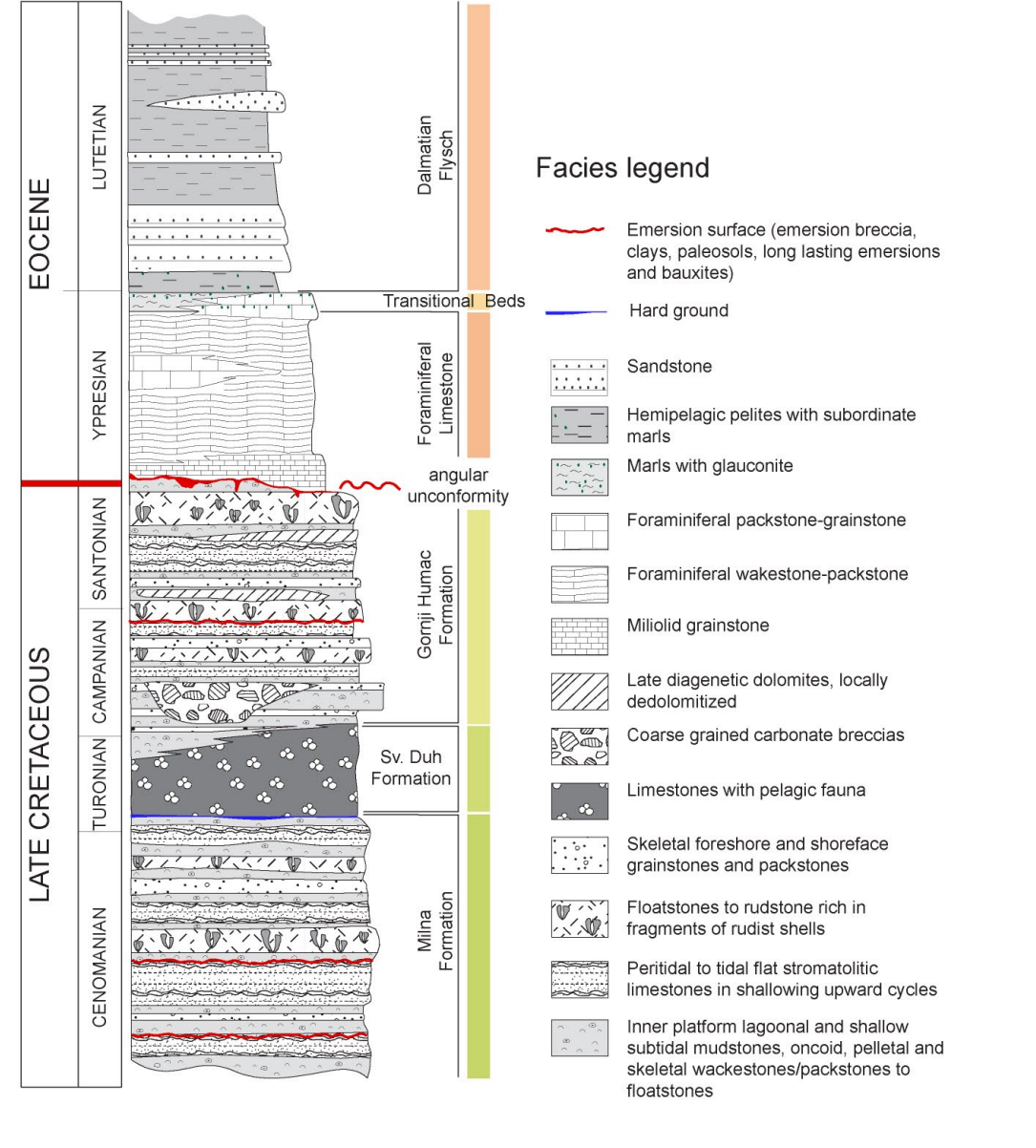
STRUCTURAL SCHEME

- Foreland Units**
- Dalmatian Flysch (Lutetian-Bartonian)
 - Foraminiferal Limestone (Ypresian)
 - unconformity
 - AdCP Units (Cenomanian-Santonian)
- Bedding
 Stratigraphic contact
 Unconformity
 Strike-slip fault
 Thrust (a - stepping out b - inward)
 Fold axial trace (a - anticline, b - syncline)

