

Fossils: Fusulinids, smaller foraminifers, phylloid algae and dasycladacean algae (*Anthracoportella*), crinoids, corals, brachiopods, bivalves.

Origin, facies: Shallow marine deposits in a moderately energetic environment.

Chronostratigraphic age: Asselian to lower Artinskian.

Biostratigraphy: -

Thickness: According to HERITSCH et al. (1934) the total thickness in the reference section is 285 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Auernig Group.

Overlying unit(s): Trogkofel Limestone.

Lateral unit(s): -

Geographic distribution: Carnic Alps, mainly west of Naßfeld crossing the Austrian/Italian border and in particular in the Karavanke Mountains.

Remarks: -

Complementary references: SCHÖNLAUB & FORKE (2007).

Klastische Trogkofel-Formation / Clastic Trogkofel Formation

HANS P. SCHÖNLAUB

Validity: Invalid; first mention ("clastic facies development of Trogkofel beds") by RAMOVŠ (1963: p. 382).

Type area: Karavanke Mountains, northern Slovenia.

Type section: A type section for the "Clastic Trogkofel beds" has never been denominated.

Reference section(s): -

Remarks: The following sections form the Karavanke Mts. have been described as "Clastic Trogkofel beds" in the literature:

- southern slope of Košuta range along the river Košutnik (KOCHANSKY-DEVIDÉ et al., 1973): this section belongs to the Schulterkofel Formation (late Gzhelian) (FORKE, 2002).
- clastic-carbonate deposits above the Dovžanova soteska limestone (BUSER, 1974): this section belongs to the recently established Born Formation (middle-late Asselian) (FORKE, 2002).

The term "Clastic Trogkofel beds" should no longer be maintained, as it represents a mixture of clastic-carbonate sequences ranging from late Gzhelian to Roadian (Wordian?). Sections from the Slovenian part of the Karavanke Mountains, which have been so far reinvestigated, reveal that these sequences belong to various lithologic units (see below), which are older than the Trogkofel Limestone itself. The occurrence of Kungurian (uppermost

Lower Permian) conodonts (RAMOVŠ, 1982) in small limestone lenses of a clastic sequence in the Eastern Karavanke Mts. near Solčava remains enigmatic. The finding could never be confirmed in subsequent investigations (pers. comm. BUSER).

"Clastic Trogkofel beds" mentioned in the explanatory notes of the geological map of the Karavanke Mts. (BAUER et al., 1983) need to be re-evaluated, before they can be implemented in a general lithostratigraphic framework.

Sediments from southern Slovenia (Ortnek, Kočevje) should be treated separately, as they display similarities to the facies development in NW Croatia (Gorski Kotar). The age of these deposits is still under discussion. However, the association of Visean deep-water conodonts, Lower Permian deep-water radiolarians, upper Carboniferous–Lower Permian deep-water fusulinids in various clasts and Roadian ammonoids reveal a complex history of these deposits, which is yet not well understood.

Derivation of name: -

Synonyms: Instead of Klastische Trogkofelschichten also the term "Kosna-Folge" (Košna beds) has been used (E. FLÜGEL, 1975; BUGGISCH et al., 1976) in the lithostratigraphic schemes of the Karavanke Mts.

Lithology: Clastic carbonates.

Fossils: Conodonts, fusulinids, ammonoids.

Origin, facies: Various reworking horizons (see remarks above).

Chronostratigraphic age: Late Gzhelian–Roadian (Wordian?) (see above).

Biostratigraphy: -

Thickness: ? (see remarks above).

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): - (see remarks above).

Overlying unit(s): - (see remarks above).

Lateral unit(s): -

Geographic distribution: Southern slope of Košuta range and Dovžanova soteska.

Remarks: -

Complementary references: -

Gröden-Formation / Gröden Formation (see description in Carnic Alps)

Bellerophon-Formation / Bellerophon Formation (see description in Carnic Alps)

Karbon von Nötsch / Carboniferous of Nötsch

The famous fossiliferous outcrops of the Carboniferous of Nötsch are located in the Gail Valley between Windische Höhe and Mount Dobratsch. The name-bearing village of Nötsch, however, is situated in the Gailtal Crystalline Complex following to the south of the Carboniferous deposits.

Since the beginning of the 19th century the Carboniferous of Nötsch has been famous for its abundance of fos-

sils and thus has attracted many geologists and paleontologists. The east-west directed exposures extend as a narrow fault-bounded wedge over a distance of 8 km, the maximum width of which is 2 km in the east. Further to the west the Carboniferous rocks are squeezed out between the above-mentioned rocks and are also covered by Quaternary deposits, respectively.

