3.3.10. Stop 17 – Rauchkofel Boden section

The Rauchkofel Boden section (Fig. 30) is located on the southwestern slope of Mt. Rauchkofel, at coordinates N 46°36'54", E 12°52'30", and altitude 2175 m. Rocks from Upper Ordovician to Lower Devonian in Wolayer facies are here exposed, but a significant gap in the lower Silurian is present. Various studies and monographic works have been carried out on this section (for a brief summary see FERRETTI et al., 1999). The conodont stratigraphy of the Silurian and Devonian parts has first been published by SCHÖNLAUB (1980) and is presently under revision by M.G. Corriga and C. Corradini.

The Rauchkofel Boden section is the type section of the Wolayer Fm. (SCHÖNLAUB & FERRETTI, 2015a) and of the La Valute Fm. (CORRADINI et al., 2015b).

The following lithostratigraphic units can be recognised (from base to top):

1. Wolayer Fm. Lithology: whitish cistoid massive limestone. Thickness: 8.6 m. Age: Katian-Hirnantian (*Am. ordovicicus* Zone).
2. Kok Fm. Lithology: Grey-brownish highly fossiliferous cephalopod limestone. The contact with the Wolayer Fm. is strongly irregular with basal pockets infilled with ooidal ironstone (FERRETTI, 2005); Thickness: 3.4 m. Age: Wenlock-Ludlow (*Pt. am. amorphognathoides-A. ploeckensis* zones), but several conodont biozones are not documented and probably missing.
3. Cardiola Fm. This unit is badly exposed in the war trench. Lithology: bituminous shale with dark limestone lenses. Thickness: 20-30 cm. Age: a Ludlow age can be inferred by the age of the adjacent units, because no direct data are available from the section.
4. Alticola Fm. Lithology: Grey-pink cephalopod packstone to wackestone in the lower part of the unit, grading to darker grey in the upper part; a level with abundant lobolith of scyphocrinitids occur in the uppermost part of the formation. Thickness: 16.50 m. Age: Ludfordian-Lochkovian (*Po. siluricus-Icr. hesperius* zones).
5 Rauchkofel Fm. This unit is poorly exposed in an almost covered interval at the base of the steep cliff, but was excavated for the field trip of the 2nd European Conodont Symposium (SCHÖNLAUB, 1980). Lithology: blackish platy limestone with shale intercalations. Thickness: 1.8 m. Age: Lochkovian (*Icr. hesperius-Ad. carlsi* zones).
6. La Valute Fm. Lithology: well bedded light grey cephalopod bearing limestone. Thickness: 18 m. Age: Lochkovian (*Ad. carlsi-P. gilberti*? zones).
7. Findenig Fm. Lithology: reddish flaser limestone. Thickness: about 20 m. Age: Pragian.

In terms of chronostratigraphy, the following boundaries have been recognised along the section:

- the Ordovician/Silurian boundary is drawn between the Wolayer and the Kok Fm. It should be noted that a large hiatus is present, corresponding to the whole Llandovery.
- the Sheinwoodian/Homerian boundary can be traced just above the thin ooidal infillings at the base of the Kok Fm.
- the Wenlock/Ludlow boundary (= Homerian/Gorstian boundary) can be tentatively traced just below sample 314, where *K. crassa* occurs.
- the Gorstian/Ludfordian boundary can be tentatively traced within the cephalopod rich bed referred to the *A. ploeckensis* Zone, about 1 m below the top of the Kok Fm.
- the Ludlow/Pridoli boundary can be tentatively located in the lower part of the Alticola Fm., in the uppermost part of the steep slope, where *Oz. crispa* has been collected.
- the Silurian/Devonian boundary occurs in the uppermost part of the Alticola Fm., just below sample 201, where *Icr. hesperius* first appears.

