Scolecodonts (= jaws of the polychaete worms) have always been a relatively neglected group of microfossils. In the Prague Basin (Czech Republic), only two major studies exclusively focused on scolecodonts have been published. The aim of the present research was to fill in this gap - by a restudy of the historical collections of Žebera and Šnajdr, and its comparison with results gained from newly collected late Silurian samples and scolecodont faunas from other areas.

It has turned out that the jawed polychaete fauna in the Prague Basin was much more diversified than previously reported. The last report on late Silurian scolecodonts by Šnajdr (1951) concluded that there are four determined and two species left in open nomenclature present. Restudy of the original collection has shown that there are at least 11 different species from families Mochtyellidae, Polychaetaspidae, Ramphoprionidae, Paulinitidae, Atraktoprionidae, Skalenoprionidae and Hadoprionidae. The new collection from similar stratigraphical level gained at least 25 species, including one newly described ("Mochtyella" pragensis). The taxonomic re-study also focused on the species Kettnerites kosoviensis that is a type species of the genus and was described in the Prague Basin. The new samples come from the limestone which is in contrast to previously studied shale lithology. This was an important factor enabling easier acid digestion and detaching the jaws.

Together with taxonomy, influence of environmental changes on diversity of scolecodont faunas was studied. A decrease in diversity associated with the "Kozlowskii" event was observed. Palaeoecological strategies of genera Pistoprion, Rakvereprion and Hadoprion were confirmed also from the peri-Gondwanan area (Prague Basin). The last but not least contribution to scolecodont studies was a preliminary correlation of the Bohemian late Silurian faunas with other regions that revealed a close relation of the Prague Basin and Baltica polychaete faunas.