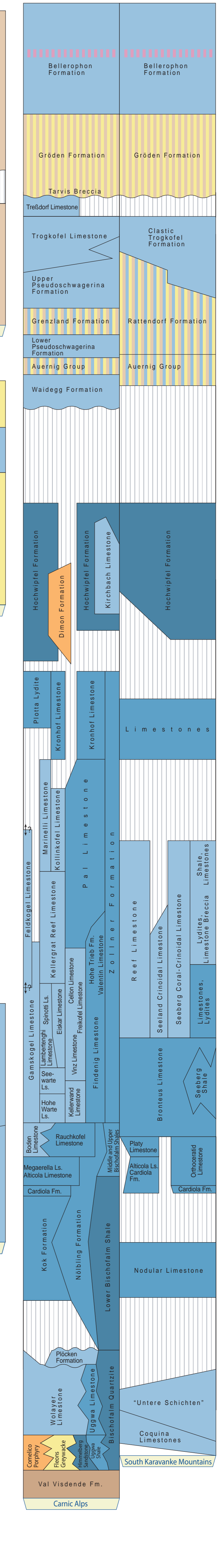
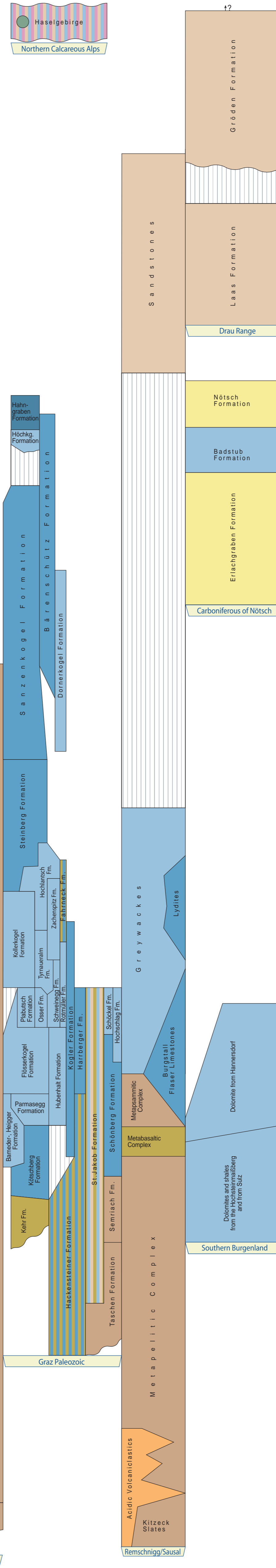
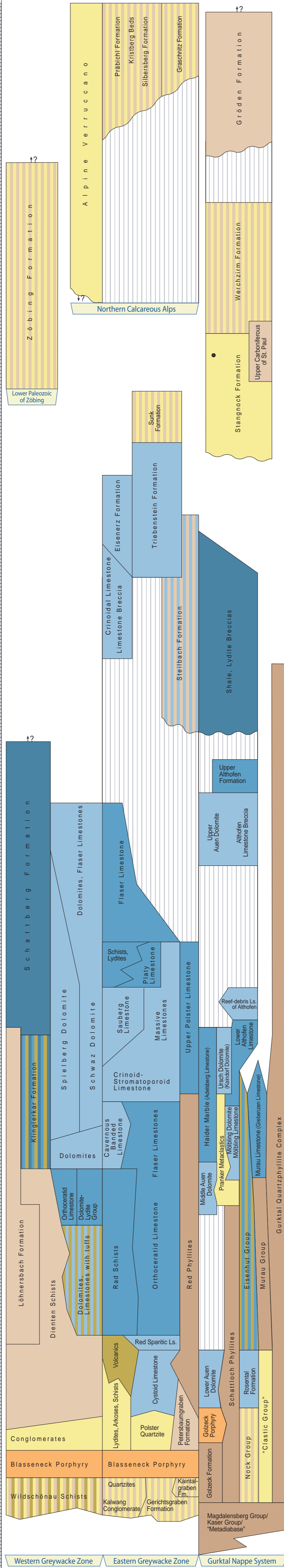
Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission



