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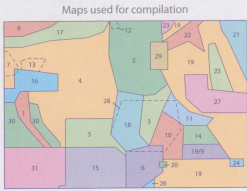
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Scale 1:100 000
1000 m 0 1 2 3 4 5 6 7 8 9
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THE CENTRAL LEPONTINE ALPS

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Adria

Sesia Zone

- 1 Polycyclic gneisses of various compositions, amphibolites and ultramafic rock

Canavese Zone

- 2 Gneisses of various compositions and layers of calcareous schist, mainly mylonitic

Tonale Series

- 3 Metagabbro, mafic and granitic gneisses

Val Colla Zone

- 4 Mainly dolomites with subordinate calcareous sediment
- 5 Polycyclic gneisses of various compositions and amphibolites

Strona-Ceneri Zone

- 6 Polycyclic gneisses of various compositions and amphibolites

Ivrea Zone

- 7 Polycyclic high-grade gneiss: «Kraigle» Pelonaic
- 8 Metagabbro and metadiorite, Mafic Complex Pelonaic

Piemont-Liguria

Avers Nappe

- 9 Calcareous micashist, Jurassic-Cretaceous

Zone of Zermatt-Saas Fee

- 10 Metagabbro, ultramafic rock and gneiss

Briançonnais

Schams Nappes

- 11 Low-grade metamorphic calcareous and siliceous sediment, dolomite, evaporite, breccia and flysch from Late Cretaceous

Arenua-Bruschghorn Zone

- 12 Low-grade metamorphic siliceous and calcareous sediment, dolomite, evaporite (Carboniferous-Rotax) interlayered with gneiss

Khoren Mélange

- 13 Calcareous micashist, quartzite, gneiss, marble and gneiss

Suretta Nappe

- 14 Metacarbonate
- 15 Quartzite
- 16 Metapsammite to metaporphritic gneiss Pelonaic
- 17 Permian granitoid (17a) Rufa Porphyry (268 Ma, Marquer et al. 1998)
- 18 Polycyclic gneisses of various compositions and amphibolites

Tambo Nappe

- 19 Quartzite and metacarbonate
- 20 Metapsammite to metaporphritic gneiss Pelonaic
- 21 Post-Triassic granitoid (21a) Tuzen Granite (268 Ma, Marquer et al. 1998)
- 22 Polycyclic gneisses of various compositions and amphibolites

Monte Rosa Nappe

- 23 Two-mica perthitic, granitic gneiss: Monte Rosa Gneiss (250 Ma, Frey et al. 1976)

Maggia Nappe

- 24 Monoclinic biotite gneiss with biotite nests: Cocca Gneiss (275 Ma, Rippel et al. 1980), Leucocratic granitic gneiss: Ramella Gneiss (240-250 Ma, Rippel et al. 1980)
- 25 Polycyclic gneisses of various compositions and amphibolites

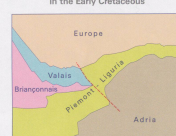
Portofino Unit

- 26 Strongly deformed granitic and metasedimentary gneiss: «Pietra Zupa»
- 27 Banded gneiss

Vigorno Unit

- 28 Polycyclic gneisses of various compositions and amphibolites
- 29 Gneiss Unit, Two-mica granitic gneiss: Vigorno Gneiss

Sketch of the paleogeographic situation in the Early Cretaceous



Valais

Chiavenna Ophiolite Zone

- 30 Marble
- 31 Metabasalt Jurassic-Cretaceous
- 32 Metagabbro Jurassic-Cretaceous
- 33 Metapelite

Tomil Nappe

- 34 Calcareous micashist, metapelite and metabasite Cretaceous

Grave Nappe

- 35 Calcareous micashist, metapelite and metabasite (35a) Ron, Moire and Lavertine units, «Sotto Schaffar» Cretaceous

Grave-Tomil Mélange

- 36 Breccia, quartzite, marble and metabasite: «Gedribug» Jurassic

Aul Nappe

- 37 Metasediment, metabasalt (follow low) and serpentinite, Triassic-Jurassic

Paleogene Tectonic Accretion Channel

Paleogeographically heterogeneous fragments accreted at depth along subduction boundary

Upper Vals Mélange

- 38 Mainly calcareous micashist and gneiss (probably Jurassic) interlayered with rare dolomitic marble (Rissax) and gneiss

Lower Vals Mélange

- 39 Dolomitic marble, subordinate calcareous micashist and gneiss (Rissax-Jurassic) interlayered with gneiss

