PSI2009/521
Environmental evolution during the last 6800 years story in Efate (Vanuatu): Emaotfer site

Anne-Marie Semah, Wilfried Gourdon and Denis Wirrmann
Institut de Recherche pour le Développement, UR055 PALEOTROPIQUE, 32, avenue Henri Varagnat, 93143 Bondy, France, Metropolitan
wilfried.gourdon@ird.fr

The Efate Island Group is located at 17°40'S and 168°20'E. The studied site, Emaotfer Swamp, lies today at a elevation of around 17m above sea-level on the south coast of Efate Island (985 km2) close to the eastern boundary of the Teouma Graben on the left bank of Teouma River. The vegetation surrounding the swamp is characterized by a swampy margin forest and is dominated by Hibiscus tiliaceus, Barringtonia racemosa, Pandanus tectorius. The more altitudinal vegetation is mainly occupied by dry forest species like: Dendrocine (Urticaceae), Antiaris (Moraceae), Garuga (Burseraceae), Homalium (Flacourtiaceae)... Lapita remains (Most ancient cemetery in the pacific -3200 to 3300 years B.P. have been discovered recently near this swamp. It seems important to compare results of this cemetery and results from the Emaotfer core. This core boring spans a period from 6800 cal. yr BP to the present. From the base to the top of core Tifer06, three main lithological sequences corresponding to three types of deposits have been identified: Unit I, from 481 to ca 431 cm, the deposits appear homogeneous and correspond to clayey organic sediments; Unit II, from 431 to ca 151 cm, the sediments present a succession of pinkish to reddish brown level, with light red, dark reddish grey and/or white patches; Unit III, until the top of the core, it appears very homogeneous and corresponds to peat deposits. The first palynological results show that the pollen content can be correlated with the three main parts of the stratigraphy. In the lower part (bottom to 440 cm), we determined the mangrove association and humid conditions. In the second part, the vegetation is represented by an open environment with many Baeckeae, Chenopodiaceae ..., and drier conditions. On the contrary, the upper part shows a relatively more humid environment which evolves to the actual vegetation, the open forest described previously. In regard with the palaeobotanical results, it seems that the "Lapita" population came during or because of drier conditions.

Number of words in abstract: 324
Keywords: Vanuatu - Environment - Holocene
Technical area: Ecosystems, Biodiversity and Sustainable Development
Special session: Not specified
Presentation: Oral presentation preferred
Special equipment: Video-projector (beamer)