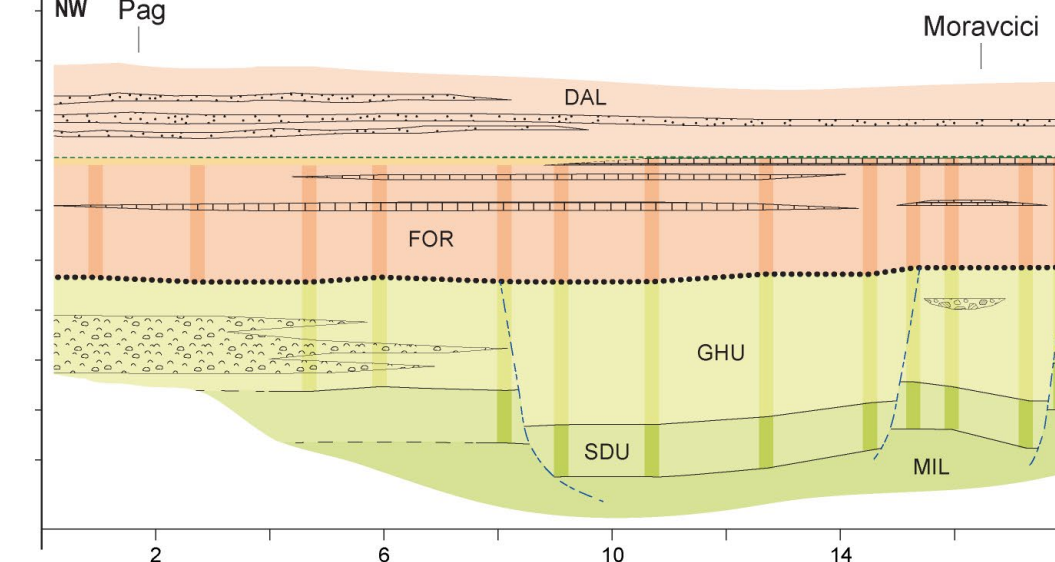
LEGEND

- QUATERNARY DEPOSITS**
- Holocene deposits (Hol)**
- Colluvial and alluvial deposits.
 - Slope deposits.
 - Lacustrine, lagoon and marsh deposits.
- Pleistocene deposits (Ple)**
- Well sorted and cross stratified alluvial deposits, in alluvial fan complexes.
 - Polymictic cemented breccias. Thickness: 0 - 50 m (Middle Pleistocene).
- UNITS OF THE DINARIC FORELAND**
- DAL** Dalmatian Flysch (DAL). Dominant grey-bluish pelites and marls, with interbedded fine-grained sandstones and micritic intervals of amalgamated banks of yellow to grey fine to very fine arenites. Arenite banks sometimes show normal gradation, have eroded base and include in their lower part mud chips, or layers of embrittled Narmite limestones. Thickness: 350 m. (Lutetian)
 - TRB** Transitional beds (TRB). Yellowish and blue-gray marls and marly limestone rich in glauconite. Thickness: 0 - 30 m. (Ypresian - Lutetian?)
 - FOR** Foraminiferal Limestone (FOR). Packstones - grainstones in silty to nodular beds, mostly composed of the complete or fragmented tests of benthic foraminifera, with subordinate remains of radiolites, echinoderms and bryozoans. The dominant beds are, from the bottom to the top of the formation, Miliolids, Alveololids, Nummulites and Dyzocyclonites, indicating a progressive deepening and opening of the carbonate ramp. The fossil content includes Miliolids and alveololids are the dominant foraminifera. Thickness: 250 - 300 m. (Ypresian)
- UNITS OF THE ADRIATIC CARBONATE PLATFORM**
- GHU** Gorjani Humac Formation (GHU). Well-bedded pelletal wackestone-packstones alternated with micritic laminated limestones in shallowing-upward cycles, well sorted cross-laminated packstone-grainstones and massive fossiliferous-mudstone layers. Coarse grained rudist localities are very common within the wackestone-packstone and mudstone banks, and, especially in the upper part of the formation, beds almost entirely composed of rudist shells (rudistites) are common. Locally, chertified beds of coarse grained breccias composed of platform carbonate clasts are present. The upper part of the formation is characterized by late diagenetic dolomite bodies (GHUa) and crystalline limestones of dedolomitized dolomites (GHUb). The lower boundary with the Sveti Duh Formation is transitional. Thickness: 250 - 300 m. (Cenomanian - Santonian)
 - SDU** Sveti Duh Formation (SDU). Poorly defined and sometimes nodular, meter thick beds of whitish-yellowish wackestone and packstones. Bioclasts include crinoid fragments, foraminifera, sponge fragments and thin-shelled bivalves. The lower boundary with the Milina Formation sharp and marked by a hard ground. Thickness: 100 - 150 m. (Cenomanian - Turonian)
 - MIL** Milina Formation (MIL). Peritidal limestones in shallowing upward cycles of up to 0.5 m thick banks of pelletal wackestone-packstones overlaid by biogenic laminated limestones. Other, the subtidal banks consist of fossiliferous including Chondrodonta and rudist fragments or, more rarely, of cross laminated grainstone layers. Paleosols and stratification breccias are frequent. Slumped laminae layers are locally present. Thickness: > 300 m. (Cenomanian)
- SYMBOLS**
- Salt pond
 - Strike-slip fault (a) defined; (b) inferred
 - Quarry
 - Thrust fault (a) defined; (b) inferred
 - Stratigraphic boundary
 - Trace of fold axial plane (a) syndine; (b) anticline
 - Unconformity
 - Altitude of bedding (a) upright; (b) overturned

