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ABSTRACT : Catalog of the mineral species first described from Zaire with mention of the collections where the type minerals are deposited. 93 valid species and 23 names applied to discredited minerals or varieties have been inventoried. The geological origin of the mineral deposits is also mentioned.

Key words : Type minerals - Zaire - Catalog.

RESUME : Catalogue des espèces minérales décrites pour la première fois au Zaïre avec mention des collections dans lesquelles les minéraux types sont déposés. 93 espèces valides et 23 noms appliqués à des minéraux discrédités ou à des variétés ont été recensés. L'origine géologique des dépôts est également mentionnée.

Mots clés : Minéraux types - Zaïre - Catalogue.

FOREWORD (*)

Type mineral specimens are :

- 1. reference samples for the definition of mineral species,**
- 2. historical documents.**

The type mineral specimen

After the description of a new mineral species it is usual to designate the type specimen. This is the specimen on which the chemical, crystallographic and physical properties of the new mineral species were originally determined. Since the determinative analysis may have been destructive, the material which remains as the type specimen may not be identical to the original sample, but it is that which is most closely related.

For historical and scientific reasons the authors who describe a new mineral species must deposit the corresponding type specimens in a museum or scientific institute. Only where a safe conservation is very probable - and only there - a unique document must be attainable. This procedure was once simply recommended but today it is strictly demanded.

Kinds of types

In 1970 Embrey and Hey proposed a scheme for distinguishing seven kinds of type specimens. When the CM launched its project to list the type specimens, this proposition served as the initial basis. However, Dunn and Mandarino (1987) presented a new nomenclature designation for type mineral specimens, which was accepted and approved by two IMA Commissions (CNMMN and CM). With these formal definitions only three kinds of type mineral specimens are accepted: holotype, cotype and neotype. These new definitions can be applied to the species described after (approx.) 1970, sometimes also for older ones.

(*) This front page extracted from the paper of STALDER *et al.* (1994) dealing with the Type Mineral Species from Italy, is reproduced with the kind permission of the authors.

1 Introduction

We present here the second part of the catalog of the Type Mineral Species (CTMS), the first one being devoted to the minerals described in Italy (STALDER *et al.*, 1994) and which served as model for the future complete world edition.

The present booklet collects the valid species as well as the discredited names of minerals that have been first described from Zaire (former Belgian Congo).

For each mineral, six categories of informations are given :

- The mineral code following HÖLZEL, 1990.
- The name of the mineral species (with a remark if the name does not concern an official accepted name) and the year of description.
- The reference of the first description: author(s), journal, year, number and pages.
- The type locality including :
 - the country (always Zaire),
 - the region (e.g. Shaba),
 - the nearest town,
 - the mine, open pit, deposit, village, mountain or river.
- The depository(ies) of the type specimen and specifications concerning these specimens:
 - the abbreviation of the country (e. g. F. for France),
 - the abbreviation of the depository (e.g. ENSM-Paris) (The extended list of the depository is given on page ...),
 - the status of the type: HT (holotype), CT (cotype), NT (neotype) or T (type without specification),
 - the catalog number with eventual quantity of material.
- Remarks (REM).

Up to now (1995), 93 valid species have been described from Zaire as well as 23 names applied to discredited species (varieties or synonyms).

Amongst the valid species, 69 are documented by a type specimen or more in an official collection (50 HT, 9 CT, 5 NT and 5 T), whereas 3 other belong to a private collector.

The relatively low number of type specimens preserved in public collections for Zairian material is due mainly to the following reasons :

- the absence of references to a depository for 9 species described by J. F. VAES between 1947 and 1958,
- the disappearance after the second world war of 13 type specimens of species described by A. SCHÖEP between 1921 and 1928 and originally preserved in the mineralogical collection of the University of Ghent (destroyed or stolen ?).

Geographical distribution of the Zairian type species

Zaire is divided into 7 regions (former provinces). With regard to the type specimens of this country, 66 (71%) originate from Shaba, 26 (28%) from Kivu and only one from Lower Zaire. 65 of the 66 type minerals from Shaba are located in the copper, cobalt and uranium deposits of the «Série des Mines» (Upper Precambrian) in the southern part of the region. More than half (35) of them were found in the uranium mine of Shinkolobwe. Amongst the 26 type species from Kivu, 13 minerals, mainly uranium phosphates, originate from the pegmatite of Kobokobo whereas 5 other type species were described from the lavas of the volcano Nyiragongo, along the boundary of Rwanda.

The geographical distribution of the type species from Zaire is given on the map of Fig. 1.

