New records in old material: preliminary data on Floian Acritarchs – a surprising new world in the Nery Delgado Collection at the Geological Museum, Portugal

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Nery Delgado (1835-1908) was one of the pioneers of Portuguese geology. In 1857, the Geological Survey of Portugal (GSP) was created as a section of the Geodesic Service of the Public Works Ministry. N. Delgado was involved since the beginning; he worked as an adjunct and during the year 1882 was nominated head of the survey. Due to his scientific contributions, N. Delgado participated in the major developments of nineteenth-century geology. The lithological and palaeontological samples collected by N. Delgado are placed at the Geological Museum, integrating the N. Delgado collection, belonging to the LNEG-LGM, the institution which inherited the legacy of more than 150 years of geological research carried out by the GSP. Following the program that commemorates the 100 years after the death of N. Delgado, preliminary palynostratigraphic research was established in several samples from the N. Delgado collection, that allowed the discovery of a surprising new world in the old material of the Geological Museum. Investigated samples are from the *Xistos com Phyllodocites* Formation from the Mestre André quarry (Barrancos village). This rock unit crops out in the Estremoz-Barrancos sector of the Ossa Morena Zone (Southeast of Portugal) and consists of dark, green and reddish micaceous shales and siltstones. The upper part also contains psammites with abundant ichnofossil genera, such as *Phyllodocites*, *Nereites*, *Dictyodora*, *Palaeophycus* and *Gordia* genera. These uppermost levels yielded the graptolites *Expansograptus sparsus* and *E. hirundo* that indicates a late Floian age. The trace fossil assemblage and the graptolites indicate an offshore shelf depositional environment. The first determination on acritarchs in the upper levels of the *Xistos com Phyllodocites* Fm are from 1988, when Cunha & Vanguestaine recovered in two samples, from an outcrop along the road Sto Aleixo-Barrancos (Km 94,2), a moderated preserved assemblage assigned to the Floian-Dapingian boundary. The preliminary age determinations based on acritarchs, from the Mestre André quarry, are here presented. The acritarch assemblages are abundant and very well preserved and contain *Acanthodiacrodium costatum*, *Acanthodiacrodium uniforme*, *Arbusculidium filamentosum*, *Coryphidium bohemicum*, *Polygonium* sp., *Steeliferidium stelligerum*, *Striatotheca principalis parva*, *S. rugosa*, *Veryhachium lairdii* and *V. trispinosum* suggesting a mid late Floian age, that confirms the preceding age determinations.