

CONODONTS ACROSS THE SILURIAN/DEVONIAN BOUNDARY IN THE CARNIC ALPS (ITALY-AUSTRIA)

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In the Carnic Alps one of the best exposed and most complete Palaeozoic successions in the world, ranging from the Middle Ordovician to the Upper Permian, is exposed. Uppermost Silurian and lowermost Devonian rocks are relatively widely exposed and mainly represented by limestones or black shales, belonging to five different formations: Seekopf Fm., Alticola Fm., Rauchkofel Fm., Nöbling Fm. and Bischofalm Fm.

Several sections have been measured in these units, and conodonts across the Silurian/Devonian boundary are documented, among others, in the Cellon section (Walliser, 1964; Corradini et al., 2015; Corrigan et al., 2016), Rauchkofel Boden (Schönlaub, 1980; Schönlaub et al., 2017), Oberbuchach II (Schönlaub, 1985), Seewarte (Suttner, 2007), Monte Cocco II (Corrigan & Corradini, 2009), Rifugio Lambertenghi Fontana III (Corradini & Corrigan, 2010) and Rio Malinfier West (Corrigan, 2011). The restudy of the original collections from these sections, often integrated with new samples, and data from new localities (Freikofel South, ...), allows to define a series of first or last occurrences of taxa in the latest Silurian and basal Devonian beds, which can be used to locate the Silurian/Devonian boundary:

- Last Occurrence of *Ozarkodina confluens* (Branson and Mehl), just followed by
- First Occurrence of *Zieglerodina remscheidensis* (Ziegler) and *Z. eladioi* (Valenzuela-Ríos), and by
- Last Occurrence of *Zieglerodina zellmeri* Carls et al.
- First Occurrence of *Icriodus hesperius* Klapper & Murphy and *Icriodus woschmidti* Walliser. In some sections the two taxa enters together (e.g., Monte Cocco II, Corrigan & Corradini, 2009; Oberbuchach II, Schönlaub, 1985), whereas elsewhere *Icr. hesperius* enters a few centimetres below *Icr. woschmidti* (e.g., 10 cm in the Cellon Section, Corradini et al. 2015, Corrigan et al. 2016).
- First Occurrence of *Zieglerodina* sp. A Corrigan et al., 2016.

The base of the Devonian is defined by the FAD of the graptolite *Monograptus uniformis* Přibyl, and the conodont taxon "with wide distribution that appears closest to the Lower Devonian boundary" is *Icr. hesperius* (Carls et al. 2007, p. 157-158). In case *Icr. hesperius* is not present in a section, all the events listed above may help to approximate the boundary.

REFERENCES

- Carls, P., Slavík, L. & Valenzuela-Ríos, J. I. 2007. Revision of conodont biostratigraphy across the Silurian-Devonian boundary. *Bulletin of Geosciences* 82, 145–164.

- Corradini C. & Corriga, M.G. 2010. Silurian and lowermost Devonian conodonts from the Passo Volaja area (Carnic Alps, Italy). *Bollettino della Società Paleontologica Italiana*, 49(3), 237–253.
- Corradini, C., Corriga, M.G., Männik, P. & Schönlaub, H.P. 2015. Revised conodont stratigraphy of the Cellon section (Silurian, Carnic Alps). *Lethaia*, 48(1), 56–71. doi:10.1111/let.12087
- Corriga, M.G. 2011. *Biostratigrafia a conodonti attorno al limite Siluriano-Devoniano in alcune aree del Nord Gondwana*. PhD Thesis, University of Cagliari, 152 pp.
- Corriga, M.G. & Corradini, C. 2009. Upper Silurian and Lower Devonian conodonts from the Monte Cocco II section (Carnic Alps, Italy). *Bulletin of Geosciences*, 84(1), 155–168.
- Corriga, M.G., Corradini, C., Schönlaub & H.P., Pondrelli, M. 2016. Lower Lochkovian (Lower Devonian) conodonts from Cellon section (Carnic Alps, Austria). *Bulletin of Geosciences*, 91(2), 261–270. doi: 10.31.40/bull.geosci.1594
- Schönlaub, H.P. 1980. Silurian and Devonian conodont localities in the Barrandian. In: Schönlaub H.P. (Ed.), Second European Conodont Symposium (ECOS II), Guidebook, Abstracts. *Abhandlungen der Geologischen Bundesanstalt*, 35, 5–57.
- Schönlaub, H.P. 1985. Devonian conodonts from section Oberbuchach II in the Carnic Alps (Austria). *Courier Forschungs-Institut Senckenberg*, 75, 353–374.
- Schönlaub, H.P., Corradini, C., Corriga, M.G. & Ferretti, A. 2017. Chrono-, litho- and conodont bio-stratigraphy of the Rauchkofel Boden Section (Upper Ordovician–Lower Devonian), Carnic Alps, Austria. *Newsletters on Stratigraphy*, 25 pp. doi: 10.1127/nos/2017/0391
- Suttner, T. 2007. Conodont Stratigraphy, Facies-Related Distribution Patterns and Stable Isotopes (Carbon and Oxygen) of the Uppermost Silurian to Lower Devonian Seewarte Section (Carnic Alps, Carinthia, Austria). *Abhandlungen der Geologischen Bundesanstalt*, 59, 1–111
- Walliser, O.H. 1964. Conodonten des Silurs. *Abhandlungen des Hessischen Landesamtes für Bodenforschung zu Wiesbaden*, 41, 1–106.