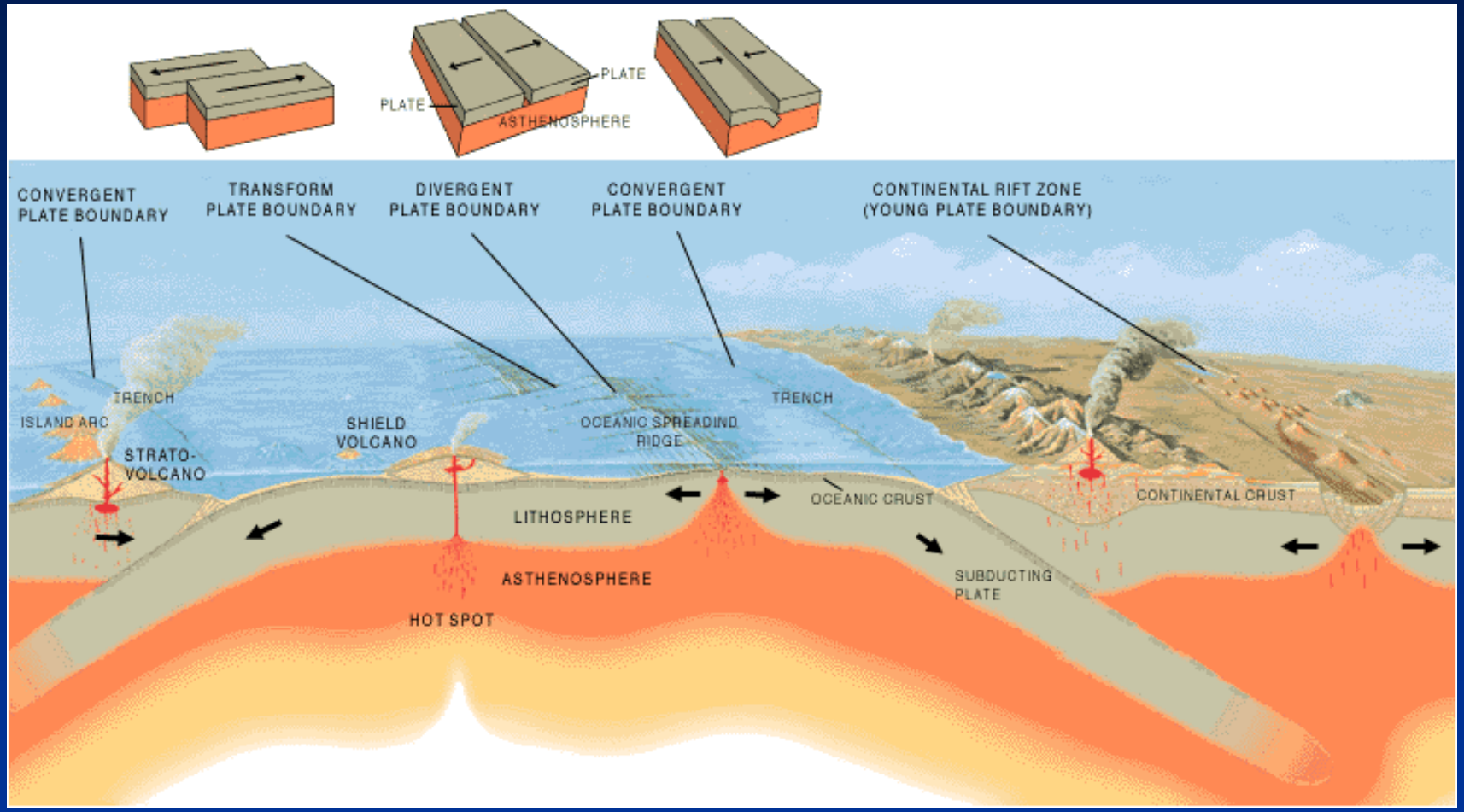
Tettonica a zolle, il sistema e i tipi di margini di placche



Da “The dinamic Earth” in USGS Web Site

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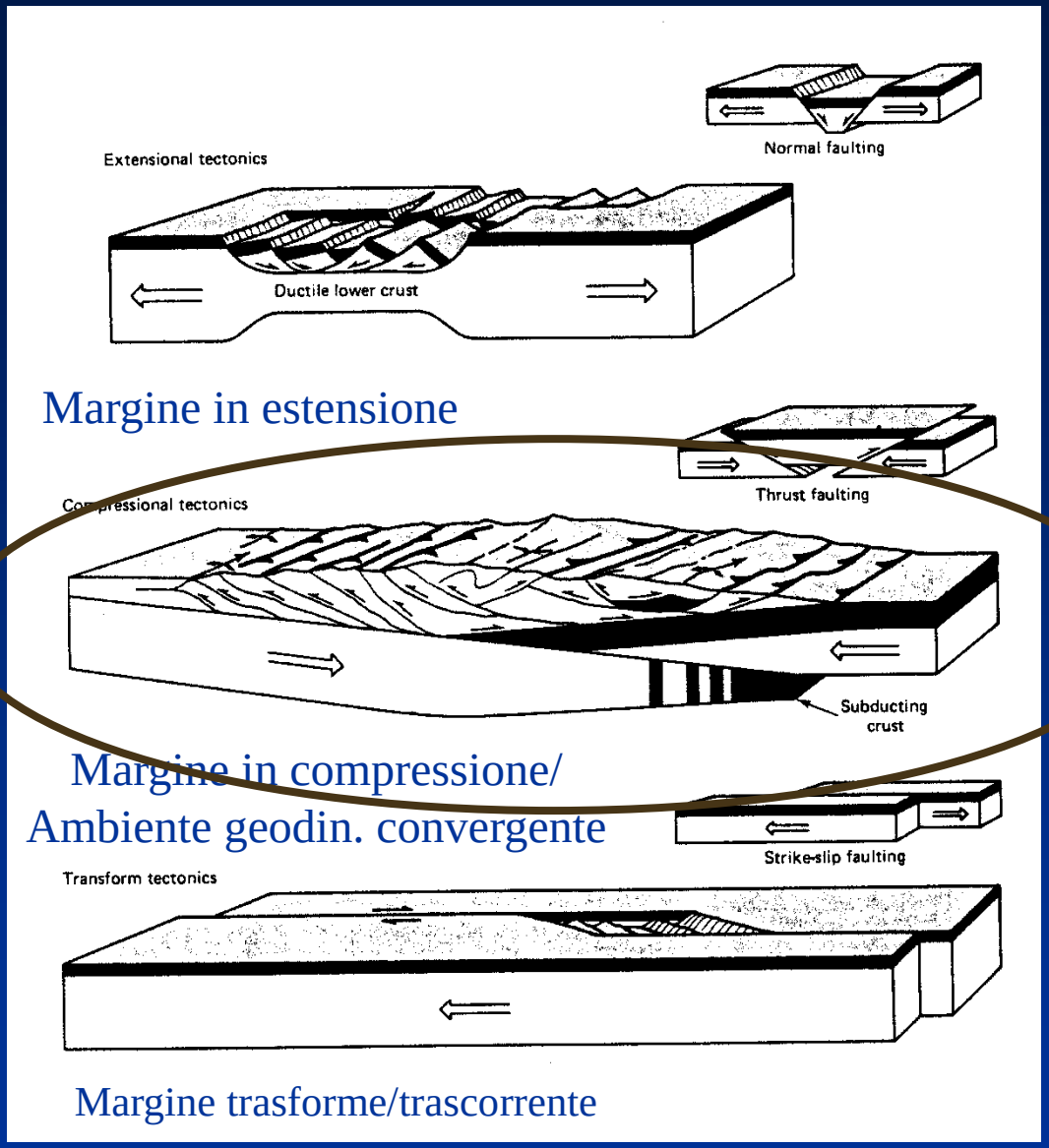
Tipo di margini di placca e ambienti geodinamici



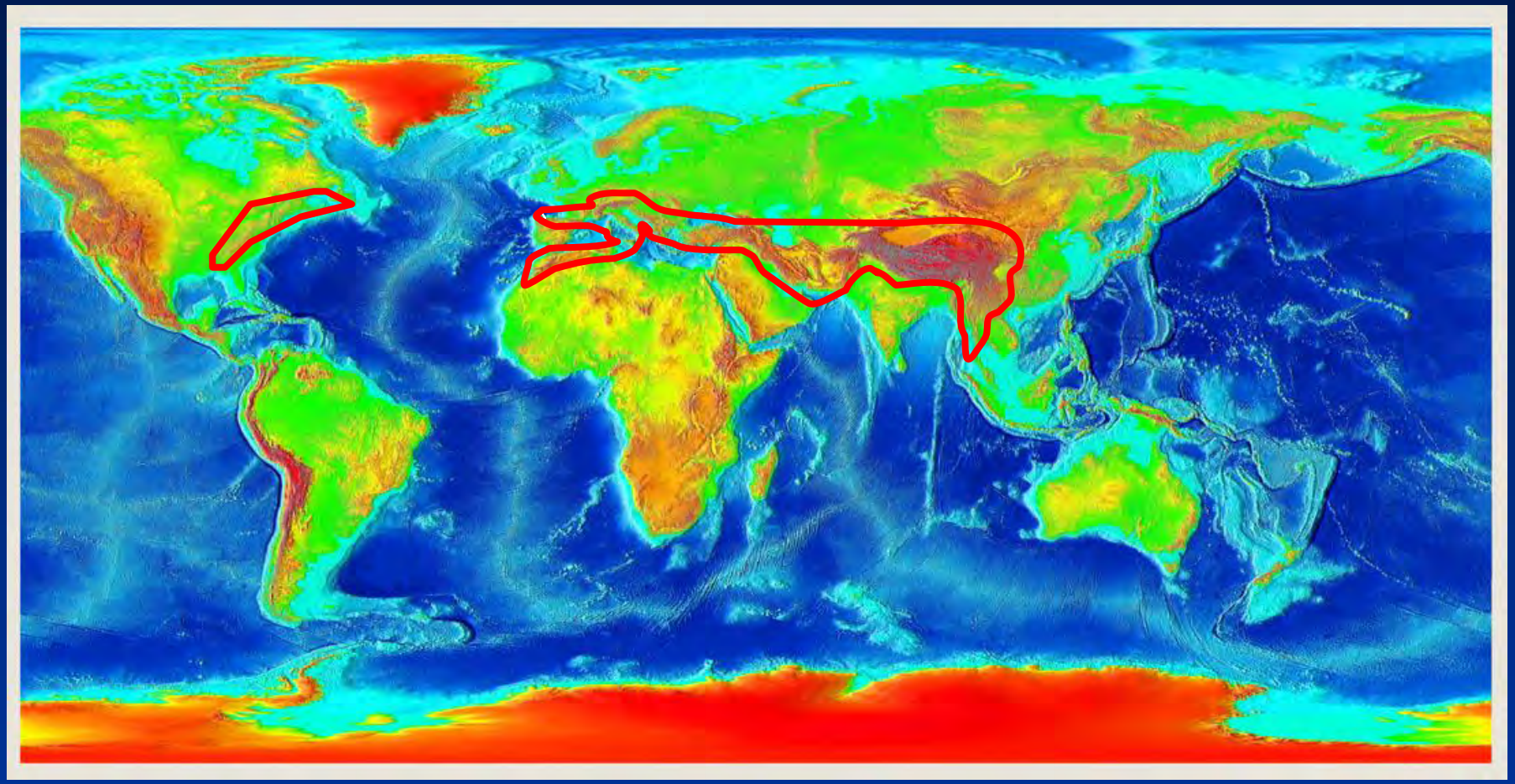
Da Suppe, 1985

Tipi di orogeni

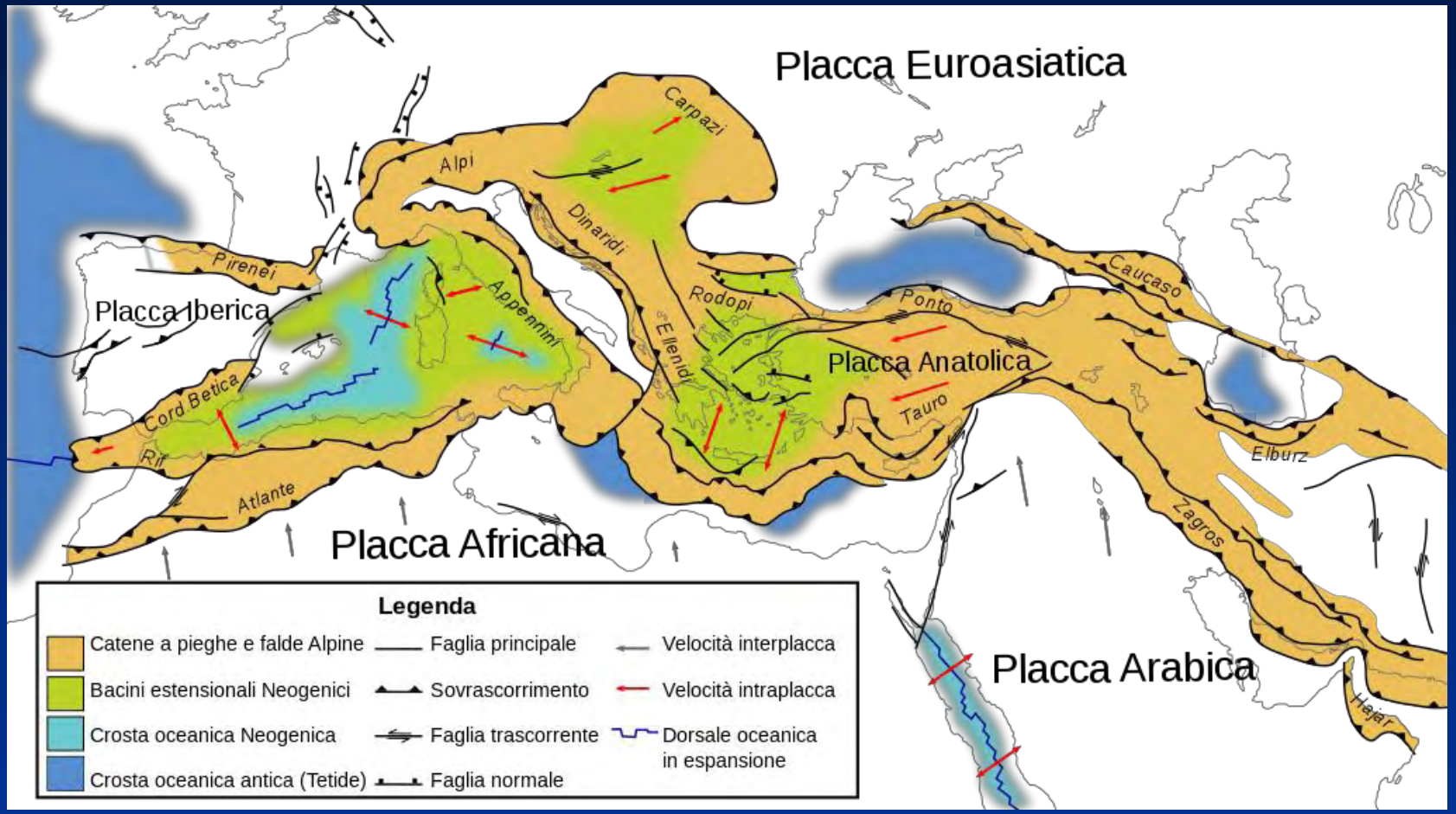
- Catene collisionali

- Prismi di accrezione
  - Tipo cordiliera o andino (margine occidentale delle Americhe)
  - Tipo Barbados-Marianne (arco insulare; es. Barbados, Tonga-Kermadek, Marianne)
  - Tipo ophiolitic back-arc (microcontinente, bacino di retroarco a crosta oceanica; es. Giappone)

