



# AN OVERVIEW OF THE TYPE MINERALOGY OF THE DEMOCRATIC REPUBLIC OF THE CONGO

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*About 400 mineral species have their type localities in Africa, and about 100 of these were first described for localities in the Democratic Republic of the Congo. A close look at how some of these species were first noticed, described and named reveals the complex processes by which suspected new minerals are evaluated, compared with known minerals, sometimes validated as species, and sometimes later discredited.*

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## INTRODUCTION

The term “type mineralogy” refers to all minerals described as new species from studies of specimens from localities in a given region, country, or continent. Within Africa, the Katanga Copperbelt area of the Democratic Republic of the Congo (DR Congo) is one of the regions that have yielded a large number of new species. In its count of type species the Copperbelt is only surpassed, in Africa, by the Otavi Mountain Land region of Namibia, encompassing the Tsumeb and Kombat mine localities, and it is still well ahead of the Kalahari Manganese Field region of South Africa, from which many new species have more recently been described, particularly from the Wessels and N’Chwaning mines. A survey of the type mineralogy of the DR Congo as a whole provides some insights into the history of mineralogical research in central Africa, and it illustrates some general aspects of the description of new mineral species. The present article addresses these themes in general; more detailed information about individual minerals, with full bibliographical references, can be found in the DR Congo chapter of a volume surveying the type mineralogy of the entire continent of Africa (Mees, 2018).

## SOME NUMBERS

At this moment, about 5800 minerals have been formally recognized as valid species by the Commission on New Minerals,

Nomenclature and Classification (CNMNC) of the International Mineralogical Association (IMA). Of these, about 400 have type localities in African countries. According to the March 2022 listing by the IMA-CNMC, the three African countries which have produced by far the most new species are Namibia (108 species), the DR Congo (101 species), and South Africa (81 species). Within the DR Congo, the former Katanga or Shaba province, in the southeastern part of the country, has been the most productive, providing 72 of the 101 minerals that have been described as new species, including only two minerals from a site in northern Katanga, outside the Copperbelt region (Manono). Of the other 29 Congolese species, 26 have been described from localities in the former Kivu Province of the eastern DR Congo, and two from sites in the neighbouring Maniema Province. Only one species has a type locality in the former Bas-Congo province, in the western part of the country.

## VALID AND INVALID MINERALS

As already mentioned, 101 minerals have up to now been described as valid new species for the DR Congo (Table 1). Most of these are valid in that they either have been approved by IMA-CNMC decision or have been grandfathered, which applies to widely accepted species that were described at a time when formal approval was not yet required; others have been renamed or redefined, and still others are regarded as questionable. Some of