



Sedimentary signature of the Krakatau 1883 tsunamis

Raphael Paris (1), Nelly Mazzoni (1), Patrick Wassmer (2), Franck Lavigne (3), Budianto Ontowirjo (1), Alexander Belousov (4), and Marina Belousova ()

(1) CNRS, GEOLAB, Clermont Université, France, (3) Université Paris 1, LGP Meudon, France, (2) Université de Strasbourg, LGP Meudon, France, (4) Institute of Volcanology and Sismology, Petropavlosk, Kamchatka, Russia

The 1883 eruption of Krakatau volcano has been extensively studied and the scenario of the events widely discussed, especially the source of the main tsunami that devastated the coasts of the Sunda Strait.

Nevertheless, less attention was paid to the deposits left inland by the successive tsunami waves. Carey et al. (2001) identified layers of rounded pumice lapilli that they interpreted as tsunami deposits, despite their lack of marine bioclasts. Coral boulders and breccia, together with massive pieces of a lighthouse were mentioned up to 4 km inland along the Cikoneng River in Java (Bronto, 1990). Boulder fields in Sumatra (Gubug Garam) and Java (Anyer) were studied by Maxcia (unpublished PhD).

We have surveyed the Western coast of Java, from Merak to Ujung Kulon National Reserve, and the Southern coast of Sumatra, from Bandar Lampung (Teluk Betung) to Bakaheuni and Sanghyang Island. The 1883 Krakatau tsunami deposits are less preserved in Java than in Sumatra, due to extensive land occupation in West Java, and also because the deposits are thicker (up to 80 cm) and intercalated with eruptive products in Sumatra (ash falls, pyroclastic flows, mud rains).

The stratigraphic logs and composition of the deposits are compared with information from the reports of Verbeek (1986) and Symons (1888). All observations were georeferenced and integrated in a GIS database that will be available online for the scientific community.

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Verbeek, R.M., 1986. Krakatau. Batavia, Imprimerie de l'Etat, 567p.