Ambiente geodinamico convergente: catene collisionali

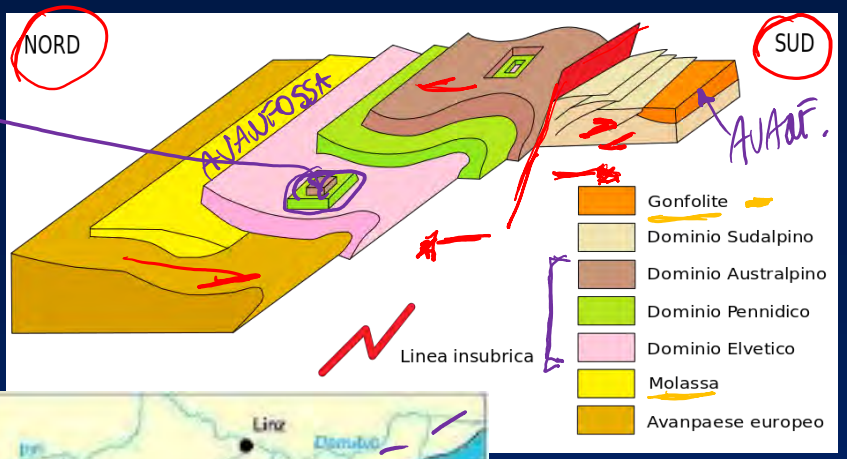


Shaded reliefs e batimetria da NOAA National Centers for Environmental Information (NCEI)

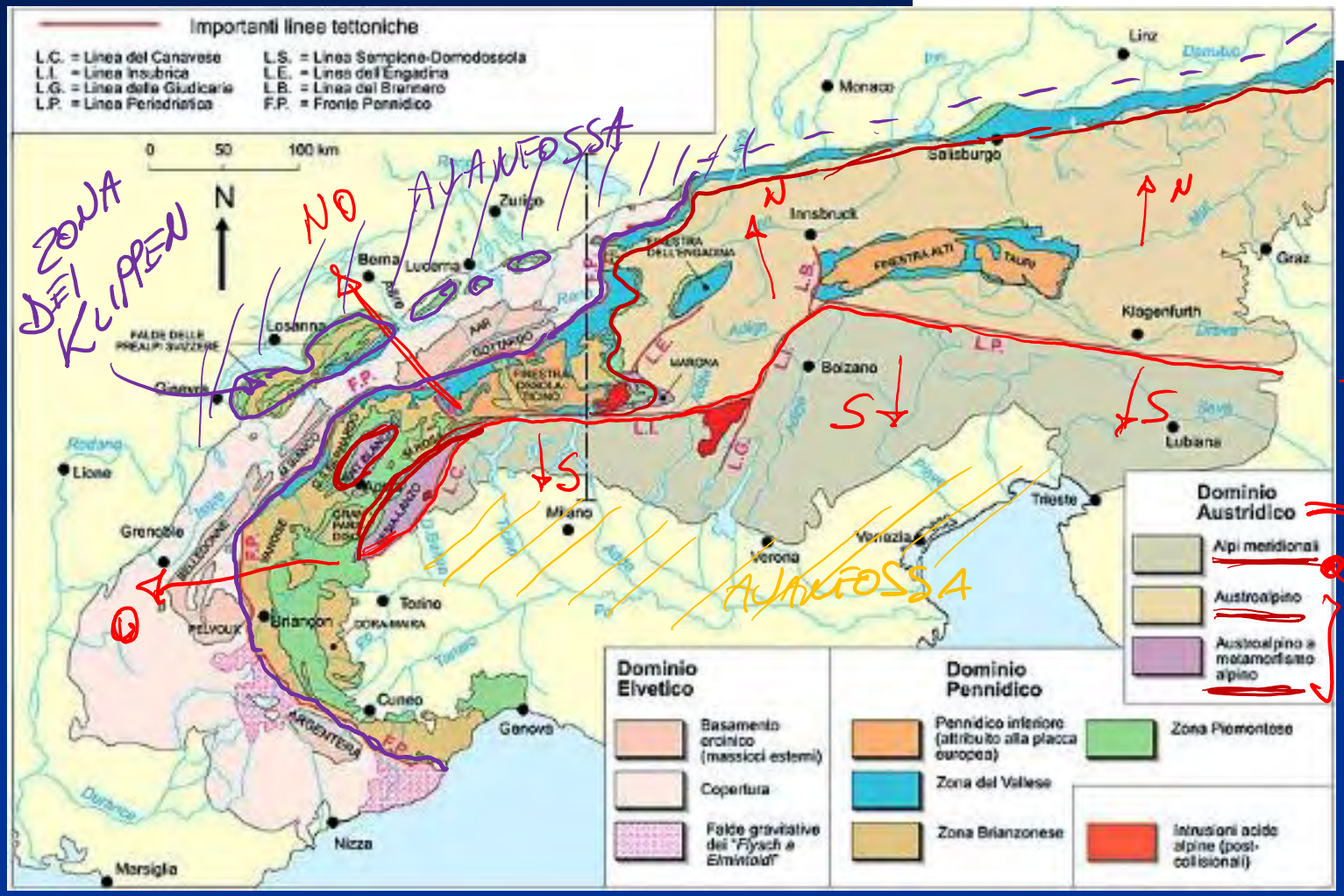


https://it.m.wikipedia.org/wiki/Geologia_delle_Alpi

Catene a doppia polarità: le Alpi



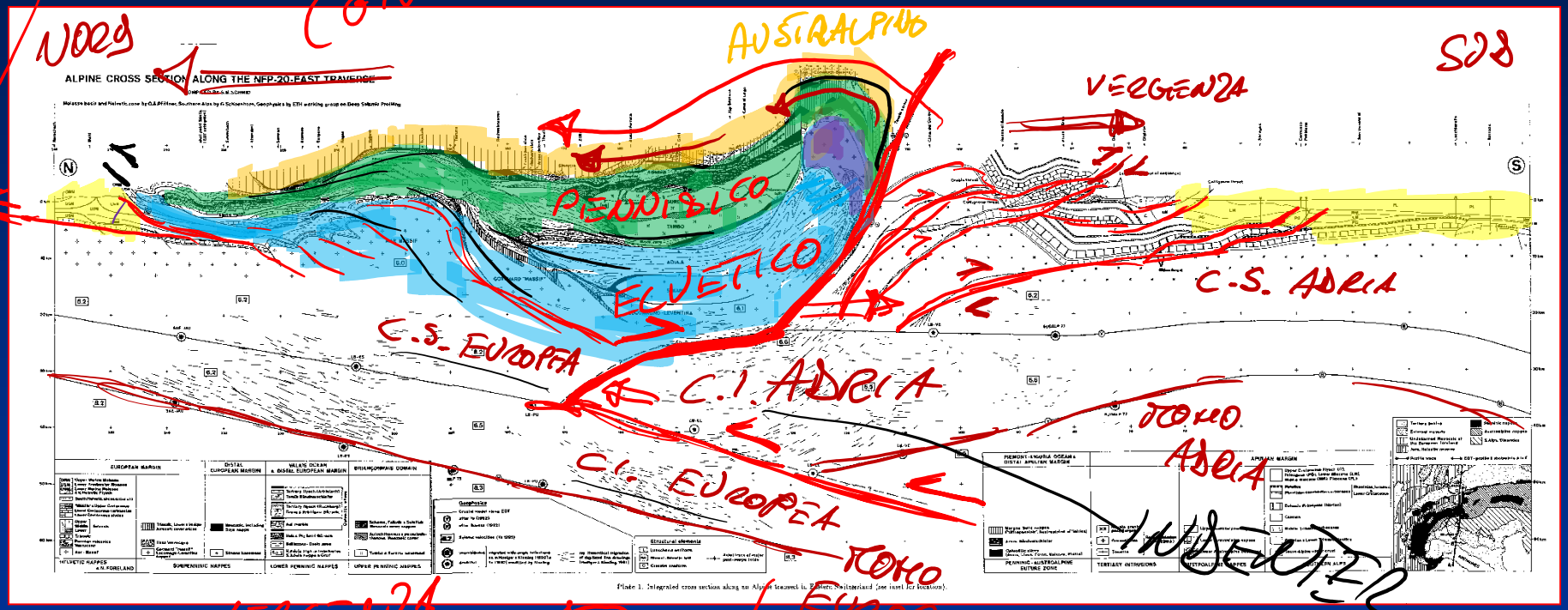
KLIPPE



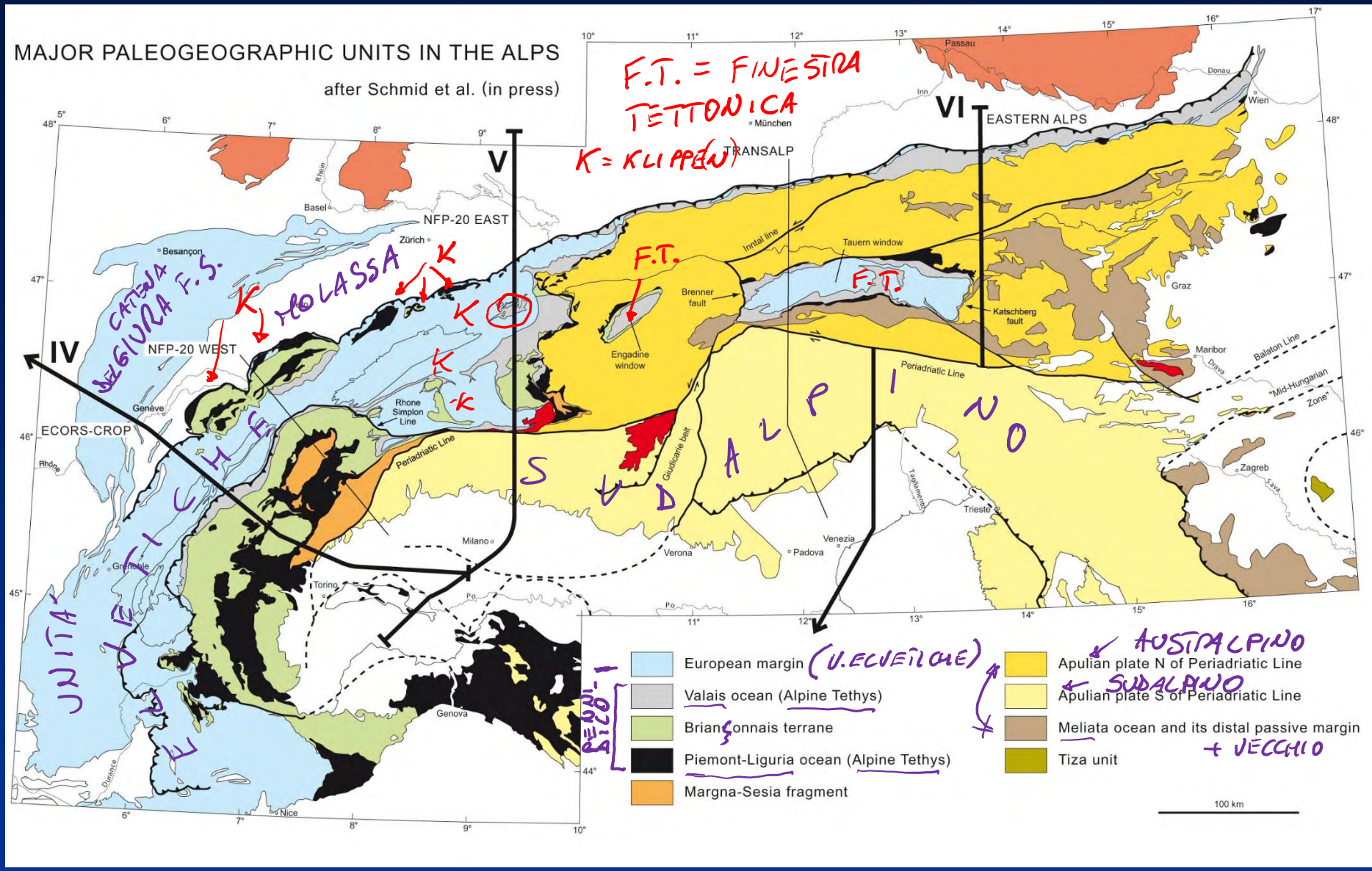
https://it.m.wikipedia.org/wiki/Geologia_delle_Alpi

