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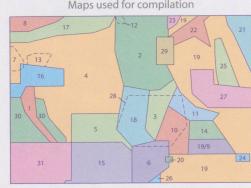
TECTONIC AND PETROGRAPHIC MAP OF THE

1:100 000

TOPOGRAPHY: NATIONAL MAP OF SWITZERLAND 1:100 000

Map sheet 43 Sopra Ceneri

Compiled by:
Alfons Berger and Ivan Mercolli



1: Preiswerk 1918; 2: Jenny et al. 1923; 3: Küntz 1926; 4: Preisswerk et al. 1936;
5: Cescope 1939; 6: Knoblauch et al. 1939; 7: Haster 1948; 8: Steiger 1962; 9: Blaauw
1963; 10: Lüthy 1963; 11: Lüthy 1964; 12: Lüthy 1965; 13: Lüthy 1971; 14: Häny 1972; 15: Bachmann et al. 1974; 16: Keller & Walli 1974; 17: Probst 1980;
18: Codoni 1981; 19: Montanari & Sciesa 1988; 20: Schmidt 1989; 21: Soyeur
1992; 22: Schärer 1993; 23: Schärer 1994; 24: Schärer 1995; 25: Schärer 1996; 26:
Merque et al. 1996; 26: Schärer 1997; 27: Huber 1998; 28: Nagel et al. 2002;
29: Preger et al. 2003; 30: Gruner & Winkl in prep; 31: Pfeifer et al. in prep
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THE CENTRAL LEPONTINE ALPS

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ID 1:100 000

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Adria

Sesia Zone

1 Polyfolytic gneisses of various compositions, amphibolite and ultramafic rock

Canavese Zone

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

Tonale Series

3 Mylonites of metasedimentary, mafic and granitic protoliths

Val Colla Zone

4 Many dolomite with subordinate calcareous sediment

5 Polyfolytic gneisses of various compositions and amphibolite

Strona-Ceneri Zone

6 Polyfolytic gneisses of various compositions and amphibolite

Ivrea Zone

7 Polyfolytic high-grade gneiss: «Königliche»

Paleozoic

8 Polyfolytic gneiss and metasedrite: Mafic Complex

Paleozoic

Piemont-Liguria

Avers Nappe

9 Calcareous micaschist

Janus-Chesteus

Zone of Zermatt-Saas Fee

10 Metagabbro, ultramafic rock and peridotite

Trasquera-Jurasic

Briançonnais

Schams Nappes

11 Low-grade metamorphic calcareous and siliciclastic sediment, dolomite, evaporite, breccia and flysch

Leit-Cerino

Areus-Brusighorn Zone

12 Low-grade metamorphic siliciclastic and calcareous sediment, dolomite, evaporite, breccia and flysch interbedded with gneiss

Knorr Mélange

13 Calcareous micaschist, quartzite, gneiss, marble and greenish schist

Suretta Nappe

14 Metacarbonate

15 Quartzite

16 Trachyte

17 Metapsammitic to metapsophitic gneiss

18 Postmetamorphic granite: (17a) Rofna Porphyry

(18a) Rofna Granodiorite

19 Polyfolytic gneisses of various compositions and amphibolite

Tambo Nappe

20 Quartzite and metacarbonate

21 Metapsammitic to metapsophitic gneiss

22 Postmetamorphic granite: (19a) Trame Granite

(19b) Trame Porphyry

23 Two-mica porphyric gneiss: Monte Rosa Granite

(33a) 3300 Ma; Frey et al. 1970

Monte Rosa Nappe

24 Metacarbonate breccia with biotite nests: Cocco Gneiss

(27a) 2700 Ma; Küller et al. 1980; Leucocratic granite gneiss:

25 Cocco Gneiss (24a) 2500 Ma; Küller et al. 1980

26 Polyfolytic gneisses of various compositions and amphibolite

Maggia Unit

27 Strongly deformed granite and metasedimentary gneiss:

28 «Perla-Zug»

29 Banded gneiss

Vagone Unit

30 Polyfolytic gneisses of various compositions and amphibolite:

Geggia Unit. Two-mica granite gneiss: Vagone Gneiss

Scetch of the paleogeographic situation

in the Early Cretaceous

Europe

Valais

Briançonnais

Piemont-Liguria

Adria

Valais

Chiavenna Ophiolite Zone

10

Marble

Metabasalt

Metacarbonate

Metapsammite

Jurassic-Cretaceous

Metaperidote

Jurassic to Cretaceous metasediments

Calcareous micaschist and quartzite

Calcareous metapsammite and quartzite

Lebendau Nappe

Calcareous micaschist, metapselite and metabasite

Calcareous micaschist and quartzite

San Giorgio, Molare and Dangio Units

Calcareous micaschist and quartzite

Calcareous micaschist and quartzite

Piz-Terrunshania Zone

Calcareous micaschist and quartzite

Gotthard metasedimentary Unit

Calcareous micaschist and quartzite

Triassic metasediments

Quartzite, meta-evaporite, dolomitic marble, metapselite, locally metacarbonate

Soja and San Giorgio Units

Metamorphic to metapsophitic gneiss:

(18a) Soja Unit, (18b) San Giorgio Unit

Sambuco Unit

Granitic gneiss: Matronello Gneiss

Polycyclic gneisses of various compositions and amphibolite

Simano Nappe

Two-mica granitic gneiss: Verzasca Gneiss

(20a) 2000 Ma; Küller et al. 1980

Various gneiss: 1–400 Ma; Allgire et al. 1974

Polyfolytic gneisses of various compositions and amphibolite

Lucomago Nappe

Metapsammitic to metapsophitic gneiss

Late Palaeozoic

Granitic gneiss

Polyfolytic gneisses of various compositions and amphibolite

Leventina Nappe

Metasediment, mainly quartzite

Two-mica granitic gneiss: Leventina Gneiss

(20b) 2000–225 Ma; Allgire et al. 1974

Antigorio Nappe

Metapsammitic, granitic, granoblastic, gneiss: Antigorio Gneiss

(20c) 2000–225 Ma; Allgire et al. 1974

Zone of Osserne

Migmatitic and granitic gneiss with local basic rock

Gotthard Nappe

Granitic gneiss: (22a) Cristallina Gneiss, (22b) Selvaccia Gneiss (22c) 2200 Ma; Grünenfelder 1983

Metasediment: «Immermann»

(23) 2000–225 Ma; Allgire et al. 1974

Two-mica granitic gneiss: «Zwellengasse»

(24) 2000–225 Ma; Allgire et al. 1974

Polyfolytic gneisses of various compositions and amphibolite: «Protoseis» and «Sonsciense»

Quaternary

Undifferentiated alluvial and glacial sediments

Tertiary intrusive rocks

Two-mica granite: Novale Stock

(25) 225 Ma; Lüthi et al. 2000

Bergl Granodiorite

(26) 225 Ma; Lüthi et al. 2000

Bergl Tonstein

(22–25 Ma; von Boneli 1992; Oberli et al. 2004)

Layers and lenses of tectonically undifferentiated rocks

Marble

Ultramafic rock

Amphibole-rich layers commonly with eclogitic reliefs

Amphibole-rich layers in polytypic basement

Structural elements

Limit of tectonic units

Fault (CL: Centovalli Line; FL: Forcola Line, IL: Illeudine Line)

Tectonic overview: 1:700 000

Europe

Valais

Briançonnais

Piemont-Liguria

Adria

Bransciano sedimentary cover

Bransciano basement

European sedimentary cover

European basement

Tertiary intrusive rocks