Selon Errami *et al*. (2015), l'Afrique et le Moyen-Orient sont dotés d'une riche géodiversité. Cependant, cette dernière reste mal connue par le grand public à cause de l'insuffisance de travaux de recherches sur le géopatrimoine et la géoconservation dans cette partie du monde. En effet ces études ont l'avantage d'explorer, de découvrir, d'inventorier et de valoriser la géodiversité d'une région. Plusieurs pays africains tels que la Tunisie, l'Algérie, le Maroc, le Sénégal, la Namibie, le Madagascar, l'Afrique du Sud, le Nigeria et bien d'autres pays font déjà partie du Réseau Africain des Géoparcs. La Côte d'Ivoire reconnue pour ses nombreuses potentialités, et ses atouts naturels exceptionnels et propices au développement d'une véritable industrie touristique ne peut rester en marge de ce processus de valorisation et de labellisation du patrimoine naturel. C'est pour répondre à ce besoin qu'a été initié le projet de création d'un géoparc dans le sud-ouest ivoirien sur le littoral. La zone concernée dans le cadre de cette étude prend en compte les régions du Gbôklè (Fresco, Sassandra) et des Grands Ponts (Grand-Lahou), délimitée par les longitudes 4°45'26''W et 6°11'56''W et les latitudes 4°54'55''N et 5°23'05''N. La végétation est constituée de forêts, de savanes littorales et de mangroves. Les précipitations varient entre 1600 et 1800 millimètres par an. Du point de vue morphologique, s'étendent, de Sassandra à la lagune de Grand-Lahou, des plateaux parfois cuirassés, séparés de la mer par des plaines étroites, sauf à Fresco où ils forment, sur plusieurs kilomètres, une ligne de falaises vives. Les formations sableuses et argileuses d'âge méso-cénozoïque dominent la région, mais à Sassandra, on observe le substratum formé par des roches magmatiques (granites, granodiorites, basaltes,…) et métamorphiques (migmatites, quartzites,…) datant du Précambrien. Le milieu naturel subit de constantes variations du fait des facteurs environnementaux (changement climatique et effet de la houle) et anthropiques. L'activité érosive de la mer emporte les sables de plage et crée l'éboulement des falaises (Yao, 2012). Parfois, des algues brunes envahissent les plages les rendant ainsi moins accessibles. Les activités des populations (vastes plantations, pêche non réglementée, chasse aux tortues marines, infiltration dans les réserves naturelles, ouverture des embouchures …) menacent considérablement la biodiversité. De nombreux sites touristiques (site des ivoires, anciens comptoirs d'échanges, hôtel *best of Africa*) sont abandonnés et recouverts par la végétation. Tous ces problèmes évoqués suscitent l'intérêt de nombreux chercheurs en vue d'actions de protection et de promotion des richesses de la région. Ainsi pour une meilleure connaissance, une exploitation rationnelle, une protection et valorisation efficiente des objets et sites géologiques ainsi que l'environnement local immédiat de ces géosites, la création d'un géoparc s'impose.

Mots clés : Géopatrimoine, sud-ouest ivoirien, biodiversité, géoparc, géotourisme.

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Sedimentary provenance of siliciclastic rocks from the LallaMouchaaCalcschists Formation (Coastal Block, Western Rehamna): Evidence of denudation of ca. 2 Ga basement in the Moroccan Meseta

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Paleoproterozoic basement rocks (ca. 2Ga) are scarce along the European and North African Paleozoic mountain chains (Fig.1a). In Morocco, ca. 2.2-2Ga granitic rocks (Gasquet et *al*., 2008; Kouyaté et *al*., 2013) have been exclusively reported in the Western Anti-Atlas at southwest of the Anti-Atlas Major Fault, (Choubert, 1963). In Eastern and Central Anti-Atlas and in the Moroccan Meseta, the existence of a Paleoproterozoic basement has only been recognized through indirect evidence (Gasquet et *al*., 2008; Michard et *al*., 2010). In the Anti-Atlas belt, ca. 2Ga detrital zircon grains are found in the Ediacaran siliciclastic rocks of the Bou Salda, Saghro and Taghdout groups (Abati et *al*., 2010). In the Moroccan Meseta, Paleoproterozoic (ca. 2Ga) zircon grains were extracted from gneiss and granitic xenoliths found in Triassic lamprophyre dykes, and from Carboniferous granophyric microgranite intrusions of central Jebilet (Dostal et *al*., 2005, Essaifi et *al*., 2003).