ALPI
2. WSZ
ALPI MERIDIONALI
SUDALPINO
PLACCA ADRIATICA (AFRICA)
SUDALPINO
AUSTROALPINO
LINEA ATTILIO
PERIADRIATICO

Catene a doppia polarità: le Alpi



Da Schmid et al., 1996



Da Schmid et al 2004

le Alpi: il sistema a falde

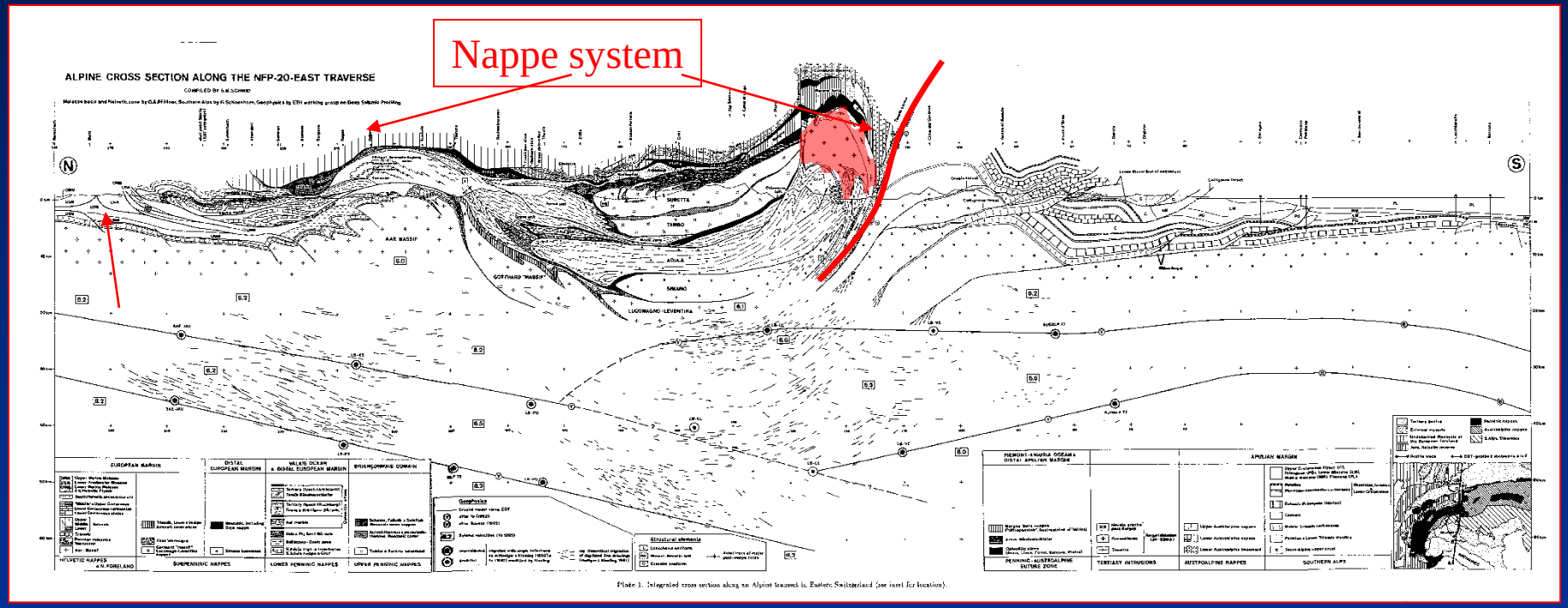
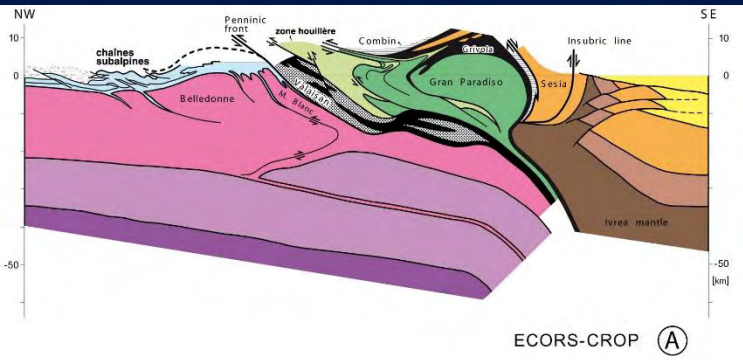
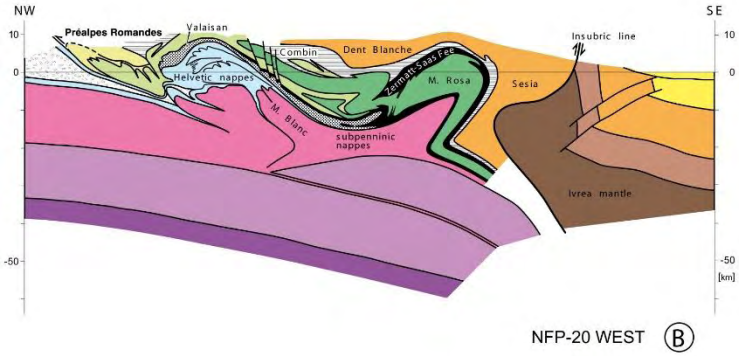


Plate 1. Integrated cross section along an Alpine traverse in Eastern Switzerland (see inset for location).

Da Schmid et al., 1996



ECORS-CROP Ⓐ



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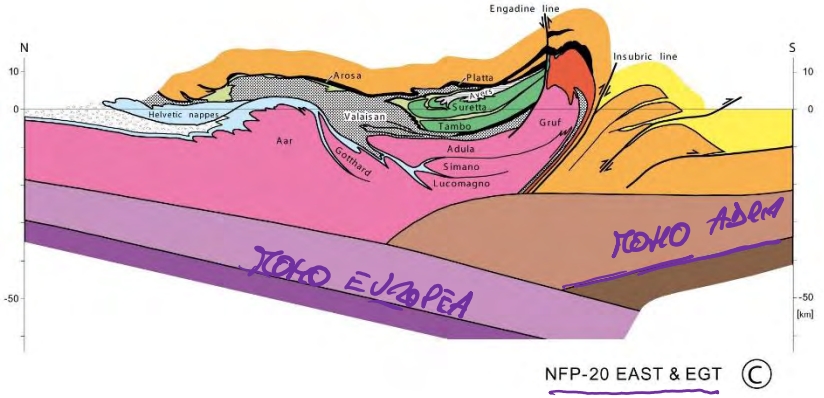
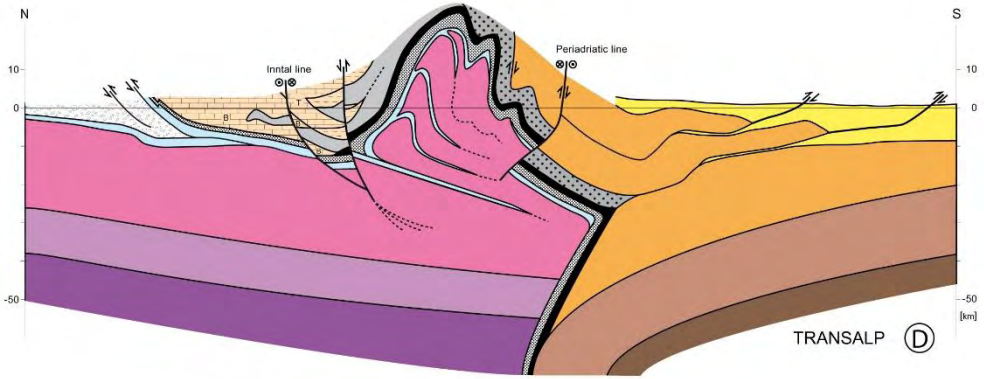
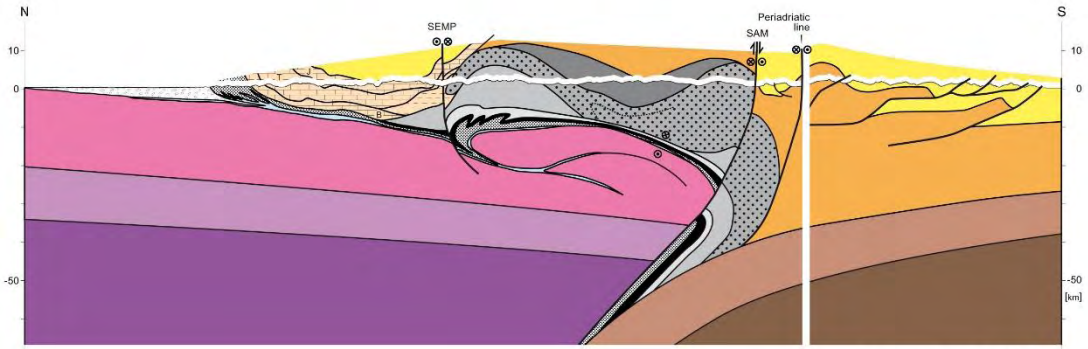


