Appendix 3: Glossary

A mata	A hole or depression.
Andesite	A generally grey volcanic rock containing 53 up to less than 62 per cent silica (SiO_2) and forming a chemical series with basalt, dacite and rhyolite.
Ash	Pieces of generally glassy volcanic rock less than 4 millimetres in diameter.
Ash fall	A term commonly used to distinguish the gravitational fall of particles from eruption clouds, from the deposits of pyroclastic flows.
Basalt	A dark volcanic rock containing less than 53 per cent silica (SiO_2) and forming a chemical series with andesite, dacite and rhyolite.
Caldera	Large generally elliptical or sub-circular surface depressions at least 1–2 kilometres wide, formed by the collapse of the roofs of magma reservoirs.
Crater	The small depressions commonly seen on volcanoes, especially at their summits, and which are generally less than 1–2 kilometres in diameter (see also caldera).
Dacite	A generally light-greyish volcanic rock containing 62 up to less than 70 per cent silica (SiO_2) and forming a chemical series with basalt, andesite and rhyolite.
Doctor-boi	New Guinean medical assistant.
Dukduk	Masked ritual figure; secret society.
Geothermal	Relating to or produced by the internal heat of the earth, whether magmatic or produced by radioactivity.
Guria	Earthquake.

Hydrovolcanic eruption	Explosions caused by magma encountering subsurface water and producing intense fracturing and expulsion of fragmented rocks.
Ignimbrite	A pumice-rich deposit or rock commonly of dacitic or rhyolitic composition produced by deposition from a pyroclastic flow.
Intrusion	Rocks representing magmas that have filled and solidified in fissures, cracks, faults and other spaces beneath volcanoes but which have not erupted from them.
Kaia	Refers to different spirits that appear most commonly as giant snakes called *valvalir* or *kaliku.*
Kina	PNG national currency.
Kuanua	Tolai language.
Landeshauptmann	Administrator.
Lava flow	A ground-hugging stream of erupted magma and rock, commonly referred to simply as 'lava' and clearly distinguishable from pyroclastic flows.
Magma	Subsurface materials in the earth's crust and upper mantle that have become molten and that either erupt from volcanoes or form intrusions beneath them. Most magmas are technically alumina-silicate liquid and most contain at least some pre-eruption crystals.
Matamatanai	Commemorative ceremony.
Nuées ardente	The term means 'glowing cloud' and was introduced for the block-and-ash type pyroclastic flows observed at Mount Pelée on 8 May 1902.
Patuana	Older people.
Peléean eruption	The name derives from the explosive eruptions at Mount Pelée in 1902 when *nuées ardentes* were first described and named. Both terms are no longer volcanologically fashionable.
Phreato	A widely used prefix that corresponds commonly to the early 'hydroexplosive' phase that precedes some magmatic eruptions.

Plinian eruption	Paroxysmal ejections of large volumes of pyroclastic materials, at times accompanied by caldera formation. The eruptions form high-rising eruption columns and clouds. Large-volume pyroclastic flows may develop when the column collapses, including ignimbrites if pumice is abundant in the flows.
Pumice	Pieces of highly frothed volcanic rock commonly of dacitic or rhyolitic composition and which can float on water.
Pyroclastic	Literally meaning 'fire broken' and applied to fresh magma or hot volcanic rocks that have been broken up during volcanic explosions.
Pyroclastic flow	Fast-flowing hot emulsions or 'avalanches' of pumice, volcanic ash, dust, blocks and entrained air, which tend to follow the floors of valleys during their emplacement.
Ra-baul	The mangroves.
Scoria	A pyroclastic *rock* in fragments containing abundant round, bubble-like cavities (vesicles). Scoria is commonly basaltic or andesitic and ranges in colour from black or dark grey to deep rust-reddish depending on its state of oxidation. It is not pumiceous.
Strombolian eruption	Weak to violent ejection of pasty blebs of fluid lava, accompanied by spherical to fusiform 'bombs', cinders and ash. The activity can be spectacularly incandescent at night-time. Lava flows may be formed.
Subduction	The process whereby a tectonic plate is thrust under an adjoining plate and descends deep into the earth's interior.
Surge	Laterally propelled eruption clouds caused typically by the interaction of magma with lake water or in shallow-water coastal areas (see hydrovolcanic eruptions). They flow across the water surface away from the vent and the base of the main eruption cloud or column.
Tabu	Shell money.

Tephra	A commonly used synonym for pyroclastic materials or pyroclastic rocks in general. The term was used originally by Aristotle.
Tinata tuna	Our own language.
Tomography (seismic)	Mapping features beneath the earth's surface using the measured velocities of earthquakes.
Tsunami	A Japanese term referring to a long, high sea wave caused by an earthquake or some other disturbance such as a volcano collapsing into the sea. Tsunamis increase their heights where approaching coastlines and can be hazardous.
Tubuan	Masked ritual figure; secret society.
Vulcanian eruption	Violent ejections of solid or viscous hot volcanic fragments, at times in cauliflower- or mushroom-shaped clouds. Pyroclastic flows can take place, but lava flows are typically absent.
Vunatarai	Matrilineal descent lines.

This text is taken from *Return to Volcano Town: Reassessing the 1937–1943 Volcanic Eruptions at Rabaul*, by R. Wally Johnson and Neville A. Threlfall, published 2023 by ANU Press, The Australian National University, Canberra, Australia.