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# A new pollen extraction method for pyrite-enriched organic deposits from dryland environments, and associated results from a wetland in semi-arid Southern Levant (Jordan)

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Wetlands are invaluable stores of palaeoenvironmental information; this is particularly true in arid or semi-arid environments where archives of past environmental change are usually scarce. However, depending on local conditions, the palaeoenvironmental proxies that wetlands developing in arid environments may contain, in particular pollen, can be challenging to extract. Here we describe a new technique to separate palynomorphs (pollen and spores) from pyrite-rich peat-like deposits, using a controlled nitric acid digestion instead of acetolysis. The results obtained by applying this method to organic deposits from small 'desert' wetlands, located close to the edge of the Dead Sea in Jordan, provided new data about the local evolution of environmental conditions in semi-arid to arid Southern Levant for the last ca. 40,000 years, which adds to the presently restricted information available for the area.