Recently, a porphyritic rhyolite from the Rehamna Massif was dated at ca. 2.05Ga (Pereira et *al*., 2015), demonstrating for the first time, the exposure of the Eburnian basement in the Western Meseta. These Eburnian arc-related magmatic rocks, which are exposed to the south of the Permian Sebt Brikiyine granite in the core of anticlines from the Lalla Mouchaa Anticlinorium, are allegedly unconformably overlained by transgressive siliciclastic and carbonate beds (Corsini, 1988; Pereira et *al*., 2015). At north of the Sebt Brikiyine granite the probable Lower Cambrian sequence (Lalla Mouchaa Calcschists Formation; Guezou & Michard, 1976; Corsini, 1988) comprises a basal unit of microbreccias, arkosic sandstones and siltstones (lower member) that pass towards the top to centimeter-thick beds of calcschists interbedded with limestones and dolomites (upper member) that are conformably overlain by the "Paradoxides Shale Formation" composed of siltstone, greywacke and sandstone with Middle Cambrian fauna.

In order to study the potential sources of the Lalla Mouchaa Calcschists Formation (probable Lower Cambrian), we have sampled a microbreccia at the Koudiat El Hamra region, for U-Pb geochronology on detrital zircon. This foliated microbreccia is composed of elongated K-feldspar and quartz phenocrysts surrounded by a fine-grained matrix. Detrital zircon grains gave $^{206}Pb/^{238}Ub$ ages that in the Probability density plot curve are distributed by two main age peaks at ca. 2.05Ga and ca. 2.03Ga (Fig.1b), yielding a $^{206}Pb/^{238}U$ age-weighted mean of ca. 2.04Ga (El Houicha et *al*., 2018). The obtained U-Pb results point to a provenance from a Paleoproterozoic source, suggesting a possible contribution from rocks of the same age of the 2Ga porphyritic rhyolite exposed at south of the Sebt Brikiyine granite. Thus, there is a possibility that the Paleoproterozoic basement extends bellow the Paleozoic and Neoproterozoic sequences of the Rehamna massif.

The U-Pb geochronological results of the present study allow us to: *i*) suggest that the Cambrian transgression in the Western Meseta probably took place based on a more complex structural architecture affecting the Precambrian basement composed not only of Ediacaran rocks, as has been suggested in the literature, but also with Paleoproterozoic rocks as discovered in this study (Fig.1c); and *ii*) admit the existence of a potential source of Paleoproterozoic age in the Western Meseta, a hundred kilometers further to the north of the South Meseta fault. Therefore, is not necessary to admit that the 2Ga-aged detrital zircon grains found in the Paleozoic and Mesozoic sequences of the Moroccan Meseta derive exclusively from sources located in the Anti-Atlas and/or from the West African Craton.

