

Lower – Middle Devonian conodont faunas from Prague Basin

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The conodonts documented were sampled from Třebotov Limestone (Daleje-Třebotov Formation, Lower – Middle Devonian, upper Emsian – lowermost Eifelian) and Choteč Limestone (Choteč Formation, Middle Devonian, Eifelian) and their shallow-water equivalents (Suchomasty and Acanthopyge Limestone). The following sections were studied: Prastav Quarry, Holyně section, Na Škrábku Quarry, Barrandov roadcut section, Jelínek mill section, Červený Quarry at Suchomasty, U Němců section at Karlštejn and Na Vyhliďce section at Hostím (Fig. 1).

Třebotov Limestone (Daleje – Třebotov Formation, Lower – Middle Devonian) was defined by SVOBODA & PRANTL (1947) and redefined by CHLUPÁČ (1959). This unit is represented mainly by bioturbated, skeletal wacke- to packstones with high component content, mainly dacryoconarid tentaculites, abundant fragments of ostracods, trilobite exoskeletons, nautiloids and goniatites, gastropods, brachiopods and bivalves.

On the basis of the presence of micritic matrix, benthic fauna typical for muddy bottom environments, abundant representatives of plankton and the lack of sedimentological features that would indicate current activity, the sedimentary environment is interpreted as low-energy, relatively deep water milieu which is rich in free oxygen (judging from intense bioturbation and diverse benthic assemblages) and below storm wave base.

Choteč Limestone (Choteč Formation, Middle Devonian), a unit defined by SVOBODA & PRANTL (1948) and redefined by CHLUPÁČ (1957, 1959), reflects in its development the effect of the Basal Choteč Event, which has been regarded as an important global transgressive geo-event documented by a distinct facies and faunal change (e.g. CHLUPÁČ & KUKAL 1986, HOUSE 2002). This unit is represented by dark, organic-rich, well-washed peloidal grainstones and packstones. Characteristic feature of the grainstones is intense micritization of grains however, echinoderm ossicles as the main component could be identified. These allochthonous parts, representing gravity flow deposits (turbidite) from shallow water alternate with background sediments, which are dark lime-mudstone/wackestone with distinct lamination at some parts suggestive of lack of free oxygen at the sea bottom.

Conodonts from the Lower and Middle Devonian (*gronbergi* – *kockelianus* biozones) in the Prague Basin (Fig. 2) were previously studied by WEDDIGE & ZIEGLER (1977), KLAPPER (1977), KLAPPER, ZIEGLER & ZIKMUNDOVÁ in CHLUPÁČ et al. (1977), KLAPPER et al. (1978), ZIKMUNDOVA in CHLUPÁČ et al. (1979), ZUSKOVÁ (1991) and KALVODA in HLADIL & KALVODA (1993).

The conodont fauna present is of very low diversity and also abundance, spanning six biozones (*serotinus* – *kockelianus* biozone). The following genera and species were recovered (numbers in brackets stand for quantity of specimens): *Polygnathus serotinus* (375), *P. linguliformis bultyncki* (147), *Icridous beckmanni beckmanni* (11), *I. beckmanni sinuatus* (2), *Ozarkodina carinthiaca* (4), *P. cooperi cooperi* (8), *P. costatus patulus* (36), *P. costatus partitus* (62), *P. costatus costatus* (53), *P. sp. aff. P. trigonicus* (4), *Polygnathus linguiformis pinguis* (2), *Polygnathus trigonicus* (3), *Tortodus kockelianus australis* (2), *T. kockelianus kockelianus* (11), *Polygnathus pseudofoliatulus* (16), *Pelekysgnathus sp.* (1), *Pandorinellina sp.* (2), *Pseudooneotodus beckmanni*, *Polygnathus cf. benderi* (2), *P. cf. borealis* (1) and three new species, which are together with two last mentioned taxa and with *P. serotinus* and *P. l. bultyncki* topic of a recent manuscript.