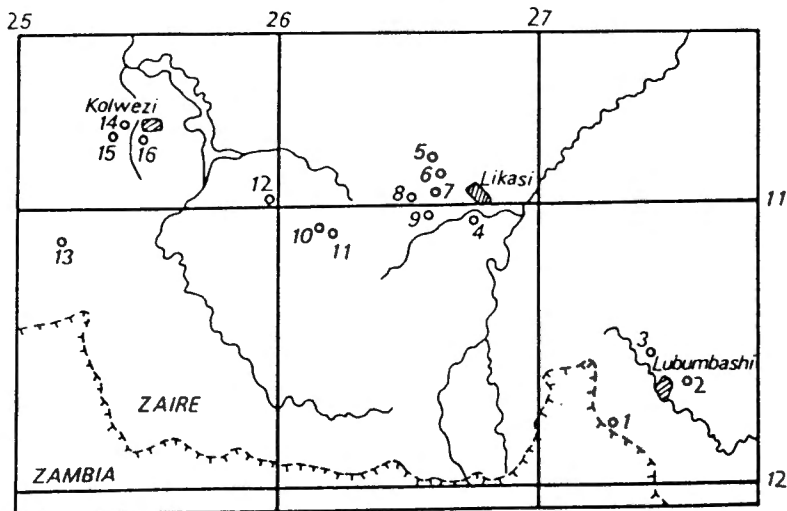
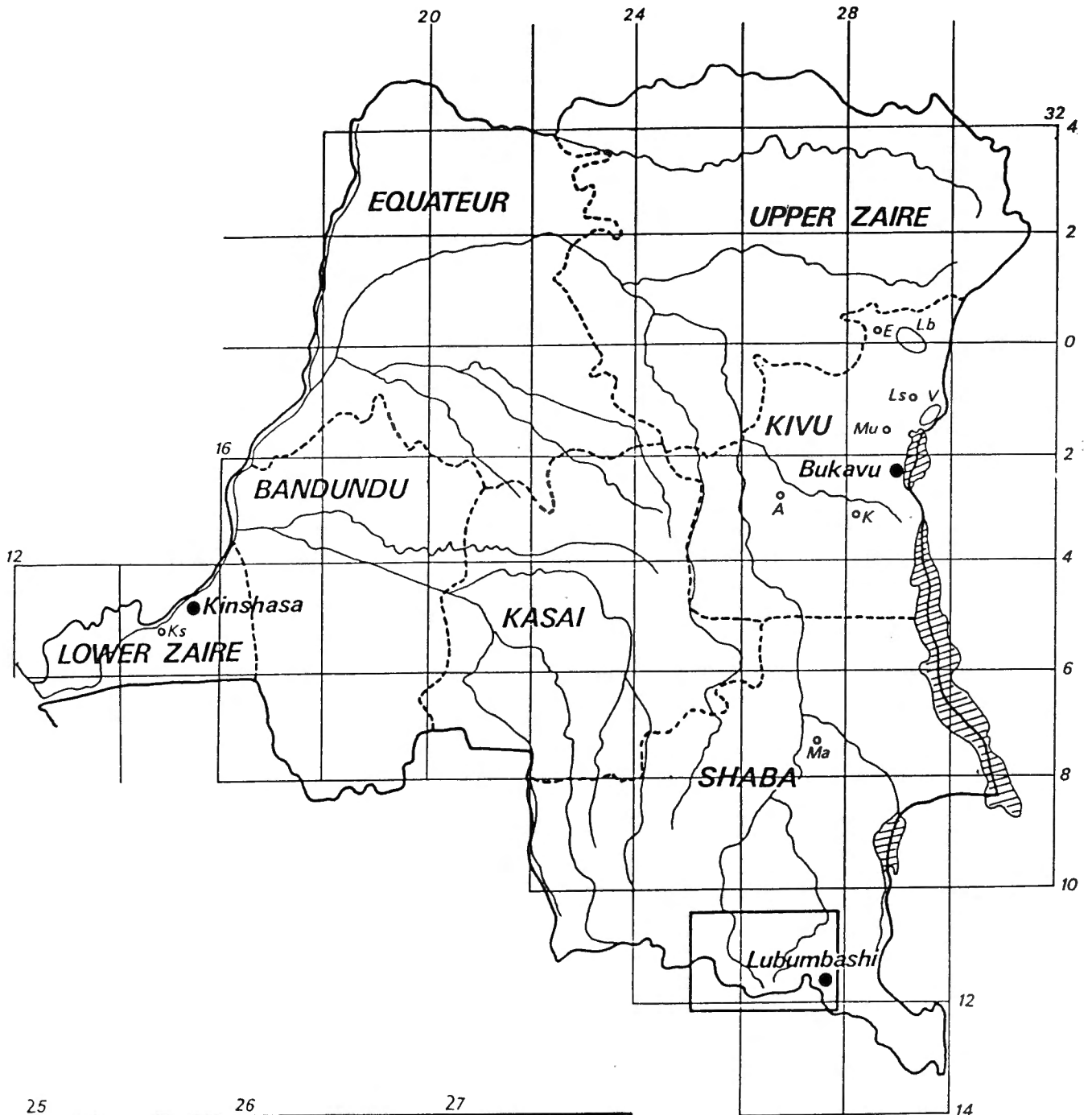


Fig. 1. Geographical distribution of the Zairian type minerals

Map of Zaire :

A	Atondo & Mount Misobo
E	Etaetu river
K	Kobokobo open pit
Ks	Kusu-Senge
Lb	Lubero area
Ls	Lueshe
Ma	Manomo
Mu	Mumba district
V	Volcano Nyiragongo & Mount Shاهر

Detailed map of Southern Shaba :

1	Kipushi (Prince Leopold mine)
2	Star of the Congo mine
3	Luiswishi copper deposit
4	Likasi open pit
5	M'sesa open pit
6	Kambove copper mine
7	Chamitumba
8	Ludjiba open pit
9	Shinkolobwe uranium mine
10	Mindigi copper-cobalt deposit
11	Swambo uranium prospect
12	Kasompi
13	Kalongwe
14	Musonoi
15	Kamoto and Eastern Kamoto
16	Kolwezi

Chronology of the discoveries

The diagram of Fig. 2. shows the chronology of the discoveries of type specimens described from Zaire.

