Zone in these unfavourable environments.

At the end of the Famennian finally (in the so-called „Strunian" deposits: „Fa2d" and „Tn1a": during the *costatus*-Zone) more marine influences are reappearing: rhythmic alternating thin-bedded sandstones, shales and calcareous layers with stromatoporoids and foraminifera.

The conodont associations are characteristic of a Polygnathid – Icriodid Biofacies mixed with elements of a Bispathodid – Pseudopolygnathid Biofacies; this is indicative of a new transgression which only will by completed during the Lower Carboniferous.

Palmatolepis Conodont Apparatuses – Empirically Derived Composition and Structure.

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Some Late Eo- and Mesotriassic Conodont Multi-Elements: Notes on their Taxonomy, Phylogeny and Distribution.

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A comparative study of Late Eotriassic and Mesotriassic conodont Multi-elements from North America (Utah, Nevada) and the circummediterranean region indicates their derivation from two major stocks: Ellisoniid *(Ellisonia, Furnishius, Parachirognathus, Hadrodontina* and *Pachycladina)* and Xaniognathid. The latter branches into two substocks: Neogondolellid *(Neogondolella, Neospathodus, Pseudofurnishius, Carinella* and *Epigondolella)* and Gladigondolellid *(Gladigondolella).*

The paleogeographic distribution of these taxa was controlled by paleoecologic factors relating to their habitat.

A Summary of Chesterian (Carboniferous) Conodonts from the Illinois Basin, USA.

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The Chesterian Series in the Illinois Basin is a sequence of dominantly limestone units alternating with clastic intervals of shale and sandstone. The clastic units are mostly nonmarine and essentially lack conodonts, but conodonts have been reported from all limestone formations or members.

Because of lack of study, however, some have almost no record of conodonts. For example, published accounts list only a few specimens of discrete element *Hindeodella* from the Vienna Limestone, but the present study shows that conodonts are diversified and moderately abundant in it. This is true of the other formations.

At least ten multielement genera have been recognized in the Chesterian Series. They are *Adetognathus, Cavusgnathus, Gnathodus (Dryphenotus), Hindeodus, Idioprioniodus, Kladognathus, Lochriea, Lambdagnathus, Synprioniodina ?,* and a new genus whose Pa element is discrete element *Spathognathodus campbelli.* In part these genera are recognized on the basis of statistical analyses, and much of the new data on occurrences is based on collecting done specifically for multielement analyses. Generally, sets of four samples were collected from single beds or portions of beds that were selected to represent a variety of environments. These samples were analyzed both collectively and individually.

We used four binary similarity coefficient (Baroni-Urbani-Buser, Jaccard, Simpson, and Phi) for which we believe levels of significance can be calculated by using standard clustering strategies. Our analysis also included the Fager coefficient because it has been used commonly in conodont studies. The data were clustered by using all five coefficients with both the complete linkage and unweighted pair clustering strategies. The Phi coefficient permits the selection of a level above which single element taxa are associated at probabilities significantly greater than randomly expected. Treating the Baroni-Urbani-Buser, Jaccard and Simpson coefficients as binomial probabilities also permits the selection of levels above or below which associations are significantly different from those expected on a random basis. Finally, the assumption of binomial probabilities also permits the direct assessment of the significance of linkages between clusters.