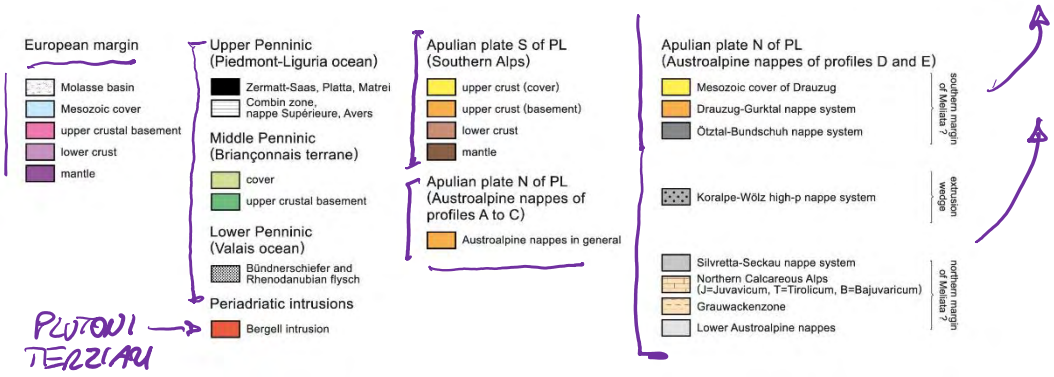
NFP-20 EAST & EGT Ⓒ



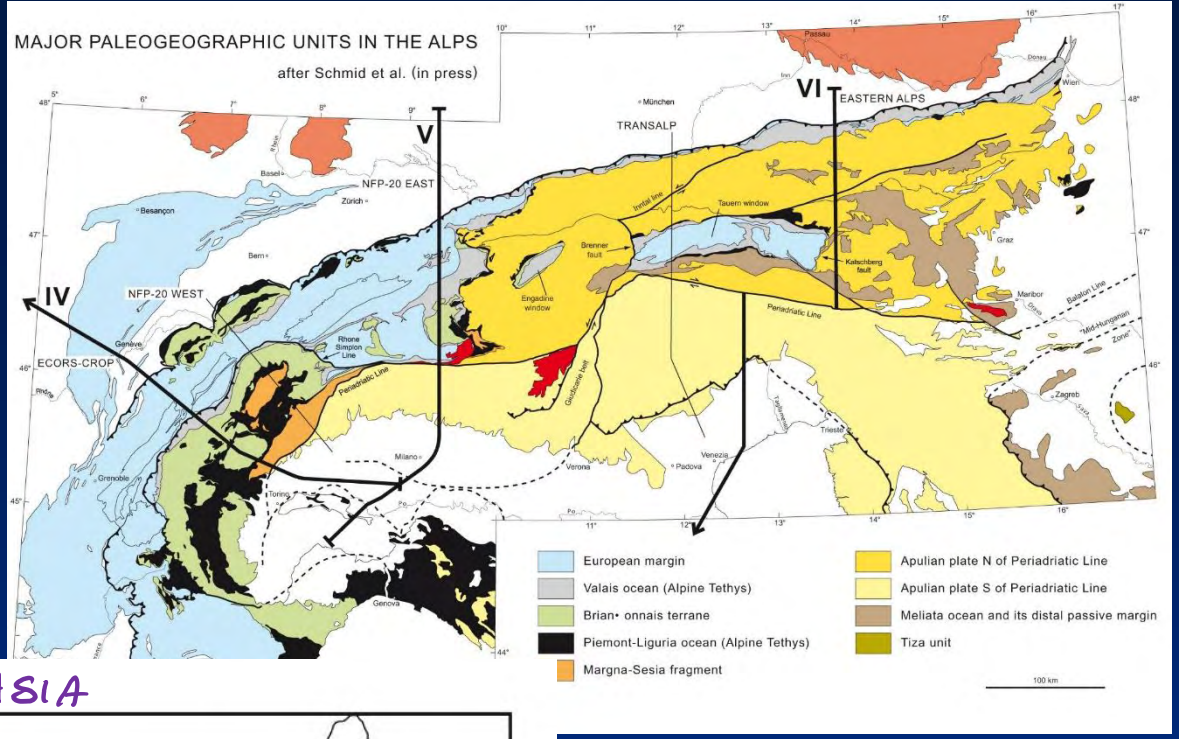
TRANSALP Ⓓ

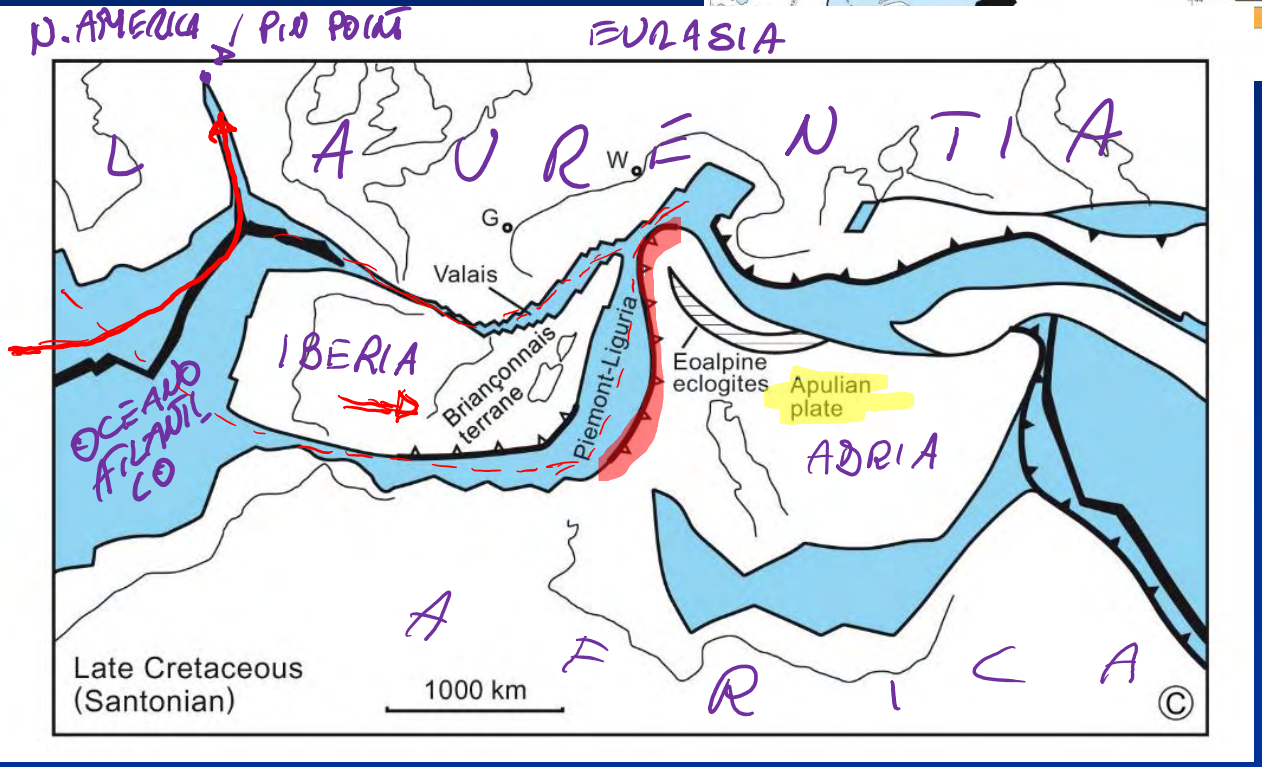


EASTERN ALPS Ⓔ



Da Schmid et al 2004

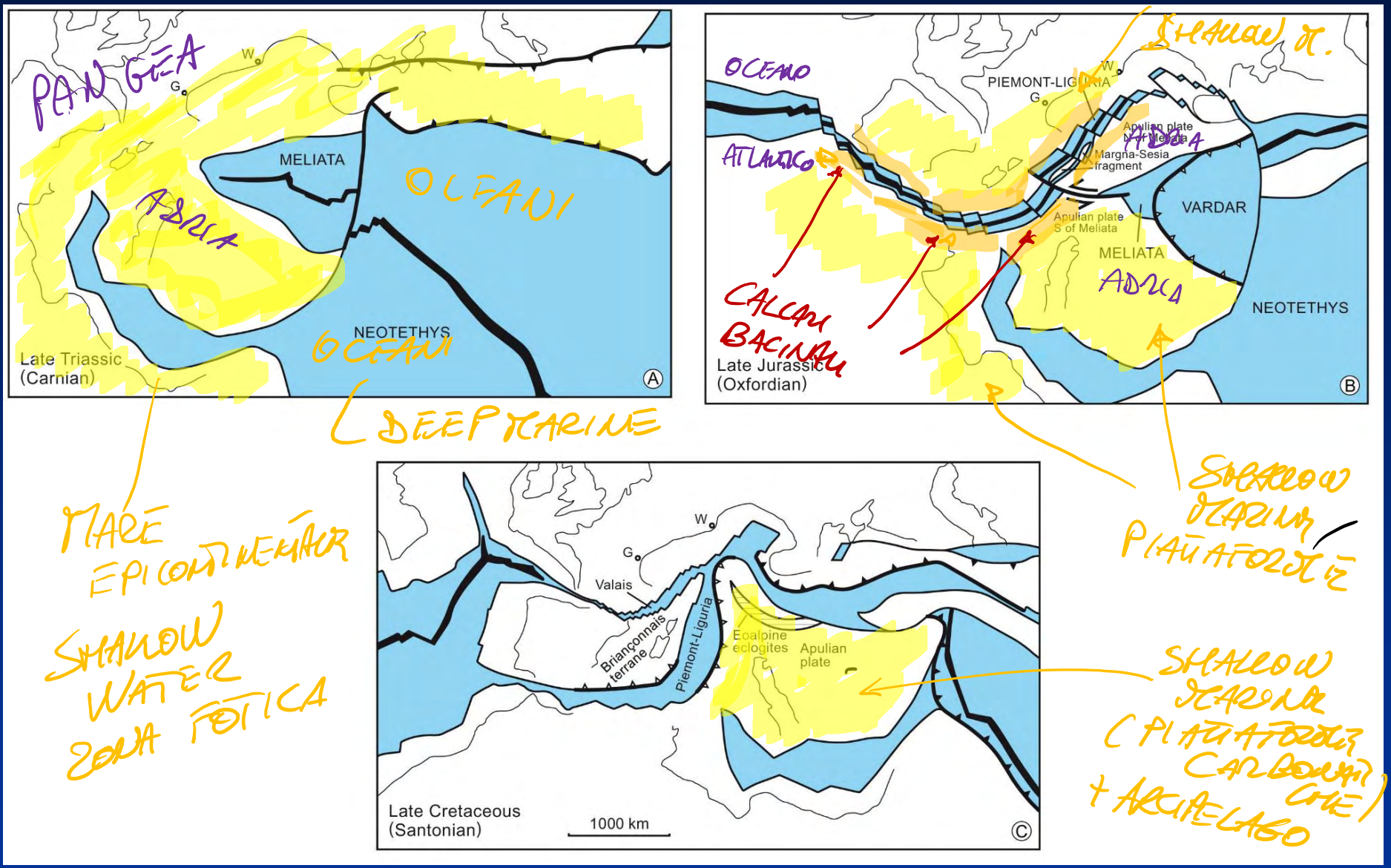




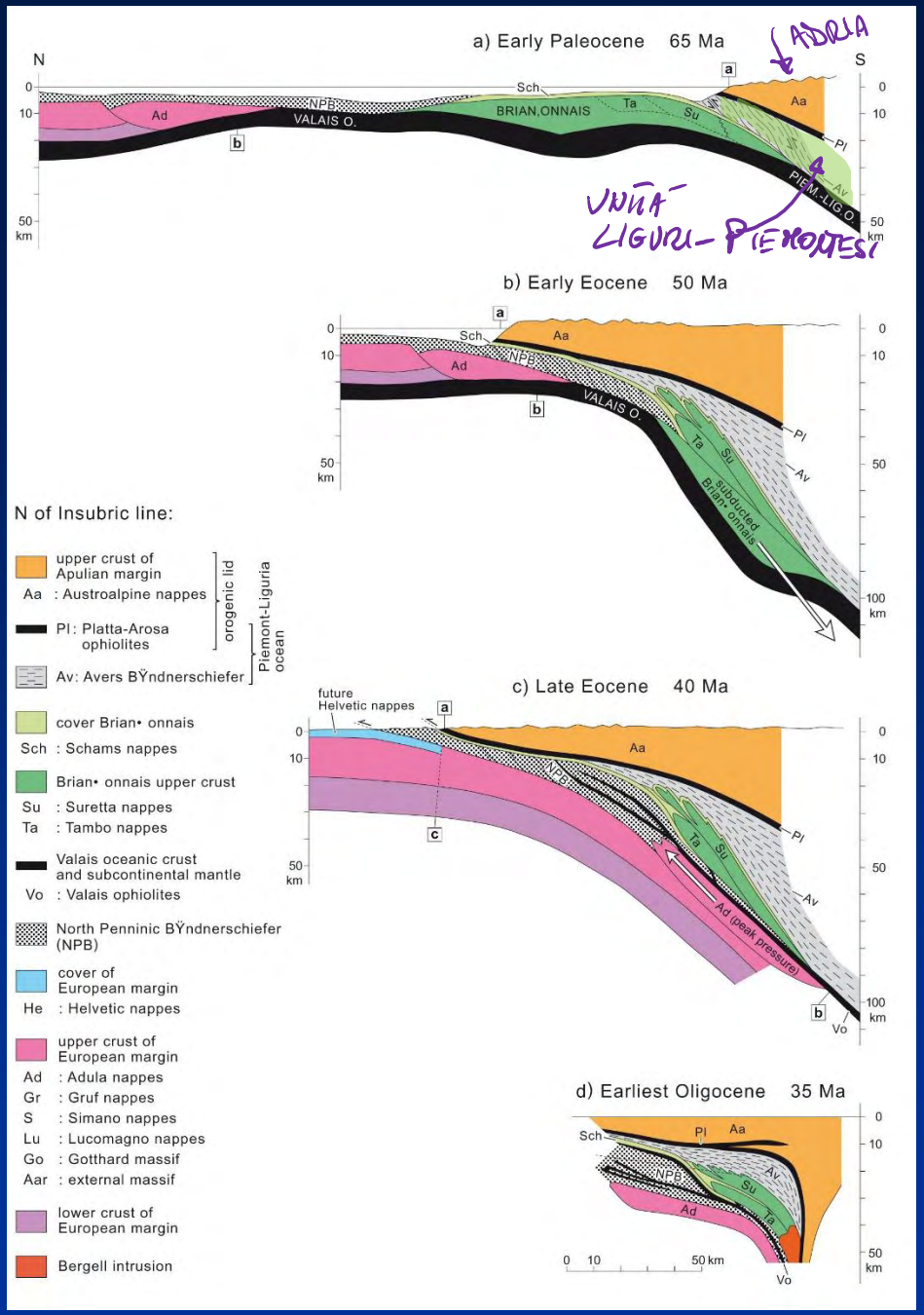
RICOSTRUZIONE PALEO-GEOGRAFICA

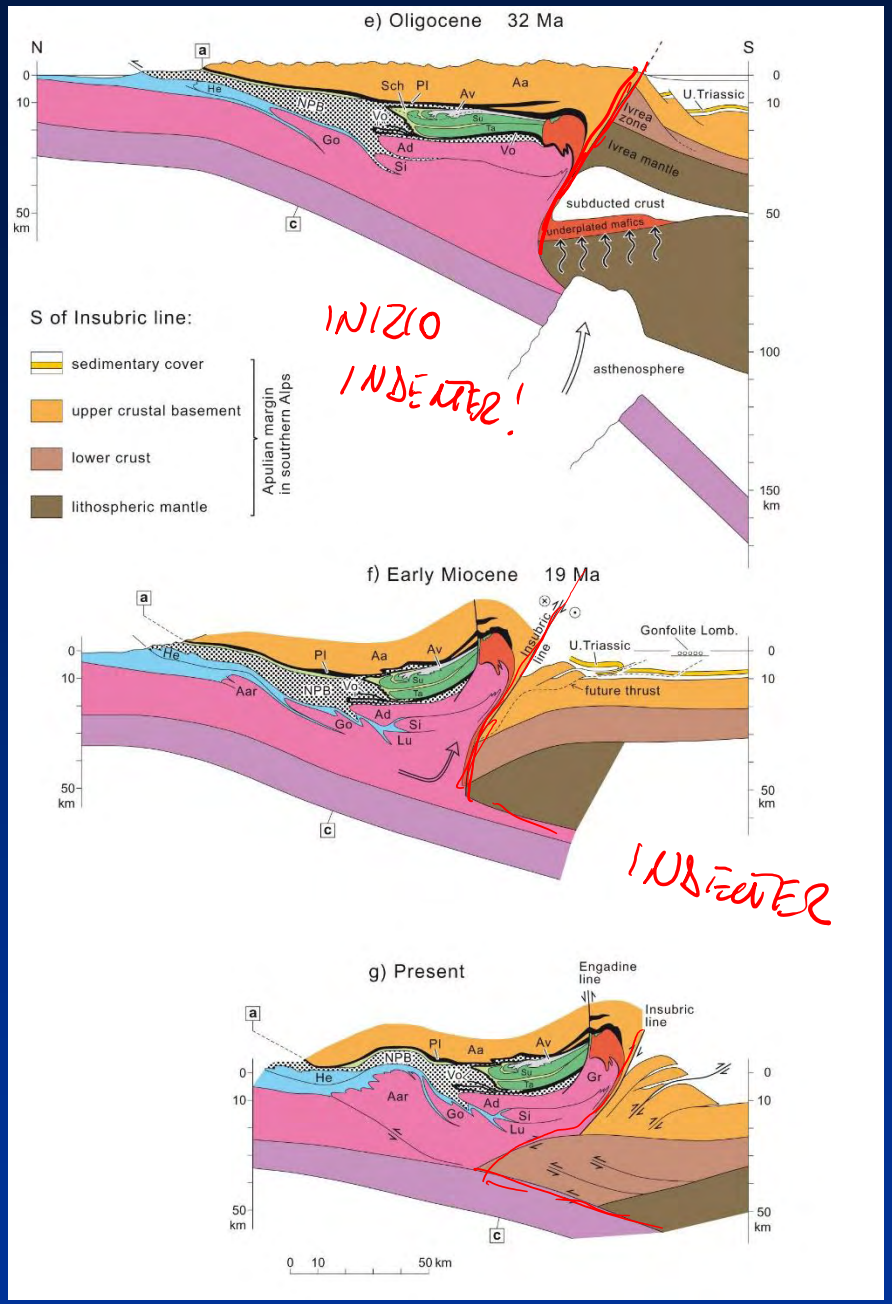
← 86-83 Ma

Da Schmid et al 2004

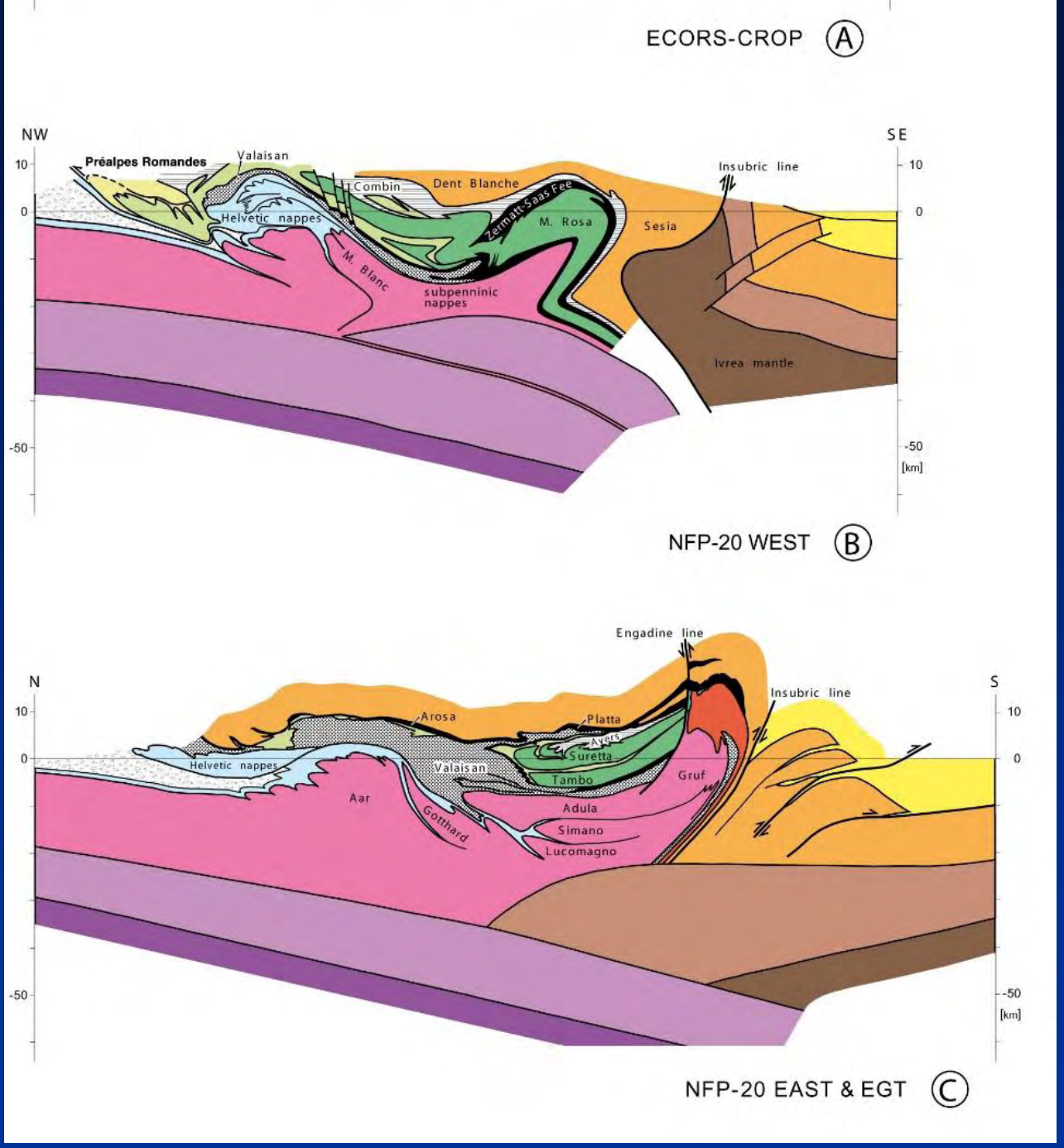


Da Schmid et al 2004



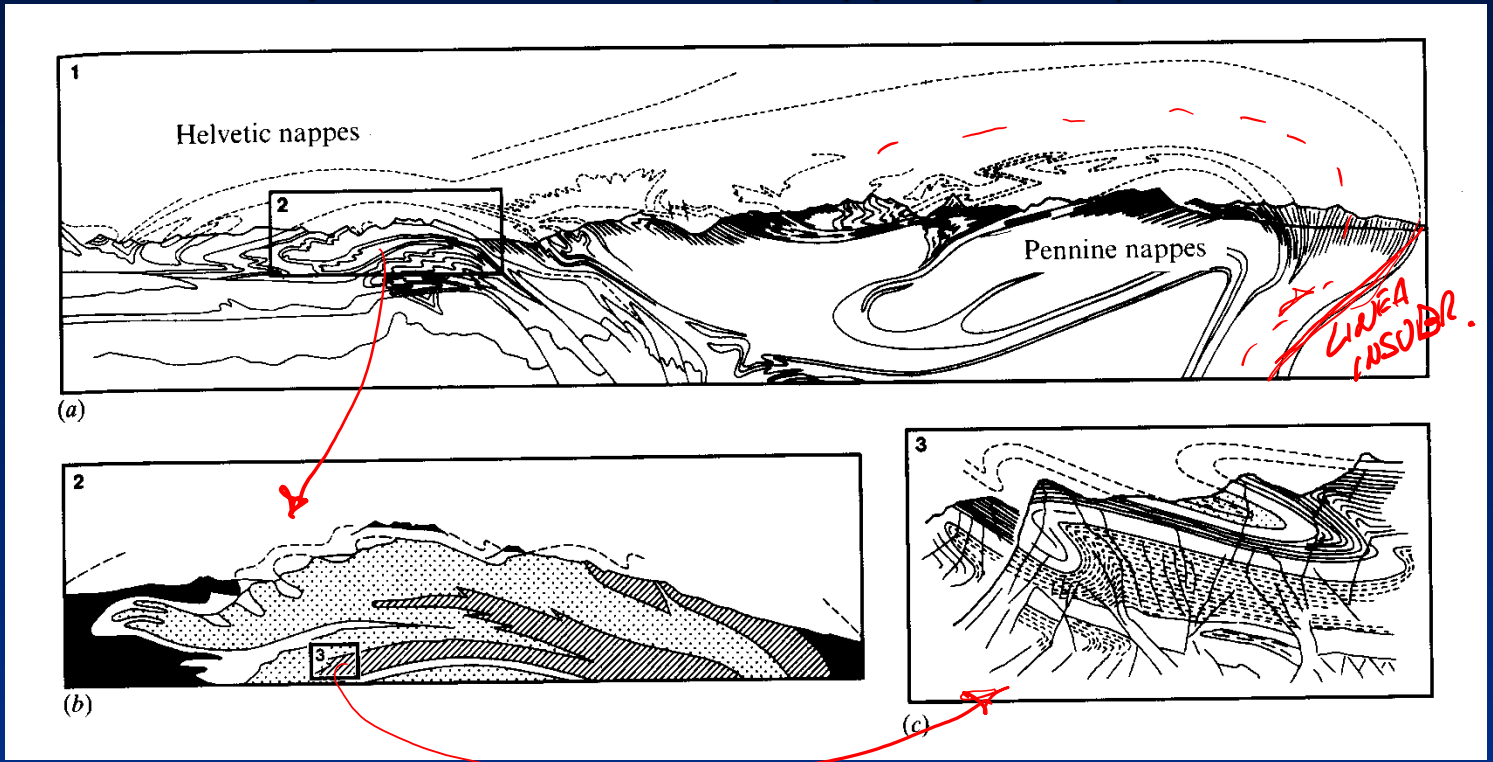


Da Schmid et al 2004

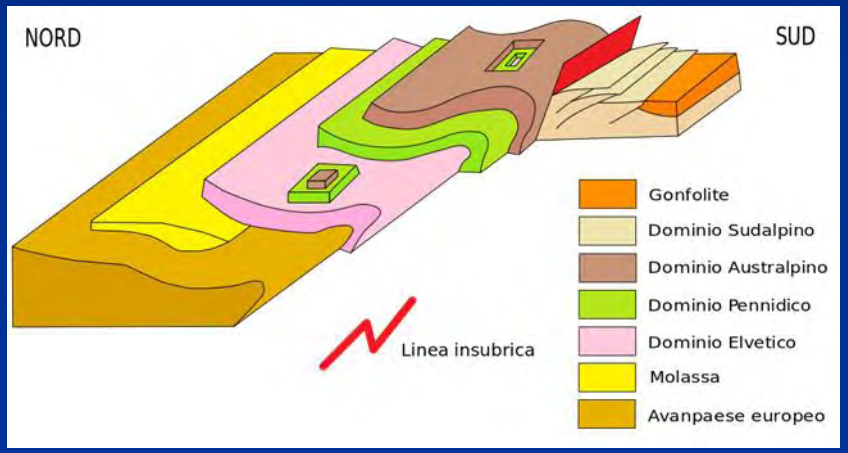


Da Schmid et al 2004