After the description of cornetite in 1911, the first Zairian species, an auspicious epoch for the mineralogy of Shaba took place between 1921 and 1925. It mainly concerned the results of the studies of A. SCHOEP onto the copper deposits and the Shinkolobwe-Kasolo uranium mine (A).

The high number of discredited names concerning the minerals described during the thirties is due to the description by L. DE LEENHEER of a lot of cobalt hydroxides from Southern Shaba, later identified as heterogenite by HEY (1962) and DELIENS (1974).

The peak of 1947 corresponds to the description of a series of uranium secondary minerals by J. F. VAES (B).

Between 1955 and 1961 (C) appear mineral species from various deposits and described by several authors. Some minerals of that period were found in the eruptive rocks associated with the volcanoes of Northern Kivu and were described by T. SAHAMA together with other Finnish mineralogists.

The peak of 1965 as well as the series between 1969 and 1973 (D) also represent various discoveries among which some uranium selenites from the Western mines of Southern Shaba (region of Kolwezi). The species were studied by French mineralogists together with geologists of the Union Minière du Haut-Katanga (UMHT), later Gécamines.

The large number of type mineral species discovered in the eighties (E) represents the result of the studies of M. DELIENS and P. PIRET about the secondary copper and uranium minerals from the deposits of Southern Shaba as well as the uraniferous pegmatite of Kobokobo in Eastern Kivu.

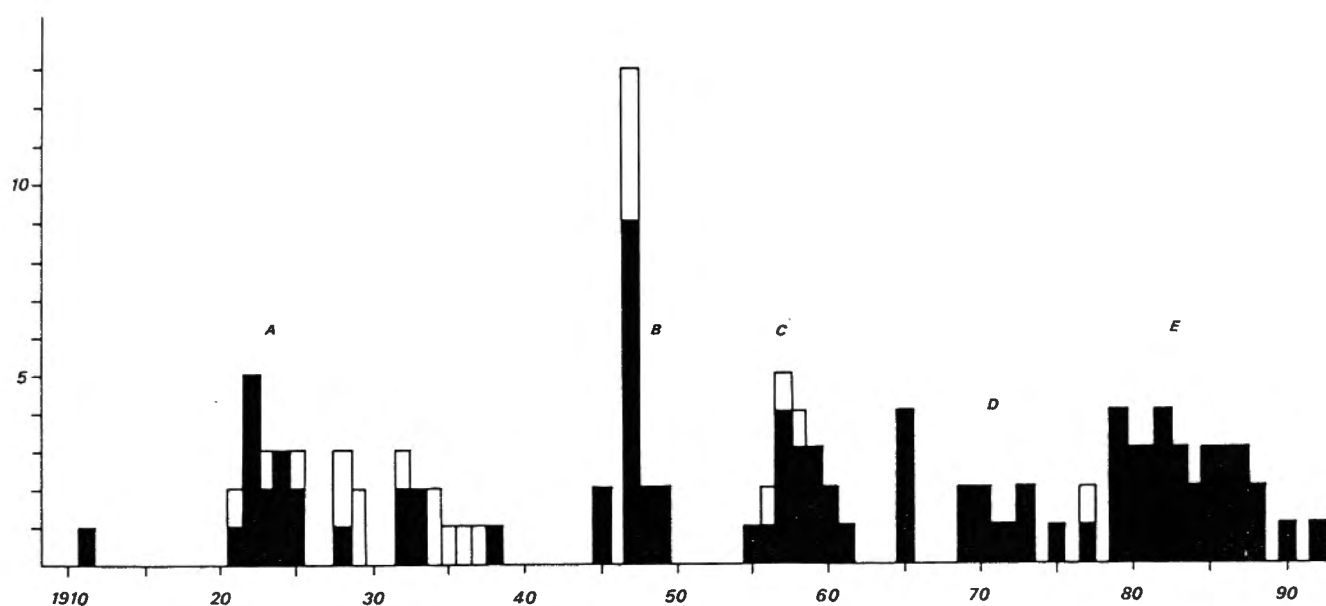


Fig. 2. Chronology of the description of new mineral species from Zaire.

Black rectangles = valid species, white rectangle = discredited name.