Southern Steep Belt

Zones of Bellinzona-Davos, Arbedo-Mergogna and Orselina

- 40 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Zone of Samos

- 41 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Cima Lunga Unit

- 42 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Adula Nappe Complex

- 43 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Preselein Unit

- 44 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Saasna Unit

- 45 Various gneisses with lenses and layers of eclogite, amphibolite, marble and ultramafic rock

Zurvela Unit

- 46 Mainly granitic gneiss and banded gneiss (without eclogite boudins)

Gana-Palligera Unit

- 47 Mainly granitic gneiss and banded gneiss (without eclogite boudins)

Green Unit

- 48 Mainly granitic gneiss and banded gneiss (without eclogite boudins)

Chers Unit

- 49 Gneiss with lenses of amphibolite, marble and ultramafic rock

Argin Unit

- 50 Granitic gneiss: «Bastagras»

Bodengo-Graf Unit

- 51 Metasedimentary gneiss

Grave Unit

- 52 Gneiss with lenses of eclogite, marble and ultramafic rock

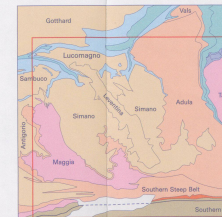
Grave Unit

- 53 Two-mica gneiss: (53a) Soss Gneiss, (53b) Gneiss Gneiss (270-280 Ma, Frey et al. 1976)

Grave Unit

- 54 Metagabbro and gneissic gneiss: (54a) Val Bodengo area, (54b) Graf Complex

Tectonic overview 1:700 000



Europe

Jurassic to Cretaceous metasediments

- 55 Calcareous micashist and quartzite Jurassic-Cretaceous

Leventina Nappe

- 56 Calcareous micashist and quartzite Jurassic-Cretaceous

San Giorgio, Molare and Dargis Units

- 57 Calcareous micashist and quartzite Jurassic

Pla Terri-Lunghina Zone

- 58 Calcareous micashist and quartzite Jurassic

Gottard metasedimentary Unit

- 59 Calcareous micashist and quartzite Jurassic

Triassic metasediments

- 60 Quartzite, meta-epidiorite, dolomitic marble, metapelite, locally metacarbonate

Soja and San Giorgio Units

- 61 Metapsammite to metaporphritic gneiss (59a) Soja Unit, (59b) San Giorgio Unit

Sambuco Unit

- 62 Granitic gneiss: Metello Gneiss
- 63 Granitic gneiss: (63a) Soja Unit, (63b) San Giorgio Unit

Simono Nappe

- 64 Two-mica granitic gneiss: Valtorta Gneiss (200 Ma, Frey et al. 1976)
- 65 Granitic gneiss: (65a) Soja Unit, (65b) San Giorgio Unit

Lucmagne Nappe

- 66 Metapsammite to metaporphritic gneiss Late Paleozoic
- 67 Granitic gneiss

Leventina Nappe

- 68 Metasediment, mainly quartzite
- 69 Two-mica granitic gneiss: Leventina Gneiss (200-225 Ma, Frey et al. 1976)

Antigorio Nappe

- 70 Metasediment: granitic gneiss: Antigorio Gneiss (200-225 Ma, Frey et al. 1976)

Zone of Onsernone

- 71 Metagabbro and granitic gneiss with local basic rock

Gottard Nappe

- 72 Granitic gneiss: (72a) Cristallina Gneiss, (72b) Salva Gneiss (200-225 Ma, Frey et al. 1976)
- 73 Metapsammite to metaporphritic gneiss Middle Paleozoic

Grave Unit

- 74 Two-mica granitic gneiss: «Bastagras» (270 Ma, Frey et al. 1976)
- 75 Polycyclic gneisses of various compositions and amphibolites: «Bastagras» and «Bastagras»

Quaternary

- 0 Undifferentiated alluvial and glacial sediments

Tertiary intrusive rocks

- 8 Two-mica granitic: Nuvola Stock (25 Ma, Frey et al. 2000)
- 9 Biogel Granodiorite (20 Ma, von Blanckenburg 1982)
- 10 Biogel Granite (22-25 Ma, von Blanckenburg 1982, Oberli et al. 2004)

Layers and lenses of tectonically undifferentiated rocks

- 11 Marble
- 12 Ultramafic rock

Amphibolite-rich layers commonly with eclogite veins

- 13 Amphibolite-rich layers commonly with eclogite veins

Amphibolite-rich layers in polycyclic basement

- 14 Amphibolite-rich layers in polycyclic basement

Structural elements

- Limit of tectonic units
- Fault (CL: Central Line, FL: Fentale Line, RL: Riedel Line)