Le Alpi: sistema di falde (nappe system)



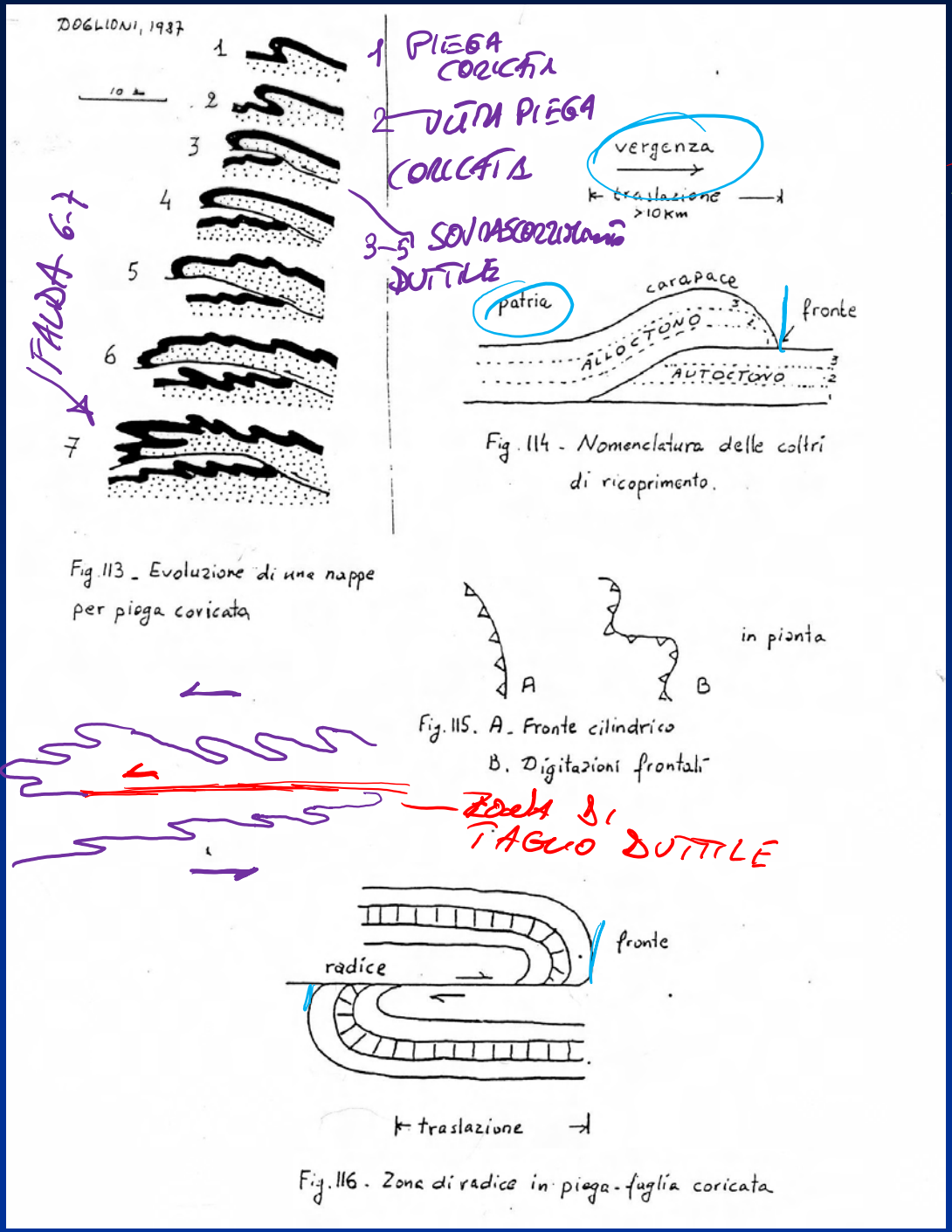
Da Price and Cosgrove, 1990



https://it.m.wikipedia.org/wiki/Geologia_delle_Alpi


Da Ramsay and Huber, 1987

Da Ramsay and Huber, 1987



Da Doglioni, 1987

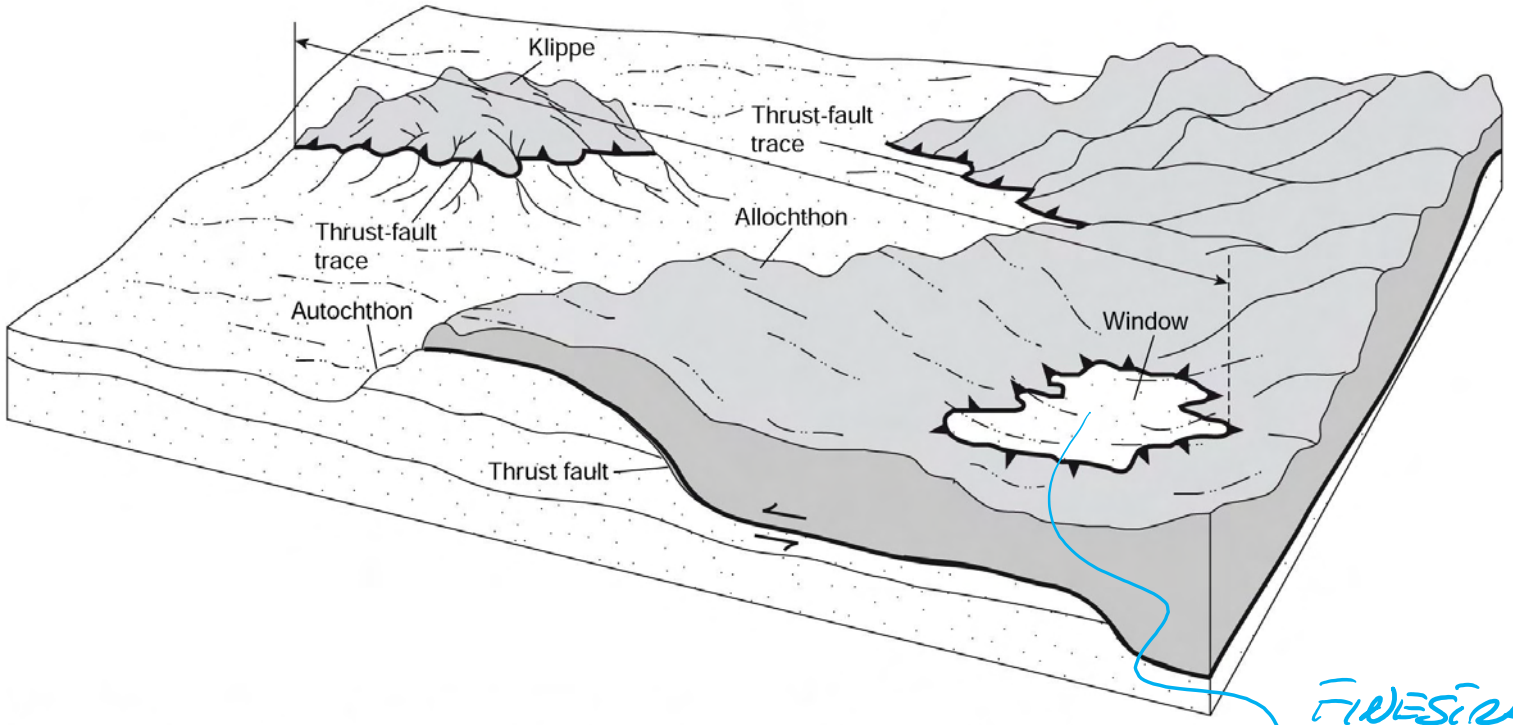
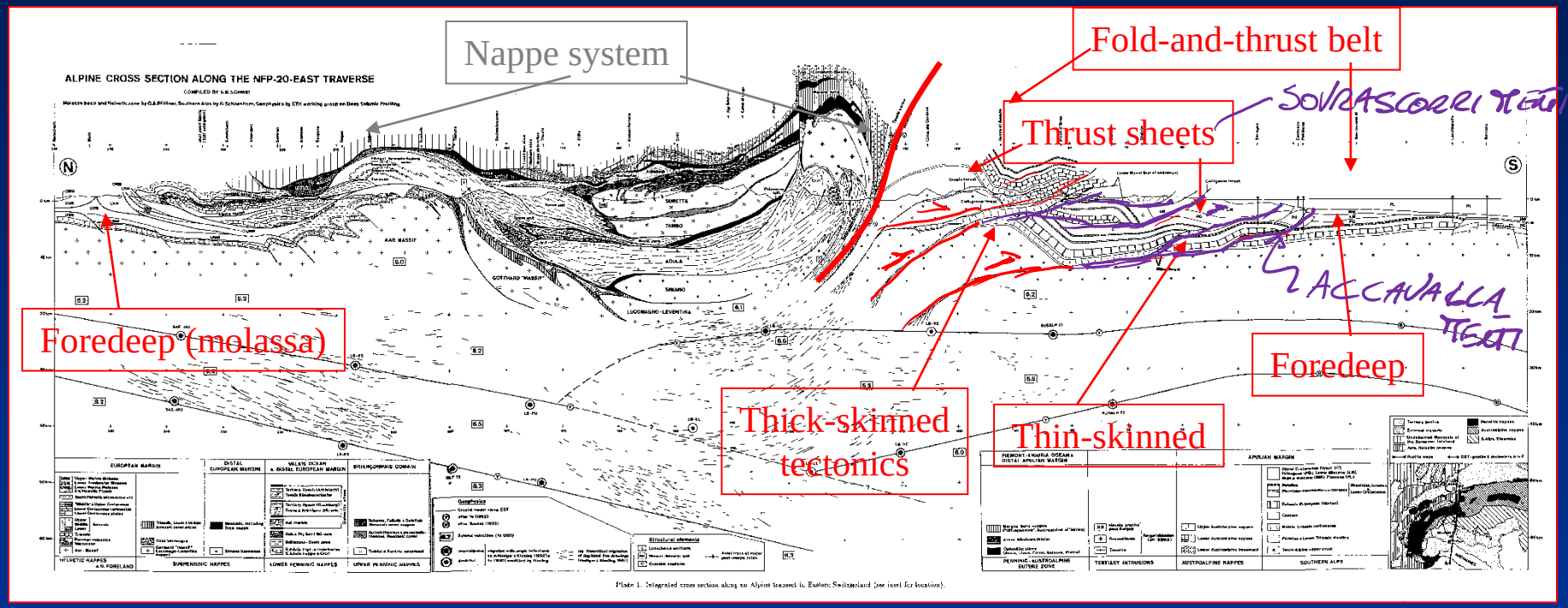


FIGURE 8.8 Block diagram illustrating klippe, window (or fenster), allochthon (gray), and autochthon (stippled) in a thrust-faulted region. Note that the minimum fault displacement is defined by the farthest distance between thrust outcrops in klippe and window.