TYPE MINERALS FROM ZAIRE

Valid species		Discredited names	
Althupite	Marthozite	Bialite	= Wavellite
Andremeyerite	Masuyite	Boodtite	= Heterogenite-3R
Astrocyanite-(Ce)	Metaschoepite	Borgniezite	= Amhibole Na
Anthoinite	Metastudtite	Chinkolobwite	= Sklodowskite
Becquerelite	Metavandendriesscheite	Diderichite	= Rutherfordine
Bijvoetite-(Y)	Metavanmeersscheite	Droogmansite	= Kasolite
Billietite	Moreauite	Epi-ianthinite	= Schoepite
Briartite	Mundite	Hydrotenorite	= Tenorite
Buttgenbachite	Oosterboschite	Katangite	= Chrysocolla
Cattierite	Oursinite	Kipushite	= Veszelyite
Cesplumtantite	Paraschoepite	Kobokobite	= Rockbridgeite
Claringbullite	Parsonsite	Kusuite	= Wakefieldite-(Ce)
Combeite	Phuralumite	Lubumbashite	= Heterogenite 3R
Comblainite	Plumbomicrolite	Lusungite	= Goyazite
Cornetite	Protasite	Mindigite	= Heterogenite 3R
Cousinite	Rankamaite	Renardite	= Dewindtite
Cuprosklodowskite	Ranaunculite	Seleniosiegenite	= Siegenite
Curite	Renierite	Seleniovaesite	= Vaesite
Delhayelite	Richetite	Selenolinnæite	= Linnæite
Demesmaeckerite	Roubaultite	Stainierite	= Heterogenite 3R
Derriksite	Salecite	Stasite	= Dewindtite
Dewindtite	Sayrite	Trieuite	= Heterogenite 3R
Dumontite	Schoepite	Uranolepidite	= Vandenbrandeite
Eylettersite	Schuilingite-(Nd)		
Florencite-(La)	Sengierite		
Fourmarierite	Shabaite-(Nd)		
Françoisite-(Nd)	Sharpite		
Gallite	Sklodowskite		
Götzenite	Soddyite		
Guilleminite	Stilleite		
Gysinite-(Nd)	Studtite		
Heterogenite-2H	Swamboite		
Ianthinite	Thoreaulite		
Julienite	Threadgoldite		
Kalipyrochlore	Triangulite		
Kamitugaite	Trikalsilite		
Kamotoite-(Y)	Upalite		
Kasolite	Uranocalcarite		
Kipushite	Vaesite		
Kirschteinite	Vandenbrandeite		
Kivuite	Vandendriesscheite		
Kolwezite	Vanmeersscheite		
Lepersonnite-(Gd)	Varlamoffite		
Likasite	Wakefieldite-(Ce)		
Luberoite	Wyartite		
Ludjibaite	Zairite		
Lueshite			

2. Alphabetical catalogue

- 7ED Althupite 1987**
Deliens M, Piret P in: Bull. Minéral. (1987) 110, 65-72
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 6.178 (a few mg)
- 8BB Andremerite 1973**
Sahama T, Siivola J, Rehtijarvi P in: Bull. Geol. Soc. Finland (1973) 45, 1-8
Zaire - Kivu - Rutshuru: volcano Nyiragongo
- 6F Anthoinite 1947**
Varlamoff N in: Ann. Soc. Géol. Belg. (1947) 70, B 153-166
Zaire - Kivu - Pangi: Mount Misobo, near Kalima
- 5DE Astrocyanite-(Ce) 1990**
Deliens M, Piret P in: Eur. J. Min. (1990) 2, 407-411
Zaire - Shaba - Kolwezi: Musonoi open pit
 B - IRScNB-KBIN-Brussels - HT : RC 3.513 [10 mm rosettes on kamotoite-(Y)]
- 4GB Becquerelite 1922**
Schoep A in: C.R. Acad. Sci. Paris (1922) 174, 1240-1242
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 F - MHN-Paris - CT : 122.135
- Bialite (Discr. name) 1928
Buttgenbach H in: Ann. Soc. Géol. Belg. Publ. rel. Congo belge (1923) 51, C 117-123
Zaire - Shaba - Likasi: Mushishimano, tributary of river Lufira
 REM: discredited name. Syn. of **wavellite**
- 5DF Bijvoetite-(Y) 1982**
Deliens M, Piret P in: Can. Min. (1982) 20, 231-238
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 B - MRAC-KMMA-Tervuren - HT : RGM 13.781 (a few mm crystals)
- 4GB Billietite 1947**
Vaes JF in: Bull. Soc. belge Géol. (1947) 70, B 212-226
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
- Boodtite (Discr. name) 1936
De Leenheer L in: Natuurwet. Tijdschr. Gent (1936) 18, 77-78
Zaire - Shaba - Lubumbashi: Star of the Congo mine
 REM: discredited name. Syn. of **heterogenite-3R**
- Borgniezite (Discr. name) 1956
de Béthune P, Meyer J in: CR. Acad. Sci. Paris (1956) 243, 1132-1134
Zaire - Kivu - Rutshuru: carbonatite of Lueshe
 B - UCL-Louvain-la-Neuve - HT
 REM: discredited name. Syn. of sodic **amphibole**

2BC Briartite 1965

Francotte J, Moreau J, Ottenburgs R in: Bull. Soc. fr. Min. Crist. (1965) 88, 432-437

Zaire - Shaba - Kipushi: Prince Léopold mine

B - UCL-Louvain-la-Neuve - HT : U 309

F - ENSM-Paris - HT

UK - BMNH-London - CT : 1967, 271

3CA Buttgenbachite 1925

Schoep A in: C.R. Acad. Sci. Paris (1925) 181, 421-422

Zaire - Shaba - Likasi: Likasi open pit (in cavities of cuprite)

B - ULG-Liège - CT : 9.482 and 16.915

2CE Cattierite 1945

Kerr PF in: Amer. Min (1950) 30, 483-497

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

4DJ Cesplumtantite 1986

Voloshin AV, Men'shikov YP, Bakhchisaraitsev AY, Devnina NN in: Mineral. Zhurn. (1986) 8, 92-98

Zaire - Shaba - Manono: in a Sn granitic pegmatite

8AK Chinkolobwite (Discr. name) 1923

Schoep A in: Bull. Soc. belge Géol. (1923) 33, 87-88

Zaire - Shaba - Likasi: Kasolo Hill, near Shinkolobwe

REM: discredited name. Syn. of **Sklodowskite**

3CA Claringbullite 1977

Fejer EE, Clark AM, Couper AG, Elliott CJ in: Min. Mag. (1977) 41, 433-436

Zaire - Shaba - Likasi: M'sesa copper mine, near Kambove

Zambia - Copperbelt - Nchanga open pit

UK - BMNH-London - HT : (mineral from Nchanga)

