

POLLEN ANALYSIS ON GRENADA, WEST INDIES

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This tropical, high, oceanic island of volcanic origin harbours remnant stands of rain forest, dry seasonal deciduous forest and mangrove forest. We have collected most of the flora of 800 species and made pollen reference slides. Pollen analysis and radiocarbon dating of sediment cores from volcanic basins provides information on Quaternary vegetation, climate, sea level and human history. Lake Grand Etang, a maar lake surrounded by rain forest at 500 m asl, yielded a 12 m long sediment core with five radiocarbon dates, indicating continuous sedimentation back to 25,000 BP; abundant fern spores indicate a continuous history of rain forest. Lake Antoine, also a maar but in seasonal forest just above modern sea level, yielded an 8 m long core which dates back to 10,000 BP. Levera Pond and surrounding mangrove swamp at modern sea level occupies a collapse basin; three dated cores indicate it was a bay of the sea until 2,300 years BP when a barrier bar isolated the pond and allowed swamp to form. In the 18th and 19th centuries, erosion from sugar cane farming increased sedimentation.