

DEVONIAN FLORA SUCCESSION IN GONDWANA: STATE OF ART IN SOUTH AMERICA

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The Devonian paleobotanical record in South America has recently been described in Argentina, Bolivia, Brazil, Chile, Colombia, Falkland Islands, Uruguay and Venezuela. This study aims to describe a pattern of floristic succession observed in the Devonian strata bearing primitive land plants mainly in Argentina, Bolivia and Brazil from Lochkovian to Frasnian deposits dated with palynomorphs. In the early Devonian (Lochkovian) the paleofloras are composed of bryophytes (*Hostinella* sp.), psilophytes and cooksonioids (including *Cooksonia paranenses*, *C. hemispherica* and *Aberlemnia caledonica*), recorded in Argentina (Villavicencio and Talacasto Fms.), Bolivia (Santa Rosa Fm.), Brazil (Furnas Fm.) and Uruguay (Cerrezuelo Fm.). These assemblages comprising herbaceous plants, simple organization, naked stems (leafless) and terminal sporangia, are named herein *Cooksonia*-like Flora (Embryobiota). This flora is associated to the *Dictyotriletes emsiensis* (Ems) Zone Grahni from Brazil (Lochkovian-Emsian). From the Middle-to-Late Devonian (Eifelian to Frasnian), herbaceous lycopsids (*Haplostigma* sp. and *Haskinsia* sp.) became dominant and especially during the Eifelian/Givetian interval, *Haplostigma* is widely documented in the South American floras. These plants, with a more complex organization, are recorded in Argentina (Chinguillos Gr.; Lolén, Punta Negra, Los Monos and Pescado Fms.), Bolivia (Huamapampa, Los Monos and Iquiri Fms.), Brazil (São Domingos Fm.), Chile (El Toco Fm.) and Venezuela (Campo Chico Fm.). The latter are grouped herein in the *Haplostigma* Flora. Its age is akin to *Grandispora permulta* (Per) and *Geminospora lemurata-Chelinospora* ex *Gr. ligurata* (LLi) Zones Melo and Loboziak from Brazil. It is noteworthy that the genus *Haplostigma* is also recorded in South Africa, Antarctica and Australia from a later interval, i.viz. Givetian to Famennian. The interval between the *Cooksonia*-like and *Haplostigma* floras is mainly hidden, due to marine transgression occurred during the Pragian/Emsian interval. The predominance of marine facies during Late Early Devonian is also attested by the domain of paleomicroplankton (i.e., acritarchs, quitinozoans) in palynological assemblages and great abundance and diversity of marine invertebrates of Malvinokaffric Realm. [CNPq 141979/2011-9, PQ309211/2013-1, 150239/2011-4, 401796/2010-8, 479774/2011-0, 402873/2012-2, and CONICET PIP 0305 (2011-2013)].