8CD Combeite 1957

Sahama T, Hytönen K in: Min. Mag. (1957) 31, 503-510

Zaire - Kivu - Rutshuru: Mount Shaheru (volcano Nyiragongo)

B - MRAC-KMMA-Tervuren - CT : RGM 8.037

US - NMNH-Washington - T : 142.981 AO

UK - BMNH-London - CT : 1957, 703

4DB Comblainite 1980

Piret P, Deliens M in: Bull. Minéral. (1980) 103, 113-117

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - HT : RGM 2.224 (a few mg)

US - NMNH-Washington - T : 147.188.00

7BF Cornetite 1911

Cesaro G in: Ann. Soc. Géol. Belg. (1911-1912) C 41, 39

Zaire - Shaba - Lumbashi: Star of the Congo mine

B - ULG-Liège - HT : 9.130 to 9.133

6G Cousinite 1958*Vaes JF* in: *Geol. en Mijnbouw* (1958) 19, 449**Zaire** - Shaba - Likasi: Shinkolobwe uranium mineREM: seems to be identical with magnesian **umohoite****8AK Cuprosklodowskite 1933***Buttgenbach H* (1933) in: *Vaes JF* in: *Ann. Soc. Géol. Belg.* (1933) 56, B 331-332**Zaire** - Shaba - Likasi: Kambove open pit

B - ULG-Liège - HT : 16.655

4GB Curite 1921*Schoep A* in: *C.R. Acad. Sci. Paris* (1921) 173, 1186-1187**Zaire** - Shaba - Likasi: Shinkolobwe uranium mine

F - MHN-Paris - CT : 121.248

UK - BMNH-London - CT : 1924, 337

8EQ Delhayelite 1959*Sahama T, Hytönen K* in: *Min. Mag.* (1959) 32, 6-9**Zaire** - Kivu - Rutshuru: Mount Shaheru (volcano Nyiragongo)

B - MRAC-KMMA-Tervuren - CT : RGM 8.037

4HE Demesmaeckerite 1965*Cesbron F, Bachet B, Oosterbosch R* in: *Bull. Soc. fr. Min. Crist.* (1965) 88, 422-425**Zaire** - Shaba - Kolwezi: Musonoi open pit

F - U-Paris 6 - HT : 9.097

F - MHN-Paris - CT : 181.36

UK - BMNH-London - CT : BM 1969, 46

F - ENSM-Paris - CT

4HE Derriksite 1971*Cesbron F, Pierrot R, Verbeek T* in: *Bull. Soc. fr. Min. Crist.* (1971) 94, 534-537**Zaire** - Shaba - Kolwezi: Musonoi open pit

F - U-Paris 6 - HT : 204 and 12.251

F - ENSM-Paris - CT : 9.104 (label from Sorbonne)

F - MHN-Paris - CT : 181.35

7EB Dewindtite 1922*Schoep A* in: *C.R. Acad. Sci. Paris* (1922) 174, 623-625**Zaire** - Shaba - Likasi: Shinkolobwe uranium mine

F - MHN-Paris - NT (chem.): 122.106

Diderichite (Discr. name) 1947

Vaes JF in: *Ann. Soc. Géol. Belg.* (1947) 70, B 233-236**Zaire** - Shaba - Likasi: Shinkolobwe uranium mineREM: Discredited name. Syn. of **rutherfordine**

Droogmansite (Discr. name) 1925

Buttgenbach H in: Ann. Soc. Géol. Belg. (1925) 48, 219-221

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - ULG-Liège - HT

REM: discredited name. Syn. of **kasolite**

7EC Dumontite 1924

Schoep A in: C.R. Acad. Sci. Paris (1924) 179, 693-695

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

F - MHN-Paris - CT : 125.11

Epi-ianthinite (Discr. name) 1947

Schoep A, Stradiot S in: Amer. Min. (1947) 32, 344-350

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

REM: discredited name. Syn. of **schoepite** (fibrous shape)

7BJ Eylettersite 1972

Van Wambeke L in: Bull. Soc. fr. Min. Crist. (1972) 95, 98-105

Zaire - Kivu - Mwenga: Kobokobo open pit

US - NMNH-Washington - T : 136.443.00

B - Private collection of L. Van Wambeke

REM: re-examination of the HT specimen stored in the private collection of Van Wambeke did not permit to find again the species eylettersite

FBJ Florencite-(La) 1980

Lefebvre JJ, Gasparrini C in: Can. Min. (1980) 18, 301-311

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

4GB Fourmarierite 1924

Buttgenbach H in: Ann. Soc. Géol. Belg. (1924) 47, C 41-43

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - ULG-Liège - HT : 16.871 and 16.872

F - MHN-Paris - CT : 124-181

7EC Francoisite-(Nd) 1988

Piret P, Deliens M, Piret-Meunier J in: Bull. Minéral (1988) 111, 443-449

Zaire - Shaba - Kolwezi: Eastern Kamoto open pit

B - IRScNB-KBIN-Brussels - HT : RC 3.512 (a few mg)

2BB Gallite 1958

Strunz H, Geier BH, Seeliger E in: N. Jahrb. Min. Mh (1958) 85-96

Zaire - Shaba - Kipushi: Prince Léopold mine

Namibia: Tsumeb mine

D - IMK-TU-Berlin - HT : 86/67, 87/564, 396 (from Kipushi and Tsumeb)

