# *Mineral and gem collecting in Indonesia: The begginings in 1989-1995*

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# Mineral and gem collecting in Indonesia: The beginnings in 1989–1995

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Indonesia is a collection of thousands of islands, representing mostly Tertiary to Recent volcanics rimming and mantling Paleozoic cratonic fragments. Accordingly, the diversity of its minerals is small and not historically well known since a mineral and gem collecting community only started with the rise in wealth of the country after independence in 1945 and the expulsion of the Dutch in 1949. Although mineral extraction is active throughout the country—gold, copper, lead, tin being major resources; minerals are rarely preserved. Between 1989 to 1995, I lived in Jakarta, and traveled within Java as well as to Sulawesi and Timor. During these travels, I field collected minerals that were available and photographed specimens seen in museums, markets and exhibitions. Mineral, gem, and lapidary dealers were just starting to surface as economic development increased. This presentation will share the beginnings of mineral collecting and dealing as it evolved. Some news of current, 2017 Indonesia mineral activities will also be described.

So how does one find minerals in Indonesia? Travel around the archipelago and keep an active open eye for opportunities to purchase, trade or self-collect, and reading the geologic literature which is mostly in English or Indonesian. Libraries in cities and universities are open to visitors; although they are much easier to use if you can read Indonesian. Used book stores will sometimes have useful material. Some tourist shops will have a one or two specimens for sale, at bargaining prices, of course. Open air street markets may also have a table or a blanket with some rocks, minerals or fossils for sale. During 1994, at the Pasar Rawa Bening, East Jakarta a gem and mineral market started to develop selling polished amethyst, petrified wood, agate, and minerals. This area after more than 20 years has become quite significant, but not particularly for mineral specimens.

*Just crystallized sulfur being sold at the Tankuban Perahu volcano crater, Bandung, West Java, August 1989 with Scott Bird, a Chevron geologist..*

Calcite, Grasberg mine, PT Freeport Indonesia, Sudiman Mountain Range, Irian Jaya, obtained 1994, 5 inches across. *Specimen from David Potter.*

Some national parks, like the Tangkuban Perahu volcano, south of Bandung, Java will have a table with freshly formed sulphur crystals as well as cooking eggs for tourists in the active fumaroles. Slightly older volcanics harbor petrified wood, agate, chalcedony, quartz veins, and amethyst. These may show up in a provincial museum. The most common material for sale or display are various forms of chalcedony with amethyst from Kalimantan, Java or Sumatra next most common. The area south of Sukabumi, West Java is known for its petrified wood and sometimes vein quartz crystals. Shops in town will have some polished chalcedony masses. Street markets in Banjar Masin, Kalimantan have in the past had alluvial diamonds for sale, found upriver. Alluvial, placer gold might be possible to find for sale, but its provenance may be debatable.

Intrusive volcanics reveal alpha quartz crystals and perhaps feldspar phenocrysts. One locality, a dacite outcrop, in southwest Java has an abundance of alpha quartz up to 1 inch in diameter, loose in road cuts and creek bottoms, having weathered out of the dacite. This locality was found after seeing specimens for sale in town and then inspecting and reading a published geologic map of the area which noted the crystals. Prehnite plates have been collected from Kalimantan were noticed in a small shop in Bandung.

Sedimentary rocks provide quartz, calcite, dolomite, pyrite, marcasite and pyrrhotite. Limestone quarries observed while traveling are always worth inspecting. West Timor has several places along some rivers with calcite-lined open fractures, nodules of pyrite and euhedral pyrrhotite crystals eroded from lignite and shale beds. Timorese minerals and fossils of Paleozoic crinoids and brachiopods or Mesozoic ammonites are usually cheaper but not more common than the island's hand-woven textiles.

The few exposed felsic plutonic rocks in the country are Paleozoic cratonic fragments with pegmatites containing muscovite and rarely beryl. Miarolitic cavities with quartz, feldspar and micas in the Tertiary-aged granites have not been reported from the archipelago but undoubtedly exist.

Mineral and gem collecting will continue but with rare exceptions only limited specimens will reach international markets. The blue-purple grape amethyst chalcedony from around Manakarra Kampung, Mamuju Kebupatan, Sulawesi Island is one rare example. Amethyst crystals form Sumatra and Kalimantan should be more common. Alluvial diamonds from Kalimantan are available on the market. Certainly more surprises should exist.