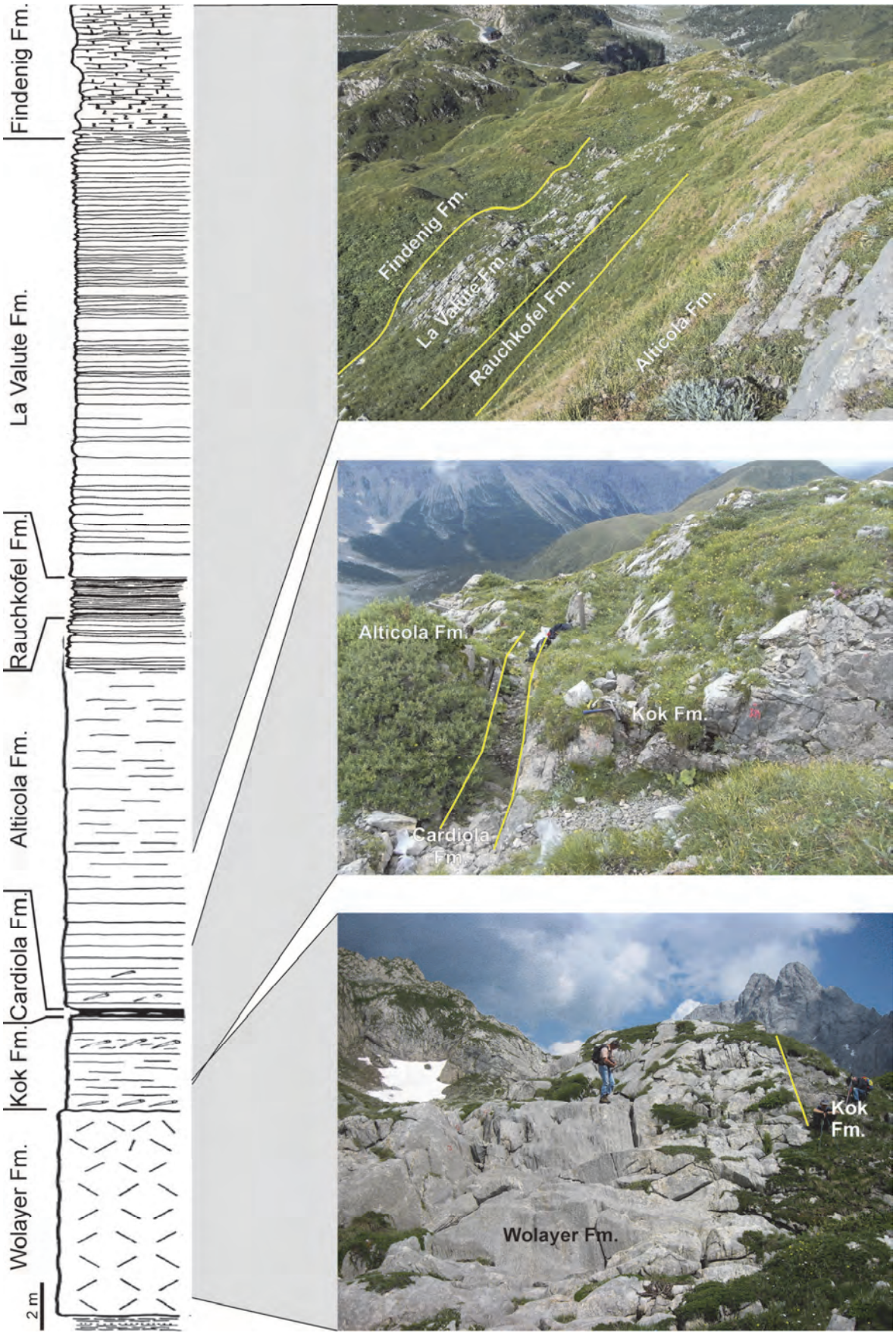

Fig. 30. The Rauchkofel Boden section. Stratigraphic log modified after SCHÖNLAUB (1980), with indication of lithostratigraphic units and selected views of the section.

- the Lochkovian/Pragian boundary can be traced just above the transition between the La Valute and Findenig formations, around sample 227, where *Nowakia acuaria* is reported (SCHÖNLAUB, 1980).

References: SCHÖNLAUB (1970, 1980), FERRETTI et al. (1999), BRETT et al. (2009).

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