8BG Götzenite 1957

Sahama T, Hytönen K in: Min. Mag. (1957) 31, 503-510

Zaire - Kivu - Rutshuru: Mount Shاهرu (volcano Nyiragongo)

US - NMNH-Washington - HT : 142.981.00

B - MRAC-KMMA-Tervuren - CT : RGM 8.037

UK - BMNH-London - CT : 1957, 702

4HE Guilleminite 1965

Pierrot R, Toussaint J, Verbeek R in: Bull. Soc. fr. Min. Crist. (1965) 88, 132-135

Zaire - Shaba - Kolwezi: Musonoi open pit

F - ENSM-Paris - HT

US - NMNH-Washington - CT : 119.360.00

5DC Gysinite-(Nd) 1985

Sarp H, Bertrand J in: Amer. Min. (1985) 70, 1314-1317

Zaire - Shaba - Likasi: Kasompi copper mine

CH - MHN-Genève - HT : 410/85 and 435/60

REM: mineral association of the HT specimen is characteristic from Kasompi and not from Shinkolobwe as mentioned by the authors in their original paper

4FB Heterogenite-2H 1973

Deliens M, Goethals H in: Min. Mag. (1973) 39, 152-157

Zaire - Shaba - Likasi: Mindigi open pit

B - MRAC-KMMA-Tervuren - HT : RGM 10.800 (minute crystals on polished slide)

US - NMNH-Washington - CT 137.226.00

Hydrotenorite (Discr. name) 1937

De Leenheer L in: Bull. Soc. belge Géol. (1937) 47, 245-262

Zaire - Shaba - Lubumbashi: Star of the Congo mine

REM: discredited name. Syn. of **tenorite**

4GB Ianthinite 1925

Schoep A in: Natuurwet. Tijdschr. Gent (1925) 7, 97-99

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

9DA Julienite 1928

Schoep A in: Natuurwet. Tijdschr. Gent (1928) 10, 58-59

Zaire - Shaba - Likasi: Chamitumba (or Shamitumba) deposit

4CH Kalipyrochlore 1965

Van Wambeke L in: Euratom Report (1965) 2110, 9-16

Zaire - Kivu - Rutshuru: in the carbonatite of Lueshe

US - NMNH-Washington - T : 136.440.00

REM: holotype specimen preserved in the private collection of Van Wambeke

7ED Kamitugaite 1984

Deliens M, Piret P in: Bull. Minéral (1984) 107, 15-19

Zaire - Kivu - Mwenga: Kobokobo open pit (near Kamituga)

B - MRAC-KMMA-Tervuren - HT : RGM 13.985 (a few tiny plates)

5DF Kamotoite-(Y) 1986*Deliens M, Piret P* in: Bull. Minéral (1986) 109, 643-647**Zaire** - Shaba - Kolwezi: Eastern Kamoto open pit

B - MRAC-KMMA-Tervuren - HT : RGM 14.350 (a lot of cm plates)

US - NMNH-Washington - CT : 163.786.00

8AK Kasolite 1922*Schoep A* in: C.R. Acad. Sci. Paris (1922) 173, 1476-1477**Zaire** - Shaba - Likasi: Shinkolobwe uranium mine

F - MHN-Paris - T : 121.287

Katangite (Discr. name) 1921

Buttgenbach H in: Bull. Acad. roy. Belg., Cl. Sci. (1921) 16, 6, 38pp.**Zaire** - Shaba - Likasi: Tantara copper depositREM: discredited name. Syn. of **plancheite** or **chrysocolla**

Kipushite (Discr. name) 1926

Buttgenbach H in: Bull. Acad. roy. Belg., Cl. Sci. (1926) 21, 905**Zaire** - Shaba - Kipushi: Prince Léopold mine

B - ULG-Liège - HT : 9287, 16.920 and 16.921

REM: discredited name. Syn. of **veszelyite****7DB Kipushite 1985***Piret P, Deliens M, Piret-Meunier J* in: Can. Min. (1985) 23, 35-42**Zaire** - Shaba - Kipushi: Prince Léopold mine

B - MRAC-KMMA-Tervuren - HT : RGM 14.026 (a few mg)

REM: not to be confused with discredited mineral «kipushite», synonym of **veszelyite****8AB Kirschteinite 1957***Sahama T, Hytönen K* in: Min. Mag. (1957) 31, 698-699**Zaire** - Kivu - Rutshuru: Mount Shaheru (volcano Nyiragongo)

B - MRAC-KMMA-Tervuren - CT : RGM 8.037

7EB Kivuite 1958*Van Wambeke L* in: Bull. Soc. Géol. Belg. (1958) 67, 383-403**Zaire** - Kivu - Mwenga: Kobokobo open pit

REM: HT preserved in the private collection of Van Wambeke. Analysis is unsatisfactory

Kobokobite (Discr. name) 1957

Thoreau J in: Bull. Acad. roy. Belg., Cl. Sci. (1957) 43, 705-710**Zaire** - Kivu - Mwenga: Kobokobo open pitREM: discredited name. Syn. of **rockbridgeite****5BA Kolwezite 1980***Deliens M, Piret P* in: Bull. Minéral (1980) 103, 179-184**Zaire** - Shaba - Kolwezi: Musonoi open pit

B - MRAC-KMMA-Tervuren - HT : RGM 12.975 (5 specimens with cm nodules)