Da van der Pluim & Marshak

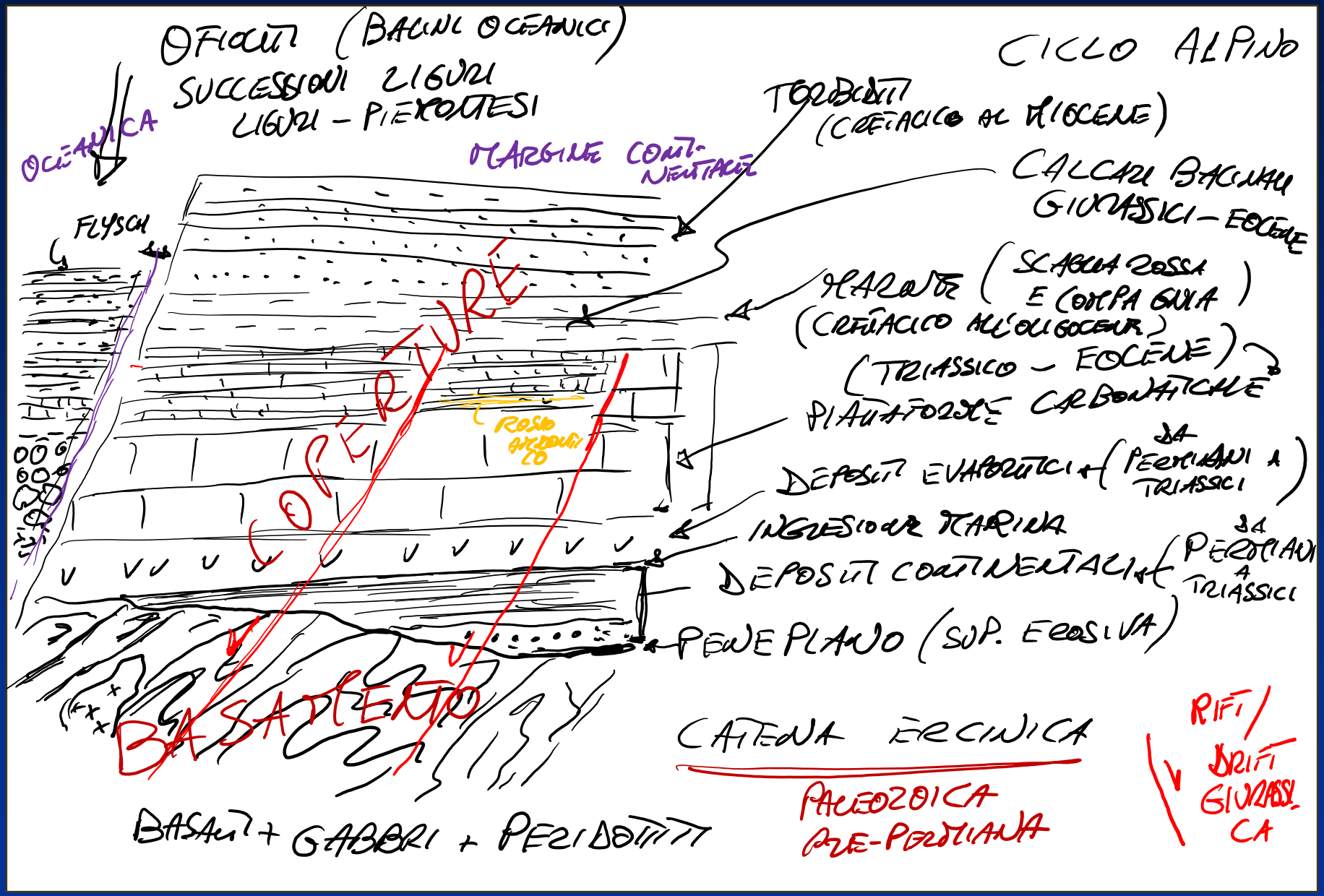
le Alpi: avanfosse e *foreland fold and thrust belt* meridionale (Alpi Meridionali)

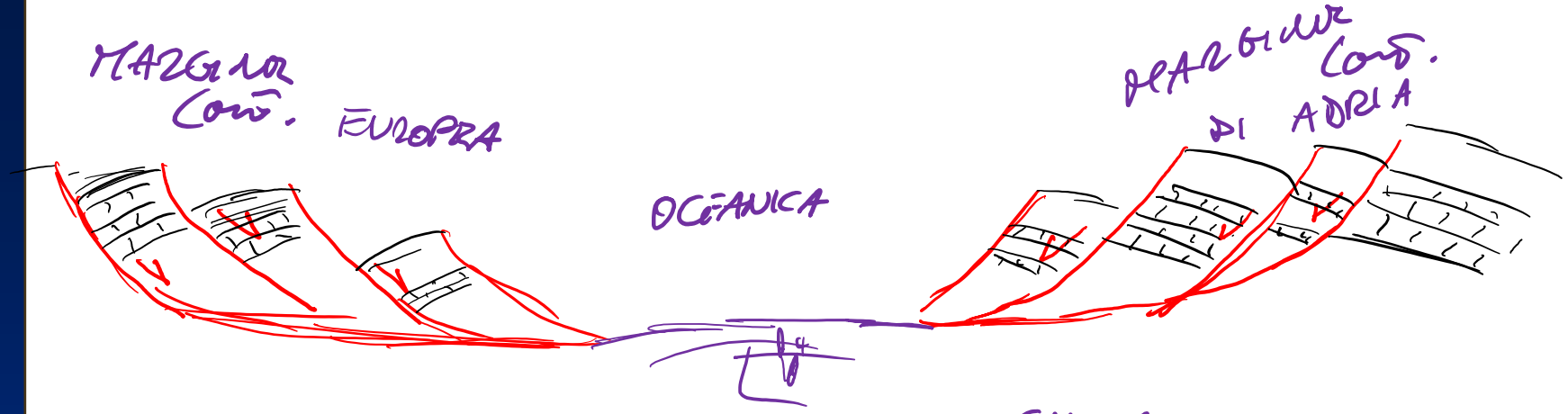


Da Schmid et al., 1996

Thick-skinned e thin-skinned tectonics, sistemi di falde = dicotomia tra basamenti e coperture

Basamento e copertura





CROSTA OCEANICA → OFIOLITI (UNITÀ LIGURI INAPPENNINO + O. LIGURI PIEMONTESI E VALLESI NELLE ALPI)

DOPO LE FASI TETTONICHE ALPINE

MESO-TARDO GIURASSICA

Accavallamenti e sovrascorrimenti: Taiwan

Sovrascorrimenti
Thrust sheets

Accavallamenti
Thrusts (fault)

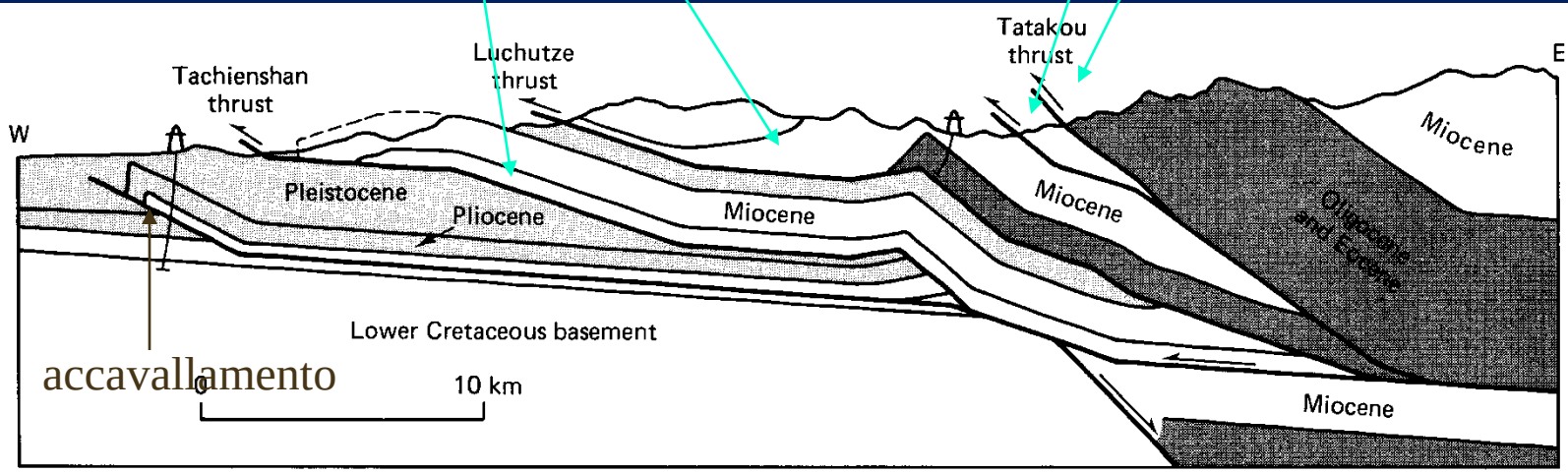
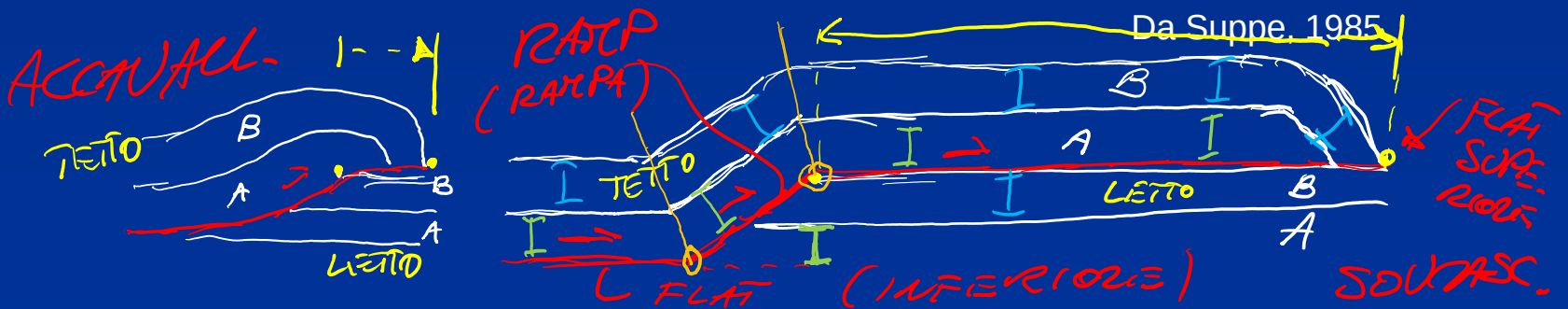
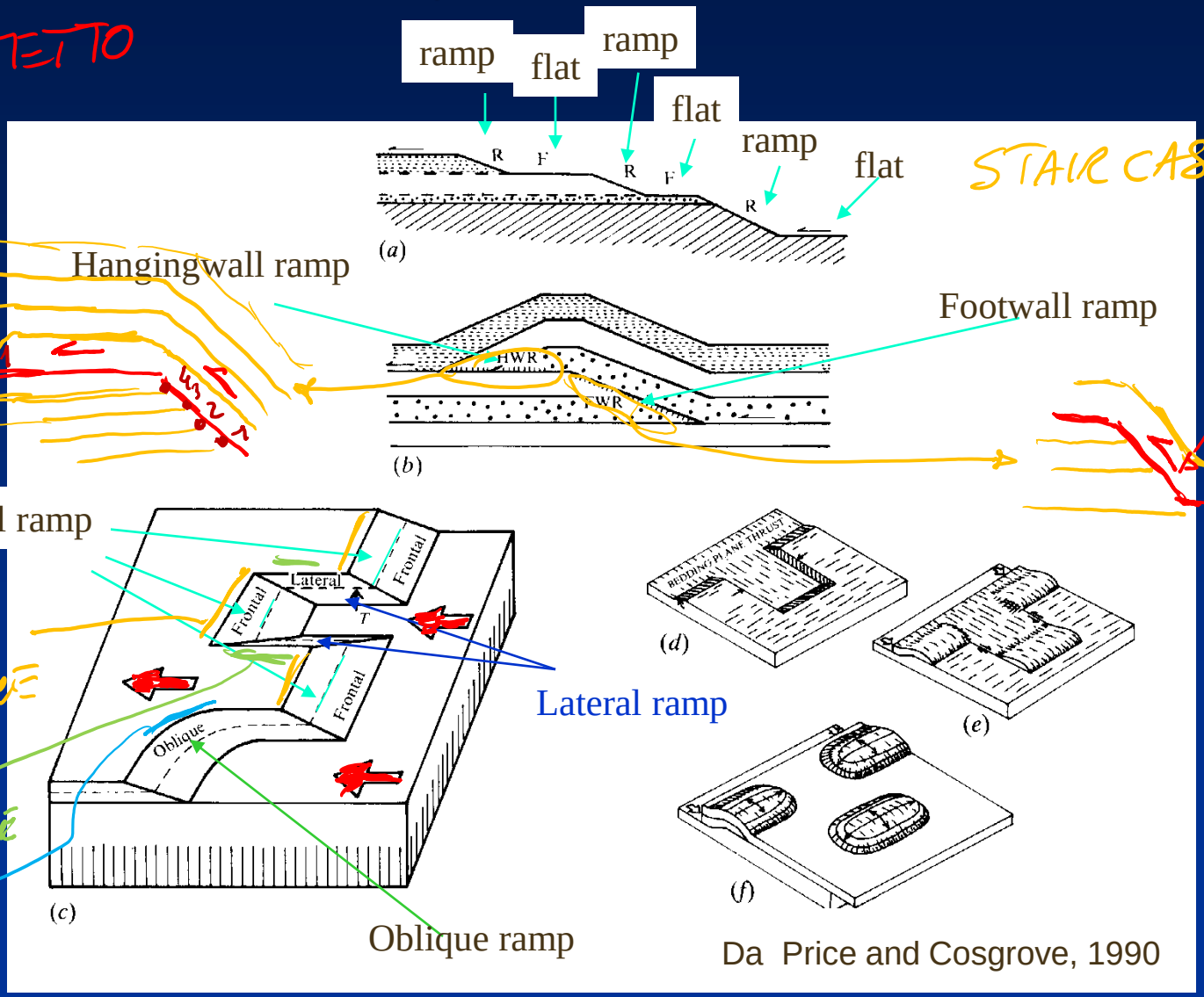


FIGURE 8–25 Cross section of active fold-and-thrust belt of western Taiwan, showing the influence of a preexisting normal fault on the locations of ramps.