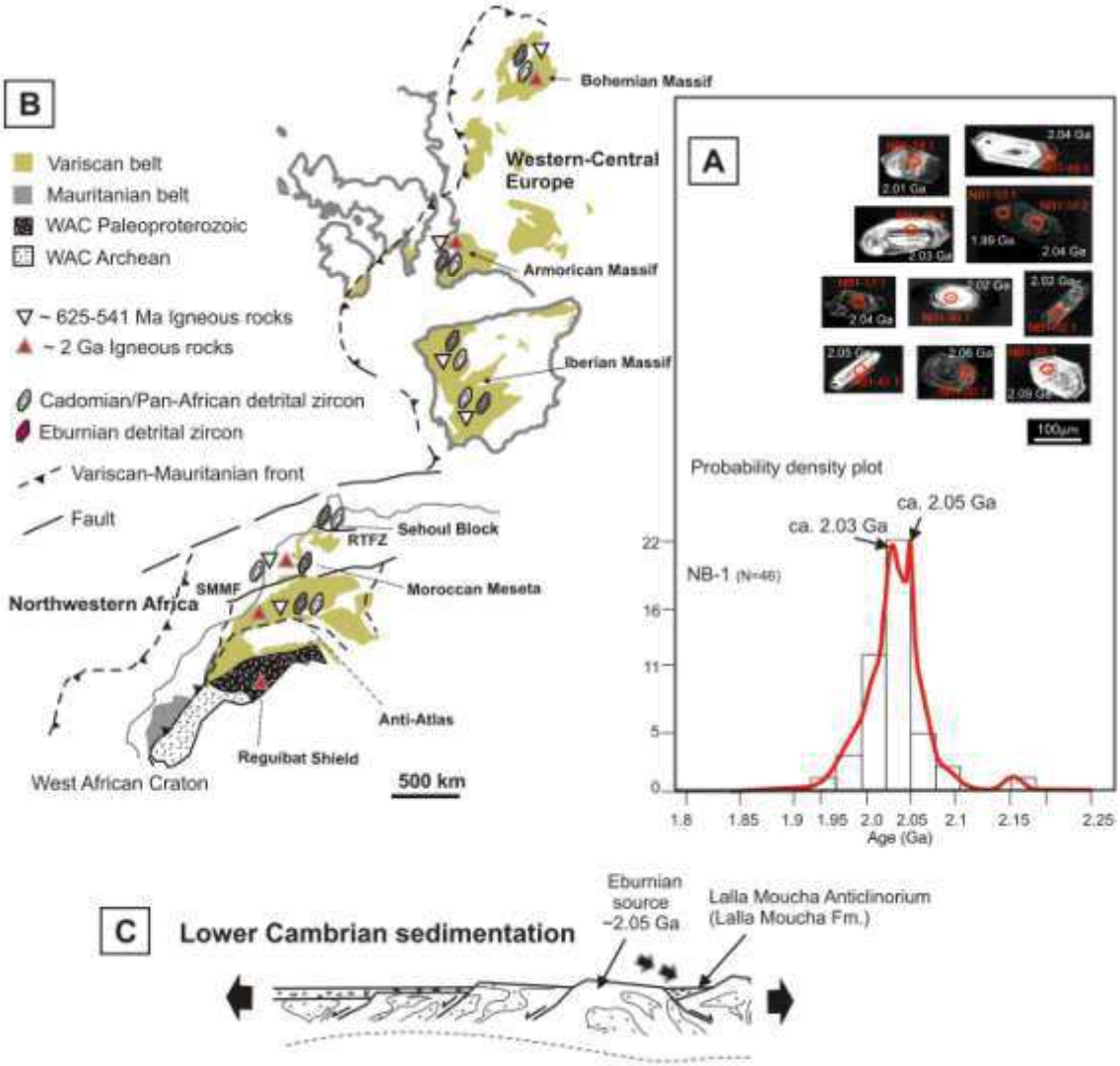

Figure 1. a) Probability diagram plot for microbreccia sampled in the LallaMouchaa Anticlinorium (LallaMouchaa Formation; sample NB1) and Cathodoluminescence images of representative zircon grains; b) Sketch showing the location of the Moroccan Meseta in the Late Paleozoic Alleghanian-Variscan orogenic belt, the known outcrops of the Ediacaran and Paleoproterozoic crystalline basement and the occurrence of Cadomian/Pan-African and the Eburnian detrital zircon in Ediacaran-Cambrian siliciclastic rocks of Europe and North Africa; c) Schematic model for the recycling of the Paleoproterozoic (Eburnian) basement in the Coastal block during the deposition of the LallaMouchaaCalcschists Formation. (El Houicha et *al*., 2018 and references therein).

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Revisiting the middle - late Visean unconformity in the SE Moroccan Massif Central: New data and perspectives

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The SE part of the Moroccan Massif Central (MMC) is a key area to the understanding of early Variscan events. It is located in between the Eastern Meseta that would be characterized by late Devonian tectonics (372-366 Ma, K/Ar ages) -referred to as an Eovariscan event, and the whole of the Western Meseta, which is typified by Upper Carboniferous-Permian compressional phases (310-275 Ma), "*i.e.* Neovariscan", (Huon et *al*., 1988; Hoepffner, 2005, 2006; Michard et *al*., 2010; Chopin et *al*., 2014; Wernert et *al*., 2015). Two distinct tectonostratigraphic frameworks have been proposed for the southeastern MMC: (*i*) an early tectonometamorphic event have deformed Neoproterozoic to Devonian strata, followed by a major and protracted phase of continental erosion (Allary et *al*., 1972-1976; Huvelin et Mamet, 1997; Verset, 1985-1988; El Houicha, 1994). The age of this deformation is younger than the Upper Devonian (which is known within the Carboniferous detrital clasts), and older than the uppermost Middle Visean (age of Akka Ouzarif and Takkat-Aberki Fms, based on microfaunas) (Verset, 1985-1988; Birlea et Birlea, 1992; Huvelin et Mamet, 1997), (*ii*) structuration and associated metamorphism were related to a Mesovariscan event (~330Ma, K/Ar ages), being coeval with the development of wrench faults and pull-apart basins initiated during the Visean which evolved into foreland basins during Upper Visean to Early Westphalian (Bouabdelli, 1989, Bouabdelli et Piqué, 1995; Ben Abbou et *al*., 2001) or possibly since the Tournaisian?. The latter model envisions a progressive westward migration of the deformation throughout the entire Morocco during the Upper Paleozoic (Huon et *al*., 1988; Bouabdelli, 1989, Hoepffner et *al*., 2005, 2006).

In order to precise the timing of the early Variscan tectonic events, the stratigraphic age of unconformable strata lying upon ante-Visean rocks is to be formally established. In the Bouechchot and the Tichout n'Rich areas of the Mrirt region, conglomerates and red greywackes that seal the unconformity truncating Middle Devonian strata are sometimes ascribed to the Upper Tournaisian, yet without formal grounds (Faik, 1988; Bouabdelli et *al*., 1989). In the Sidi Lamine area (Qasbat-Tadla map), sandstones and shales of the Bou Ifoulloussene Fm, which overly the Cambro-Ordovician quartzites of the Aguelmouss massif,