

Mineral occurrences in southern and south-eastern Australia – impressions of a professional mineralogist (abstract)

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Southern and south-eastern Australia contains an El Dorado of interesting mineral localities and ore deposits, both for professional mineralogists and amateur collectors. Uncounted old mines with forgotten or rarely visited dumps are scattered over vast areas of this part of Australia, but one encounters also very modern mines extracting copper, gold, silver, nickel and other precious metals, as well as industrial minerals (e.g., talc, dolomite, gypsum). It should be remembered that the wealth of Australia as a young state was based on mining (a large part of the money coming from the very rich Broken Hill deposit in New South Wales). Nowadays, the resources sector (comprising minerals and petroleum) is the country's largest single export sector. In 2006-2007, over 80 % of its output was exported, accounting for approximately 49 % of total goods and services exports. During that period, the minerals and petroleum industries produced over 8 % of Australia's Gross Domestic Product. The largest buyers of Australian minerals in 2006-2007 were China and Japan. Exploration activities are strong and will remain so, despite the current global economic crisis.

The author, a mineralogist and curator, considers himself lucky to have been able to visit Australian mineral localities during a postdoctoral stay at the South Australian Museum, Adelaide (South Australia) from 1997-1999, and during subsequent, brief stays and field trips in 2000, 2004 and 2008.

The author's talk will focus on the states and localities listed below.

South Australia:

- active and inactive phosphate quarries in the Mount Lofty Ranges
- the Mount Malvern baryte mine near Adelaide
- the Iron Monarch Fe-Mn mine in the Middleback Range
- the Spring Creek Cu mine
- the Paratoo Cu mine, type locality for two unusual REE-Cu carbonate minerals

Tasmania:

- the operating magnetite-scheelite Kara Mine
- the sulfide-bearing axinite skarn of Colebrook Hill
- zeolites in young volcanics
- the recently re-opened Mount Bischoff tin mine

Victoria:

- zeolites on Phillip Island (near Melbourne)
- the operating Lake Boga granite quarry (late-stage phosphates in miarolitic cavities, including the type locality species kunatite, lakebogaite, ulrichite and bleasdaleite)

New South Wales:

- the world-renowned Pb-Zn-Ag deposits of Broken Hill
- pegmatites in the Broken Hill area
- the active New Cobar Au-Cu mine (with an interesting suite of secondary minerals)

- the active Northparkes Au-Cu mine, currently the world's best locality for sampleite (phosphate analogue of lavendulan)

Access to some old mines, which may be in remote areas, is often only possible using four-wheel drives and local guides. Helpful information for the amateur and professional mineralogist is often provided on the websites of the Geological Surveys of the individual states (e.g., downloadable geoscientific maps, lists of mines etc.) Important literature references and links for Australian mineral localities are all given on the respective locality page of www.mindat.org, the internet-based free database on minerals and mineral occurrences.