



HAL
open science

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

Anne-Laure Decombeix, Thibault Durieux, Carla J. Harper, Brigitte Meyer-Berthaud, Cyrille Prestianni, Merlin Ramel, Malgorzata Horajska-Shaikh

► To cite this version:

Anne-Laure Decombeix, Thibault Durieux, Carla J. Harper, Brigitte Meyer-Berthaud, Cyrille Prestianni, et al.. Reinvestigating the late Devonian plant bearing localities of Co. Kerry and Co. Wexford. 11th European Palaeobotany and Palynology Conference, Jun 2022, Stockholm, Sweden. hal-03722190

HAL Id: hal-03722190

<https://hal.inrae.fr/hal-03722190>

Submitted on 13 Jul 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

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.

P.012 Reinvestigating the Late Devonian plant bearing localities of Co. Kerry and Co. Wexford, Ireland

Decombeix, Anne-Laure¹; Durieux, Thibault²; Harper, Carla J.²; Meyer-Berthaud, Brigitte¹; Prestianni, Cyrille^{3,4}; Ramel, Merlin¹; Horajska-Shaikh, Malgorzata⁵

¹UMR AMAP, Univ. Montpellier, CNRS, CIRAD, INRA, IRD, Montpellier, France. ²Department of Botany, School of Natural Sciences, Trinity College Dublin, Dublin 2, Ireland. ³Royal Belgian Institute of Natural Sciences Brussels, Belgium. ⁴EDDy Lab, Geology Dpt., Liege University, Belgium. ⁵Kerry Geo, Tralee, Co. Kerry, Ireland.

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.

References

Matten, L.C., Lacey, W.S., May, B.I. & Lucus, R.C., 1980. A megafossil flora from the uppermost Devonian near Ballyheigue, Co. Kerry, Ireland. *Review of Palaeobotany and Palynology* 29, 241–251.

Matten, L.C., Tanner, W.R. & Lacey, W.S., 1984. Additions to the silicified Upper Devonian/Lower Carboniferous flora from Ballyheigue, Ireland. *Review of Palaeobotany and Palynology* 43, 303–320.

Matten, L.C., 1989. A petrified lycopod from the uppermost Devonian of Hook Head, County Wexford, Ireland. *Botanical Gazette* 150, 323–336.

May, B.I. & Matten, L.C., 1983. A probable pteridosperm from the uppermost Devonian near Ballyheigue, County Kerry, Ireland. *Botanical Journal of the Linnean Society* 86, 103–123.