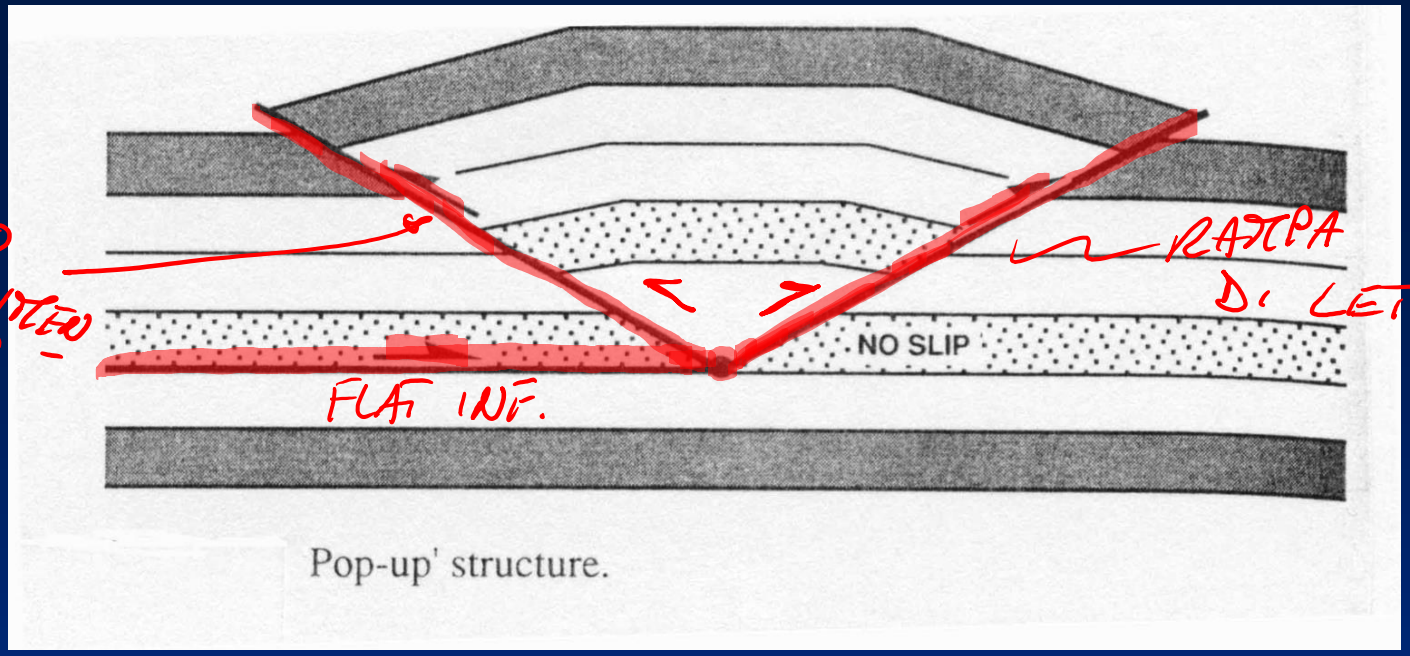
Da Suppe, 1985



Accavallamenti, sovrascorrimenti: nomenclatura

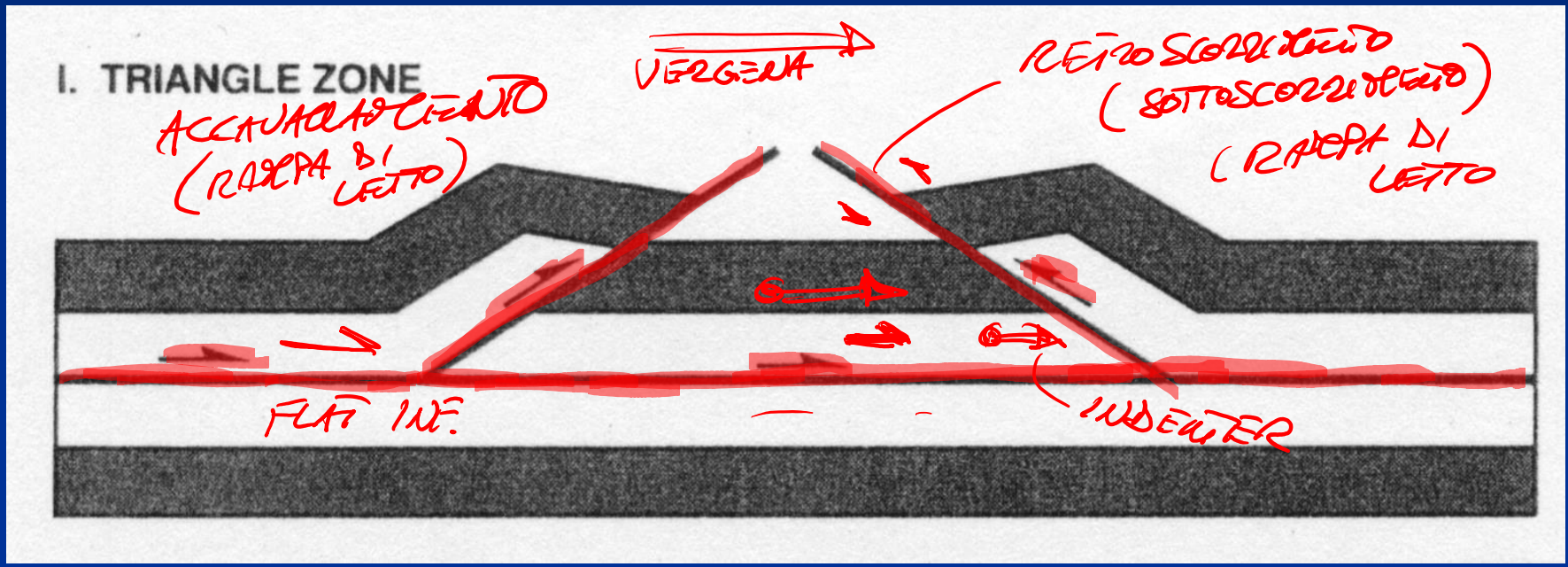


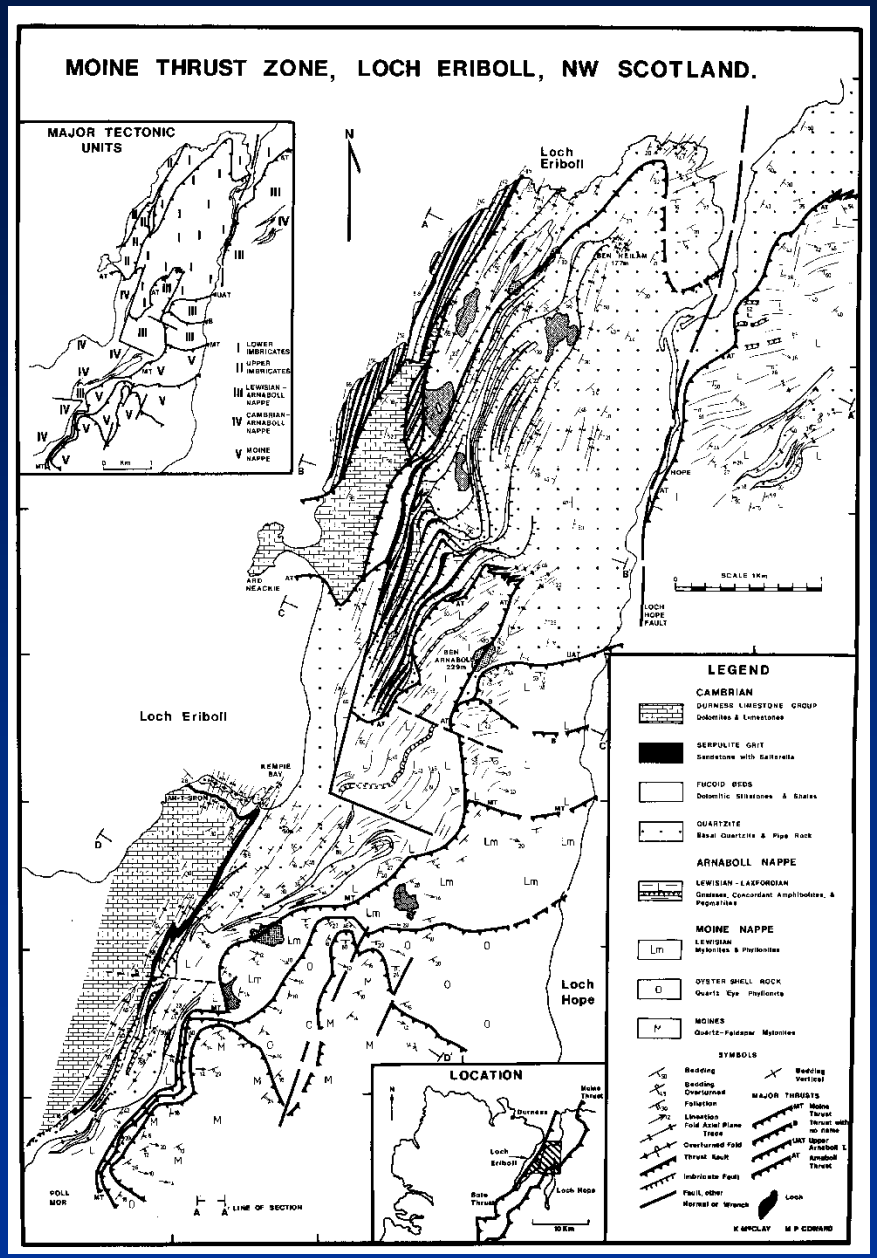
Da Price and Cosgrove, 1990



Pop-up' structure.