Kusuite (Discr. name) 1977

Deliens M, Piret P in: Bull. Soc. fr. Min. Crist. (1977) 100, 39-41

Zaire - Lower-Zaire - Ngungu: Kusu-Senge deposit

B - MRAC-KMMA-Tervuren - HT : RGM 5.895

REM: name changed into **wakefieldite-(Ce)**

5DF Lepersonnite-(Gd) 1982

Deliens M, Piret P in: Can. Min. (1982) 20, 231-238

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - HT : RGM 13.781 (about 50 mg)

US - NMNH-Washington - T : 150.228.00

5a Likasite 1955

Schoep A, Borchert W, Kohler K in: Bull. Soc. fr. Min. Crist. (1955) 78, 83-88

Zaire - Shaba - Likasi: Likasi open pit

B - MRAC-KMMA-Tervuren - NT : RGM 655 (100 mg)

US - NMNH-Washington - T : 107.463.00

F - ENSM-Paris - CT

Lubumbashite (Discr. name) 1934

De Leenheer L in: Natuurwet. Tijdschr. Gent (1934) 16, 237-241

Zaire - Shaba - Lubumbashi: in the cobaltic ore

REM: discredited name. Syn. of **heterogenite-3R**

Z Luberoite 1992

Jedwab J, Cervelle B, Gouet G, Hubaux X, Piret P in: Eur. J. Min. (1992) 4, 683-692

Zaire - Kivu - Lubero: in alluvial deposits of the Lubero river

B - IRScNB-KBIN-Brussels - HT : RC 4.215 (one micro crystal)

7BF Ludjibaite 1988

Deliens M, Piret P in: Bull. Minéral (1988) 111, 167-171

Zaire - Shaba - Likasi: Ludjiba copper deposit

B - IRScNB-KBIN-Brussels - HT : RC 3.514 (crust on pseudomalachite)

B - MRAC-KMMA-Tervuren - CT : RGM 14.445

4CF Lueshite 1959

Safiannikoff A in: C.R. Acad. roy. Sci. Outre-Mer, Brussels (1959) 5, 1251-1255

Zaire - Kivu - Rutshuru: in the carbonatite of Lueshe

B - MRAC-KMMA-Tervuren - HT : RGM 8.269 (a lot of 5 mm isolated crystals)

UK - BMNH-London - CT : BM 1960, 440

Lusungite (Discr. name) 1958

Van Wambeke L in: Bull. Soc. belge Géol. (1958) 67, 162-169

Zaire - Kivu - Mwenga: Kobokobo open pit

B - MRAC-KMMA-Tervuren - HT : RGM 6.181

REM: discredited name. Syn. of **goyazite**

4HE Marthozite 1969

Cesbron F, Oosterbosch R, Pierrot R in: Bull. Soc. fr. Min. Crist. (1969) 92, 278-283

Zaire - Shaba - Kolwezi: Musonoi open pit

F - U-Paris 6 - HT : 12.252

F - MHN-Paris - T

4GB Masuyite 1947

Vaes JF in: Bull. Soc. belge Géol. (1947) 70, B 212-226

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - NT

REM: chemical analyses of more than 30 specimens belonging to numerous collections show the presence of Pb in stoichiometric proportions. Pb was omitted in the original description (Deliens M: personal communication)

4GB Metaschoepite 1960

Christ CL, Clark JR in: Amer. Min. (1960) 45, 1026-1061

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

4GB Metastudtite 1983

Deliens M, Piret P in: Amer. Min. (1983) 68, 456-458

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - HT : RGM 13.748 (a few mg)

4GB Metavandendriesscheite 1960

Christ CL, Clark JR in: Amer. Min. (1960) 45, 1026-1061

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

7EB Metavanmeersscheite 1982

Piret P, Deliens M in: Bull. Minéral. (1982) 105, 125-128

Zaire - Kivu - Mwenga: Kobokobo open pit

B - MRAC-KMMA-Tervuren - HT : RGM 13.749 (a few mg)

Mindigite (Discr. name) 1934

De Leenheer L in: Natuurwet. Tijdschr. Gent (1934) 16, 237-241

Zaire - Shaba - Likasi: Mindigi cobalt deposit

B - MRAC-KMMA-Tervuren - CT : RGM 10.817

REM: discredited name. Syn. of **heterogenite-3R**

7EC Moreauite 1985

Deliens M, Piret P in: Bull. Minéral. (1985) 108, 9-13

Zaire - Kivu - Mwenga: Kobokobo open pit

B - MRAC-KMMA-Tervuren - HT : RGM 6.601 (millimetric flakes)

7EB Mundite 1981

Deliens M, Piret P in: Bull. Minéral. (1981) 104, 669-671

Zaire - Kivu - Mwenga: Kobokobo open pit

B - MRAC-KMMA-Tervuren - HT : RGM 11.888 (a few mg)

