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New information from mesofossils on phytoterrestrialisation in the Lower Devonian

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Much of our anatomical information of diverse components on numerous facets of basal Devonian vegetation comes from charcoalified mesofossils. New information from sporangia with in situ trilete spores indicate even greater diversity in presumed vascular plants with terminal sporangia, and sporangia with cryptospores are recorded for the first time. The possibility that these tiny sporangia were the tips of much larger plants is discounted by the discovery of much more extensively branched fertile compression fossils with similar dimensions occurring in association with 'conventional' fertile megafossils assigned inter alia, to Cooksonia and Salopella. The profusion of these branching mesofossils suggests that they were an important facet of Lower Devonian vegetation. Non- embryophyte fossils reveal clues to the possible ontogeny and architecture of such enigmatic organisms as Pachytheca and Prototaxites. Far more fragmentary thalloid fossils show organisation reminiscent of that in lichens.