platform (Sp) element is the most characteristic. The Sp element is most commonly gondola-shaped, but more blade-like („naked") forms are present in some units with or without broadly platformed elements. The relationship between the two kinds of Sp elements is uncertain in most cases (von BITTER and MERRILL, 1980).

Gondolella is the most environmentally restricted Carboniferous conodont that can be called „abundant", occurring in great numbers in the few units and generally small aggregate thickness where it occurs. In addition to the sharply restricted *Gondolella*-biofacies, we now recognize microbiofacies within it involving broad and „naked" platforms.

The phylogeny of *Gondolella* features iterative developments of „naked", simple broad, and complex broad platforms. In our collections of middle and Upper Carboniferous conodonts (uppermost Atokan or lowermost Desmoinesian through middle Virgilian) the following species are recognizable and restricted: *gymna, laevis,* n. sp. a, *bella, magna, elegantula, symmetrica, „symmetrica", merrilli,* n. sp. b, n. sp. c, n. sp. d, and a new species that is in press. We offer these as the basis of a tentative biostratigraphic zonation subject to the following qualifications. First, these „zones" are sharply controlled by environments *externally* and possibly *internally* as well. Second, this zonation leaves a substantial part of the Upper Carboniferous and Lower Permian *outside* the zonation and the majority of the section *within* the zonation does not contain *Gondolella.* Third, these intervals leave large gaps in the phylogenetic synthesis that complicate taxonomy.

Ordovician Conodont Zonation and Paleogeography of the Canadian Arctic.

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Over the past decade extensive conodont collections have been made from Ordovician strata in the Canadian Arctic. Limited material is available from the Franklinian eugeosynclinal deposits and from those of the Pearya Geanticline on its northern flank. Over 40,000 conodonts have been recovered from the widespread carbonate-evaporite facies that exceeds 3000 m in thickness in the Franklinian Miogeosyncline, which extends for over 2000 km into northern Greenland, and that thins to less than 1000 m in the platform sequence of the Arctic Lowlands.

The conodonts present in the miogeosyncline-platform sequence belong to the Midcontinent Province. An apparently continuous Ordovician sequence is present in the miogeosyncline and a succession of twelve conodont zones is proposed for the Lower and early Middle Ordovician strata. These zones are primarily assemblage zones and can be traced throughout the miogeosyncline and platform deposits and most are recognizable in other parts of North America. The zones are a replacement for the succession of Faunas defined by SWEET, ETHINGTON and BARNES in 1971.

The conodont faunas have enabled accurate correlations to be achieved throughout the Arctic for these generally sparsely fossiliferous strata. A series of paleogeographic maps has been developed which illustrate the changes in the carbonate and evaporite facies in relation to the main structural features for each of ten stages during the Ordovician.

Problems and Models of Conodont Reworking in the Upper Devonian of the Alps.

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Large scale submarine reworking of fossils may be related to either turbidity currents or to storm events transferring material from the shallow shelf to the basin. Such processes usually imply vertical (stratigraphic) reworking, but in a few cases produce only lateral reworking (actually within the time span of a subzone). In both cases analyzing pattern of reworking may provide useful information about sedimentation and environment.

An Upper Devonian pelagic carbonate sequence with allodapic intercalations and large amount of intraclastic micrite breccias from the base of the lowermost *Polygnathus asymmetricus asymmetricus*-Zone (do I α, Lower Frasnian) to the base of the Upper *Palmatolepis gigas*-Zone (do I δ, Upper Frasnian) has been studied. Within this interval the standard zonal sequence is practically undisturbed at