| ERA | SYSTEM / PERIOD / SERIES / EPOCH | STAGE / AGE | DURATION Ma | Global Classification | | | | | |
|--------------|----------------------------------|-----------------------------|----------------------------|-----------------------|---------------------------------------|------------|---------------------------|---------|---------------------------|
| | | | | ERATHM / ERA | SYSTEM / PERIOD / SERIES / EPOCH | | | | |
| PALEOZOIC | PERMIAN | CHANGHSINGIAN / Dorashanian | 251 | PERMIAN | MID PERMIAN / GUADALUPIAN / LOPINGIAN | | | | |
| | | WUCHIAPINGIAN / Dzhulfian | 255 | | | | | | |
| | | CAPITANIAN | 260 | | | | | | |
| | | WORDIAN | 265 | | | | | | |
| | | ROADIAN | 270 | | | | | | |
| | | PERMIAN | LOWER PERMIAN / CISURALIAN | | | KUNGURIAN | 275 | | |
| | | | | | | ARTINSKIAN | 280 | | |
| | | | | | | SAKMARIAN | 285 | | |
| | | | | | | ASSELIAN | 290 | | |
| | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | | GZHELIAN | 295 | PERMIAN | UPPER PERMIAN / ZEPHYRIAN |
| KASIMOVIAN | 300 | | | | | | | | |
| MOSKOVIAN | 305 | | | | | | | | |
| BASHKIRIAN | 310 | | | | | | | | |
| PERMIAN | LOWER PERMIAN / CISURALIAN | | | SERPUKHOVIAN | 315 | | | | |
| | | | | VISEAN | 320 | | | | |
| | | | | TOURNAISIAN | 325 | | | | |
| PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | | FAMENNIAN | 330 | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | |
| | | | | FRASNIAN | 335 | | | | |
| | | | | GIVETIAN | 340 | | | | |
| | | EIFELIAN | 345 | | | | | | |
| | | PERMIAN | LOWER PERMIAN / CISURALIAN | EMSIAN | 350 | | | | |
| | | | | LOCHKOVIAN | 355 | | | | |
| | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | LUDFORDIAN / GORSTIAN | 359.2 | | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN |
| | | | | HOMERIAN / SHEINWOOD | 365 | | | | |
| | | | | TELYCHIAN | 370 | | | | |
| | | | | AERONIAN | 375 | | | | |
| RHUDDANIAN | 380 | | | | | | | | |
| PERMIAN | LOWER PERMIAN / CISURALIAN | | | HIRNANTIAN | 385 | | | | |
| | | | | ORDOVICIAN | 390 | | | | |
| PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | | WEN-LUD-LOCK / LOW | 395 | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | |
| | | | | PRAGIAN | 400 | | | | |
| | | | | LOCHKOVIAN | 405 | | | | |
| | | LLANDOVERY | 410 | | | | | | |
| | | AERONIAN | 415 | | | | | | |
| | | PERMIAN | LOWER PERMIAN / CISURALIAN | HIRNANTIAN | 420 | | | | |
| | | | | ORDOVICIAN | 425 | | | | |
| | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | WOLYER | 430 | | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN |
| | | | | UGWA | 435 | | | | |
| | | | | BISCHOLAIM | 440 | | | | |
| VAL VISDENSE | 445 | | | | | | | | |
| PERMIAN | LOWER PERMIAN / CISURALIAN | | | HIRNANTIAN | 450 | | | | |
| | | | | ORDOVICIAN | 455 | | | | |
| PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | | WOLYER | 460 | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | |
| | | | | UGWA | 465 | | | | |
| | | | | BISCHOLAIM | 470 | | | | |
| | | | | VAL VISDENSE | 475 | | | | |
| | | PERMIAN | LOWER PERMIAN / CISURALIAN | HIRNANTIAN | 480 | | | | |
| | | | | ORDOVICIAN | 485 | | | | |
| | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | WOLYER | 490 | | | PERMIAN | UPPER PERMIAN / ZEPHYRIAN |
| | | | | UGWA | 495 | | | | |
| | | | | BISCHOLAIM | 500 | | | | |
| | | | | VAL VISDENSE | 505 | | | | |
| PERMIAN | LOWER PERMIAN / CISURALIAN | | | HIRNANTIAN | 510 | | | | |
| | | | | ORDOVICIAN | 515 | | | | |
| PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | | WOLYER | 520 | PERMIAN | UPPER PERMIAN / ZEPHYRIAN | | |
| | | | | UGWA | 525 | | | | |
| | | | | BISCHOLAIM | 530 | | | | |
| | | | | VAL VISDENSE | 535 | | | | |
| | | PERMIAN | LOWER PERMIAN / CISURALIAN | HIRNANTIAN | 540 | | | | |
| | | | | ORDOVICIAN | 542 | | | | |



Legend

- pelagic, offshore, siliciclastic
- pelagic, nearshore, calcareous
- shallow marin, neritic
- terrestrial-continental, coarse clastic
- terrestrial-continental, fine clastic
- evaporite (chloride, sulphate)
- rhyolite, dacite
- (basaltic) andesite, trachyandesite
- basalt
- phyllite
- mixed-facies (in corresponding colors)
- coal (may include several seams)
- ? position/age doubtful/controversial
- | equal units
- \ older unit left \ younger unit right
- hiatus
- unconformity
- GSSP
- Fm. Formation
- Ls. Limestone

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Cutout and English adaptation of the "Die Stratigraphische Tabelle von Österreich 2004": Geological Survey of Austria

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