Da Suppe, 1985



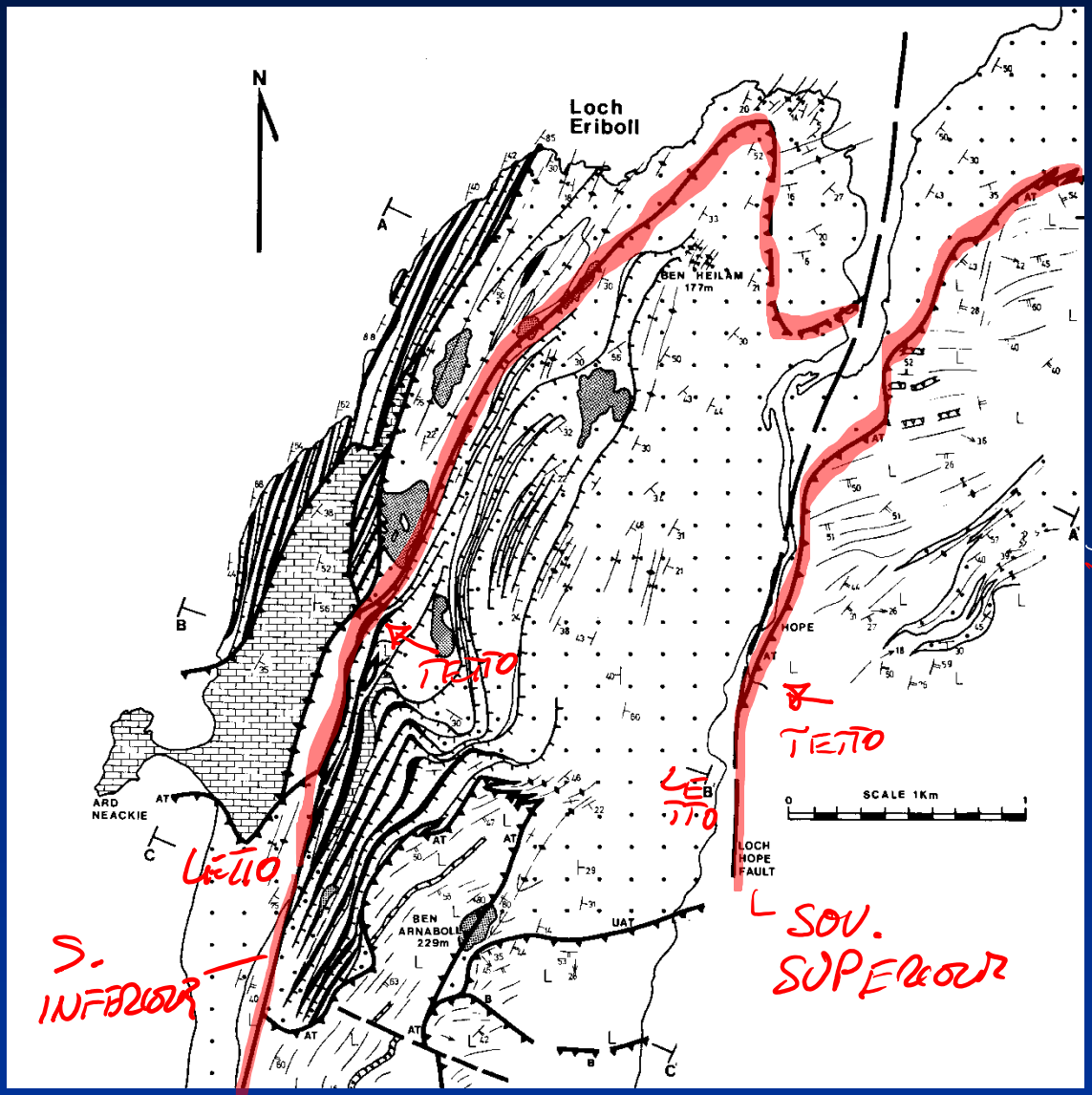


SOVRASCORRIMENTI E DUPLEX

Thrust sheets e
Sistemi di duplex
Moine thrust, Scozia

Da McClay & Coward, 1981

Sistemi di duplex, Moine thrust



Da McClay & Coward, 1981

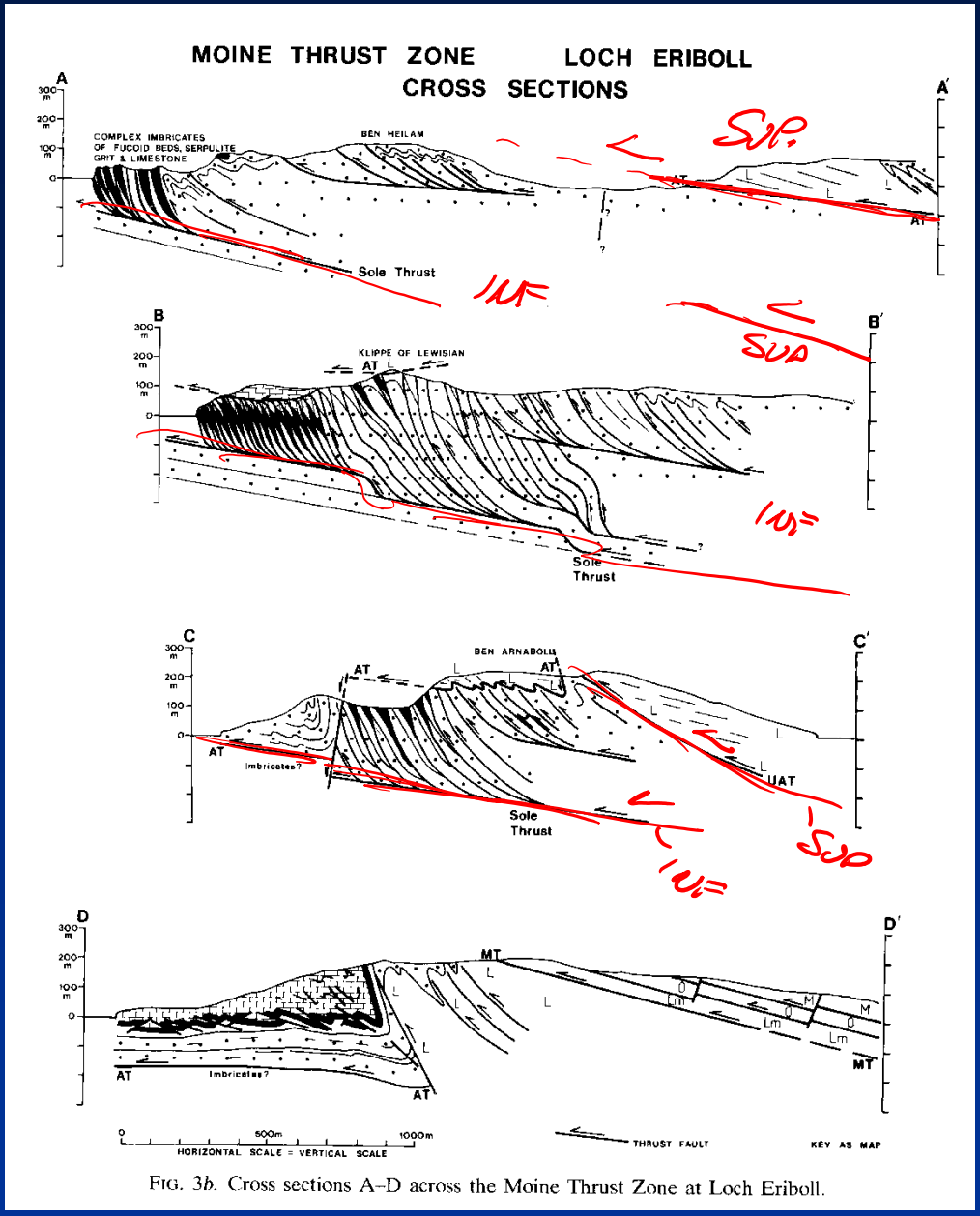
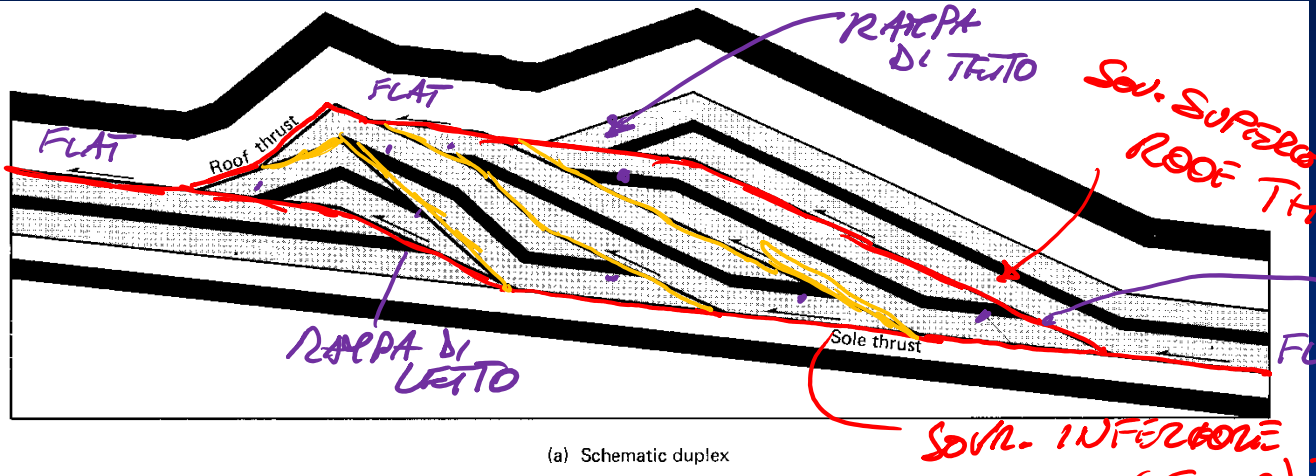


FIG. 3*b*. Cross sections A–D across the Moine Thrust Zone at Loch Eriboll.

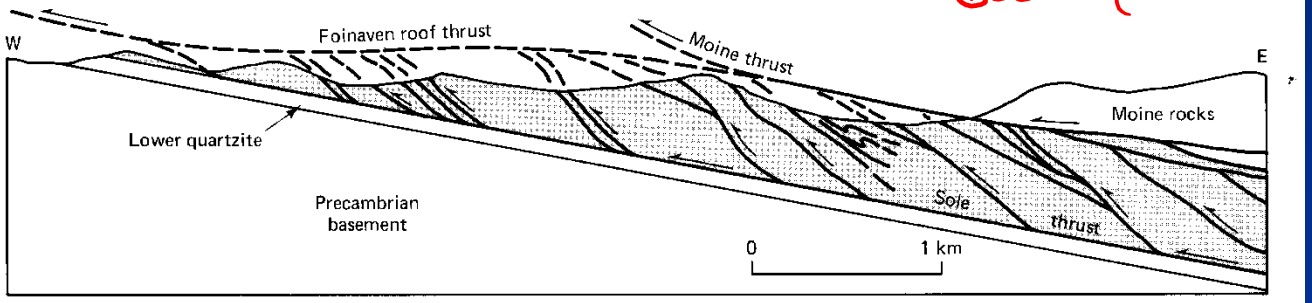
Sistemi di duplex, Moine thrust

Da McClay & Coward, 1981

Geometria dei duplex, Moine thrust



(a) Schematic duplex



(b) *Eroded duplex, Scotland*

FIGURE 8–27 (a) Schematic drawing of a duplex structure. (b) Example of a duplex structure of the Moine thrust system, Scotland. (Cross section simplified after Elliott and Johnson, Trans. Roy. Soc. Edin., **71**, 69–96, 1980.)

Da Suppe, 1985

Sistemi di duplex: evoluzione

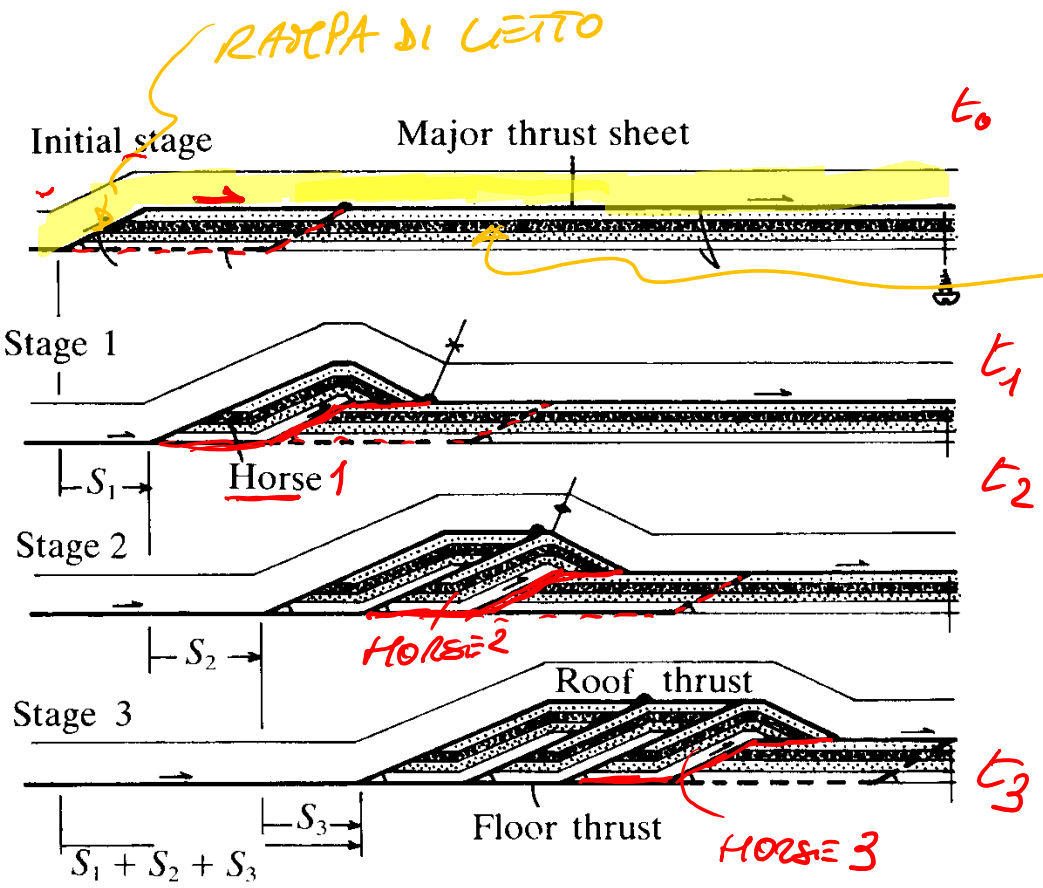
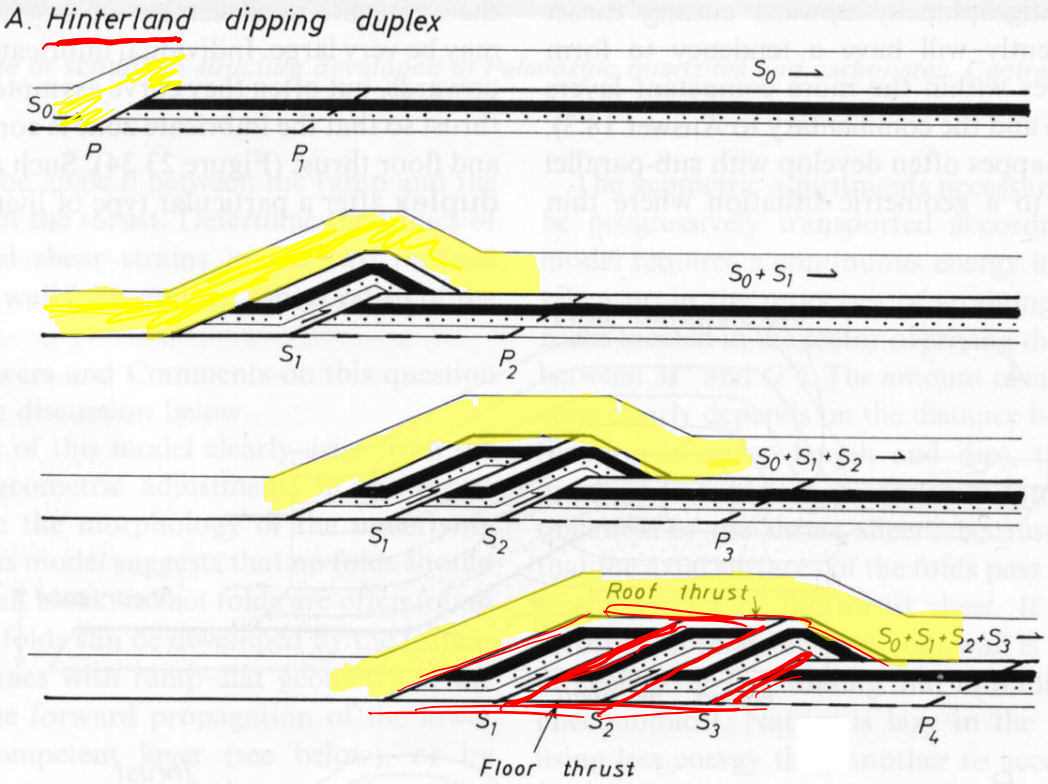
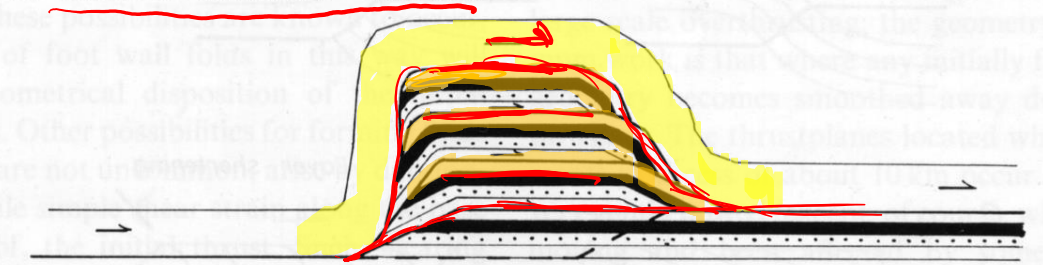
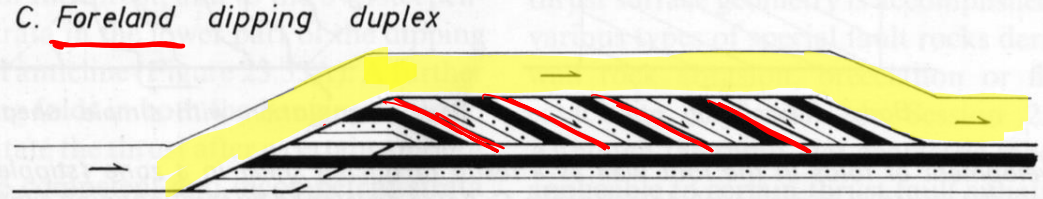


Fig. 7.6. The formation of a duplex by the progressive collapse of a footwall ramp. The roof thrust sheet undergoes a sequence of folding and unfolding. (After Boyer & Elliot, 1982.)

Da Price and Cosgrove, 1990







HORSE = SINGOLO ACCAVALLAM.

DUPLEX = STRUTTURA (NEL SUO INTEGL

RETRO PAESE

AVANPAESE

HINTERLAND

FORELAND

VERGENZA

Da Ramsay and Huber, 1987