

The Devonian in the Villec Area

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The set of outcrops located from about 2.6 to 3.3 km south-southwest of Martinet on the left bank of the Cabiscol stream along the road from Martinet to Villec and in the eastern slope of a hill north of Villec (Fig. 1), exhibits a still fragmentarily known Devonian sequence in a set of outcrops tectonically disrupted but with a relevant conodont record (Gouwy et al., 2013, 2016; Martínez-Pérez & Valenzuela-Ríos, 2014; Martínez-Pérez et al., 2011).

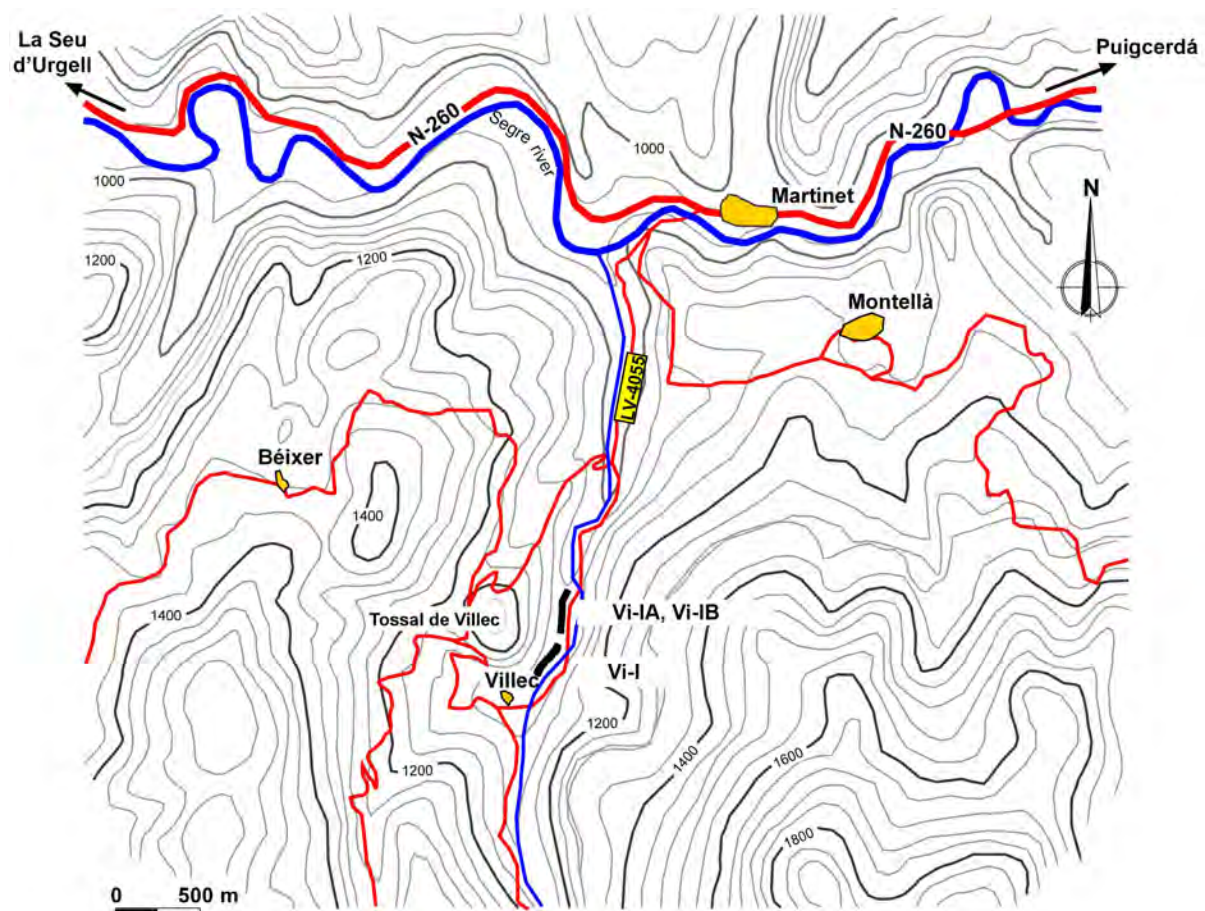


Figure 1. Location of sections in the Villec area. Vi-IA and Vi-IB Pragian-Emsian sections. Vi-I Eifelian to Famennian sections.

Boersma (1973) was the first in studying and dating by means of conodonts the Devonian at Villec. He recognised the uppermost part of the “Basibé Fm.”, the Villech Fm. and what the Dutch team called the Compte Fm. with the three members A, B and C, ranging in age from Emsian to Famennian. Valenzuela-Ríos in the course of a Geological Survey restudied this area, recognised all the Devonian formations (from Rueda Fm. to the Barousse Fm.) and improved the initial dating of Boersma, extending the records down to the Lochkovian? and Pragian. This important conodont record played an essential role to feed two Ph. D. Thesis (Martínez-Pérez, 2010; Gouwy, 2010) and the subsequent series of papers aforementioned.

Ber. Inst. Erdwiss. K.-F.-Univ. Graz	ISSN 1608-8166	Band 23	Valencia 2017
<i>International Conodont Symposium 4</i>		Valencia, 25-30 th June 2017	

The Devonian is compiled from seven main sections. The lower set of five sections exposes in a severely tectonically disturbed area part of the Castanesa and Villech Formations (sections Vi-IA to Vi-IE; Martínez-Pérez 2010). They have yielded conodonts from the Pragian to the Emsian (*pireneae* to *serotinus* zones) and the section Vi-IA is important for on-going discussions regarding the Pragian/Emsian boundary as it contains in sequence the relevant conodonts *P. pireneae*, *P. kitabicus* and *P. exc. excavatus* (Martínez-Pérez & Valenzuela-Ríos, 2014). The Vi-IB section is relevant for the lower/upper *nothoperbonus* boundary (Martínez-Pérez et al., 2011).

The other group of two sections comprises the boundary between the Villech Fm. and Comabella Fm., the Comabella Fm. and La Mena Fm. The conodont record starts in the Eifelian and reaches the Famennian (Gouwy et al., 2013, and unpublished data).

The first section is about 64 m thick and has some covered intervals spanning from the Eifelian *costatus* Zone into, at least, the Frasnian F6 Zone. This section is relevant for the composite standard in the Spanish Central Pyrenees (Gouwy et al., 2016) and contains all the indexes of the middle and upper Givetian. The sequence is detailed in the corresponding chapter and is composed of mixed fauna icriodis-polygnathids that permits direct correlations between the two main zonations, and completed with *Tortodus*, *Schmidtognathus*, *Klapperina*, *Mesotaxis*, *Skeletoghathus* and *Ancyrodella*.

A second section is in a preliminary stage of knowledge, exposes strata of La Mena Fm., has a thickness of about 13 m and has already yielded lower-middle Famennian conodonts from the *Palmatolepis glabra pectinata* to the *Pa. mg. marginifera* Zones in the new zonation of Spalletta et al. (2015).

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