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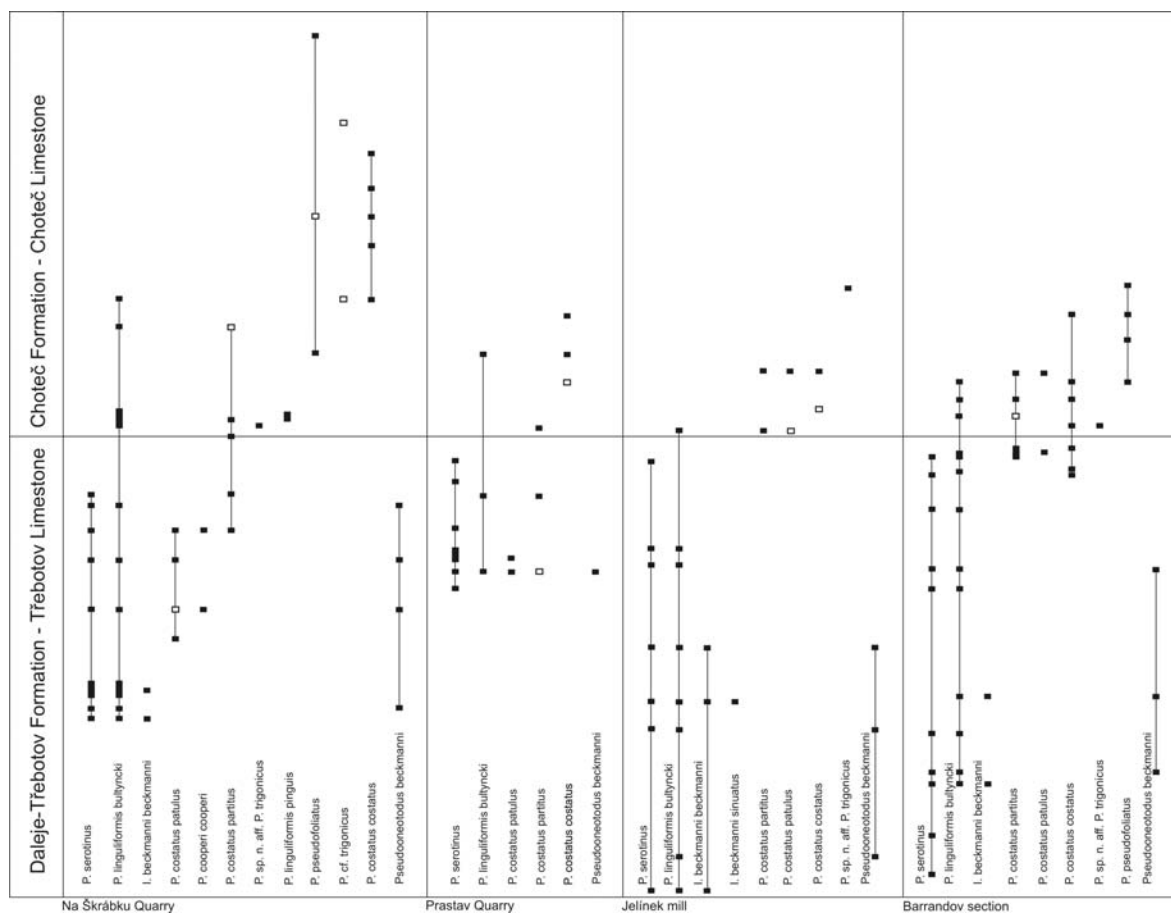


Fig. 1: Conodont distribution chart across the boundary of Třebotov Limestone and Choteč Lst.

