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Brigitte Meyer-Berthaud[1], Ralph Thomas Becker[2], Candys Bert[1], Anne-Laure Decombeix[1], Ahmed El Hassani[3], Christian Klug[4], Marion Lacand[5], Merlin Ramel[1], Abdelfatah Tahiri[6]

1. *UMR AMAP, Univ. Montpellier, CNRS, CIRAD, INRA, IRD, Montpellier, France*
2. *Institut für Geologie und Paläontologie, WWU, Munster, Germany*
3. *Hassan II Academy of Science and Technology, Rabat, Morocco*
4. *Paläontologisches Institut und Museum, Zurich, Switzerland*
5. *Research laboratory on cold forests, UQAT, Canada*
6. *Institut scientifique, Université Mohamed V, Rabat, Morocco*

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Despite its importance for the evolution of vascular plants, Gondwana, the largest paleocontinent in the Devonian, is the least studied for its floras. This talk is part of a long-term project initiated in Montpellier on Devonian plant assemblages from Morocco, on the northern edge of Gondwana. This project aims to document their composition, evaluate their diversity and discuss their relationship with contemporary floras from Laurussia.

We report the discovery of a new permineralized plant assemblage at Oum el Jerane, a locality in a paleoregion of eastern Anti-Atlas corresponding to the Tafilalt Platform. The fossiliferous deposit is marine and dated to the upper Givetian (Middle Devonian) from its rich invertebrate fauna. Oum el Jerane and Imouzzer-du-Kandar, another Moroccan Middle Devonian site located further north in the Middle Atlas Mountains, are the oldest localities in North Africa where anatomically preserved plant remains have been systematically studied.

Specimens from Oum El Jerane are limonitized and small. They measure 4-14 mm wide and do not exceed 30 mm in length. Apart from a small lycophyte strobilus, all other remains consist of axes referrable to the Aneurophytales, Pseudosporochnales, and Iridopteridales. In this last order, the best-preserved axis is assignable to *Arachnoxylon* sp. Assemblages combining basal fern allies and aneurophytalean progymnosperms are usual in the Givetian localities of Europe, the eastern USA, and Venezuela. These occurrences indicate that floral exchange occurred between northern Gondwana and Laurussia. The lack of complete specific correspondence of the Oum el Jerane plants with those of Laurussia results from the incompleteness of the fossils. It may also suggest a certain level of provinciality of the Moroccan flora.