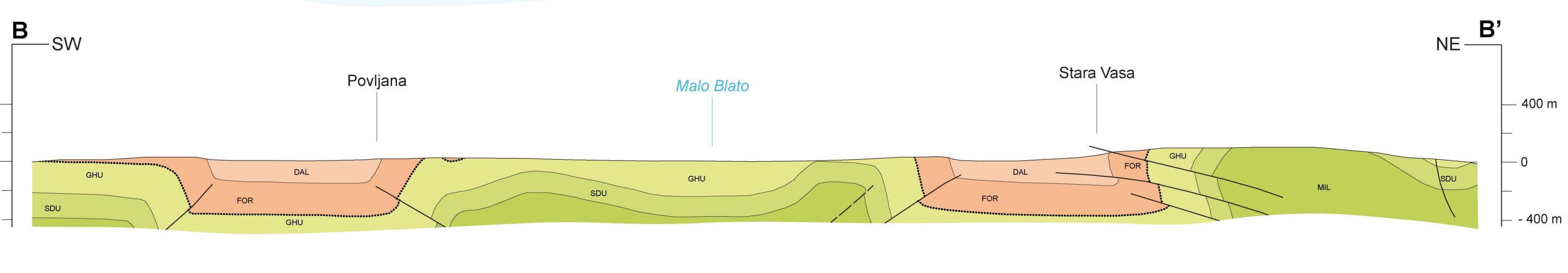
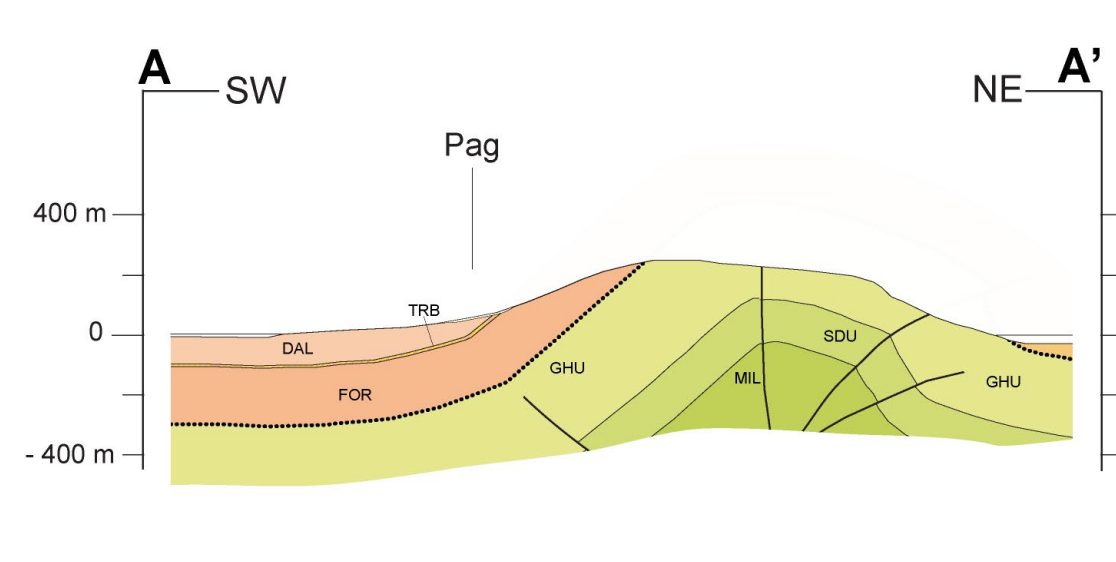
STRATIGRAPHIC COLUMN



STRATIGRAPHIC SCHEME



- Foreland Units**
- Dalmatian Flysch (DAL) (Lutetian-Bartonian)
 - a - amalgamated sandstone
 - Transitional beds (TRB) (Lutetian)
 - Foraminiferal Limestone (FOR) (Ypresian)
 - a - rudstone beds
- AdCP Units**
- Gorjani Humac Formation (GHU) (Senonian)
 - a - mudstone-dominated
 - b - carbonate megafabricated
 - Sveti Duh Formation (SDU) (Turonian)
 - Milina Formation (MIL) (Cenomanian)
- inferred normal fault
 unconformity
 downing surface with glauconite



Scale 1 : 25,000