Reinvestigating the late Devonian plant bearing localities of Co. Kerry and Co. Wexford

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analysis. Here is reported a high percentage of PAHs >4 ringed polynuclear aromatic hydrocarbons, typical attribute to pyrogenetic materials. Moreover, during post-depositional times, the fossil trunks were deformed by lithostatic compression as outlined by the trunk's shapes, which underwent a final partial chalcedony petrification.

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Our understanding of vegetation changes around the Devonian-Carboniferous boundary remains limited by the small number of plant-bearing deposits close in age to the boundary. In this context, we have started to reinvestigate Devonian-Carboniferous assemblages of Ireland, with an initial focus on those from which Matten and collaborators (1980, 1983, 1984, 1989) had described anatomically preserved plants of Late Devonian age. Prospecting trips in 2018, 2019, and 2021 yielded new finds in two key areas of the country: Kerry Head in County Kerry, and Hook Head in County Wexford. A few localities around Kerry Head yielded fragments of fossil plants but the richest to date remains on the north side of Ballyheigue beach. The bed with silicified plants studied by Matten contains abundant remains of one or several small seed plants: cupules, petioles with a W-shaped vascular strand, stems, and rhizomes. The vegetative organs are commonly connected, providing information on the habit of the plants. The bases of a few woody axes *ca* 10 cm in diameter were also observed at the locality in 2019. Underlying beds have yielded a different type of assemblage, including adpressions of cf. *Archaeopteris* foliage and casts of large lycopsid stems. At Hook Head, the historical locality of Sandeel Beach has yielded both adpressions and heavily pyritized permineralized axes. The later correspond to stems of the lycopsid *Wexfordia* and to at least one other type of plant characterized by pycnoxylic wood. Prospecting trips around the Hook Head Peninsula have also revealed other plant-bearing beds, including at least one with permineralized axes, that will be investigated in future fieldtrips.

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