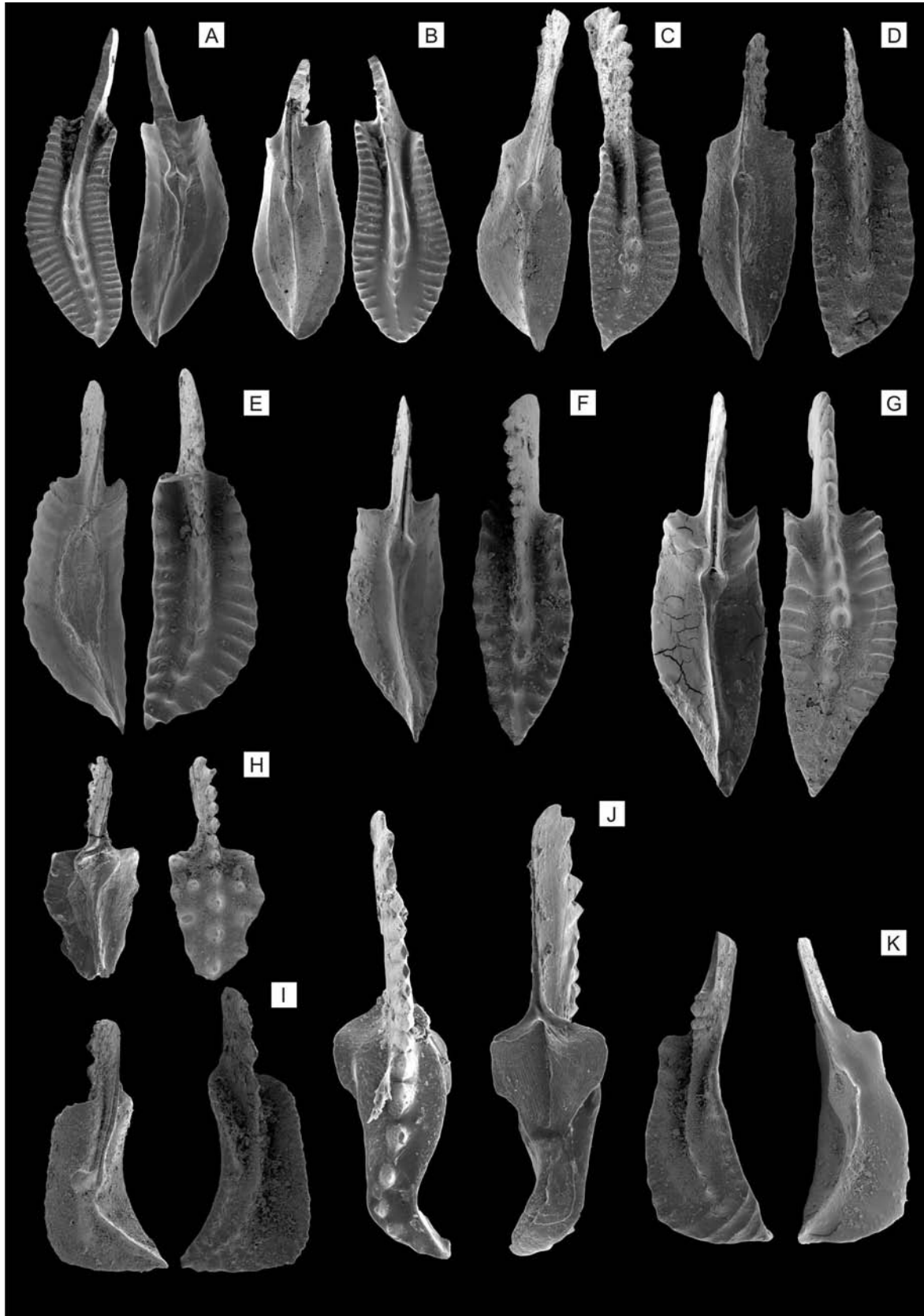


Fig. 2: A, B. *Polygnathus costatus costatus* KLAPPER, 65x; C. *Polygnathus pseudofoliatus* WITTEKINDT, 57x; D. *Polygnathus costatus patulus* KLAPPER, 60x; E. *Polygnathus cooperi cooperi* KLAPPER, 40x; F, G. *Polygnathus costatus partitus*, KLAPPER, ZIEGLER & MASHKOVA, 60x; H. *Polygnathus trigonicus* BISCHOFF & ZIEGLER, 85x; I. *Polygnathus serotinus* TELFORD, 57x; J. *Tortodus kockelianus kockelianus* (BISCHOFF & ZIEGLER), 85x; K. *Polygnathus linguiformis bulyyncki* WEDDIGE, 57x.