- 2B Oosterboschite 1970**
Johan Z, Picot P, Pierrot R, Verbeek T in: Bull. Soc. fr. Min. Crist. (1970) 93, 476-481
Zaire - Shaba - Kolwezi: Musonoi open pit
 F - ENSM-Paris - HT
- 8AK Oursinite 1983**
Deliens M, Piret P in: Bull. Minéral. (1983) 106, 305-308
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 B - MRAC-KMMA-Tervuren - HT : RGM 1.321 (2 mm sheaves)
- 4GB Paraschoepite 1947**
Schoep A in: Amer. Min. (1947) 32, 344-350
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
- 7ED Parsonsite 1923**
Schoep A in: C.R. Acad. Sci. Paris (1923) 176, 171-173
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 F - ENSM-Paris - T : 123.89
- 7EC Phuralumite 1979**
Deliens M, Piret P in: Bull. Minéral. (1979) 102, 333-337
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 6.201 (a few prismatic crystals)
- 4CH Plumbomicrolite 1961**
Safiannikoff A, Van Wambeke L in: Mineral Deposit (1961), 2, 119-130
Zaire - Kivu - Masisi: Mumba district
- 4GB Protasite 1987**
Pagoaga MK, Appleman DE, Stewart JM in: Amer. Min. (1987) 72, 1230-1238
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 US - NMNH-Washington - HT : 150.732.00
- 4DK Rankamaite 1969**
von Knorring O, Vormaa A, Nixon PH in: Bull. Geol. Surv. Finland (1969) 41, 47-56
Zaire - Kivu - Masisi: Mumba district (alluvial deposits)
- 7EC Ranunculite 1979**
Deliens M, Piret P in: Min. Mag. (1979) 43, 321-323
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 6.201 (12 samples with tiny nodules)
 US - NMNH-Washington - HT : 145.686.00
- Renardite (Discr. name) 1928
Schoep A in: Bull. Soc. Minéral. France (1928) 51, 247-252
Zaire - Shaba - Likasi: Kasolo (Shinkolobwe) uranium deposit
 F - MHN-Paris - T : 128.25
 REM: intermediate term between **dewindtite** and **phosphuranylite**

2BC Renierite 1948

Vaes JF in: Ann. Soc. Géol. Belg. (1948) 71, B 19-32

Zaire - Shaba - Kipushi: Prince Léopold mine

REM: first described in 1928 as «orange bornite»

4GB Richetite 1947

Vaes JF in: Bull. Soc. belge Géol. (1947) 70, B 212-226

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - ULG-Liège - NT : (chem.): 1712

5DF Roubaultite 1970

Cesbron F, Pierrot R, Verbeek T in: Bull. Soc. fr. Min. Crist. (1970) 93, 550-554

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

F - ENSM-Paris - HT

REM: originally described as Cu-U oxide, roubaultite was later re-analyzed as Cu-U carbonate (Ginderow D, Cesbron F: Acta Cryst. (1985) 641, 654-657)

7EA Saleeite 1932

Thoreau J, Vaes JF in: Bull. Soc. belge Géol. (1932) 42, 96-99

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - UCL-Louvain-la-Neuve - HT : K 1.812

4GB Sayrite 1983

Piret P, Piret-Meunier J, Deliens M, Germain G in: Bull. Minéral. (1983) 106, 299-304

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - HT : RGM 13.944 (a few tiny scales)

4GB Shoepite 1923

Walker TL in: Amer. Min. (1923) 8, 67-69

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

5DC Schuilingite-(Nd) 1947

Vaes JF in: Ann. Soc. Géol. Belg. (1947) 70, B 233-236

Zaire - Shaba: Kasompi copper deposit (between Likasi and Kolwezi)

B - MRAC-KMMA-Tervuren - NT (chem.): RGM 11.418

REM: in the original description, REE were erroneously analysed as Ca (Piret P, Deliens M: Bull. Minéral. (1982) 105, 225-228)

Seleniosiegenite (Discr. name) 1947

Vaes JF in: Ann. Soc. Géol. Belg. (1947) 70, B 227-232

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

REM: discredited name. Syn. of selenian **siegenite**

Selenioveasite (Discr. name) 1947

Vaes JF in: Ann. Soc. Géol. Belg. (1947) 70, B 227-232

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

REM: discredited name. Syn. of selenian **vaesite**

Selenolinnæite (Discr. name) 1929

Cuvelier V in: *Natuurwet. Tijdschr. Gent* (1929) 11, 176

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

REM: discredited name. Syn. of selenian **linnaeite**

7EE Sengierite 1949

Vaes JF, Kerr PH in: *Amer. Min.* (1949) 34, 109-120

Zaire - Shaba - Lubumbashi: Luiswishi copper mine

7DE Shabaite-(Nd) 1987

Deliens M, Piret P in: *Eur. J. Min.* (1987) 1, 85-88

Zaire - Shaba - Kolwezi: Eastern Kamoto open pit

B - IRScNB-KBIN-Brussels - HT : RC. 3.511 (a few mg)

5DF Sharpite 1938

Mélon J in: *Bull. Inst. roy. col. belge* (1938) 9, 333-336

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - ULG-Liège - HT : 6.280 and 16.905

8AK Sklodowskite 1924

Schoep A in: *C.R. Acad. Sci. Paris* (1924) 179, 413-415

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

8AK Soddyite 1922

Schoep A in: *C.R. Acad. Sci. Paris* (1922) 174, 1066-1067

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

F - MNH-Paris - T : 122.122/3

Stainierite (Discr. name) 1929

Cuvelier V in: *Natuurwet. Tijdschr. Gent* (1929) 11, 170

Zaire - Shaba - Likasi: Mindigi copper-cobalt open pit

B - MRAC-KMMA-Tervuren - CT : RGM 10.800

REM: discredited name. Syn. of **heterogenite-3R**

Stasite (Discr. name) 1922

Schoep A in: *C.R. Acad. Sci. Paris* (1922) 174, 875-877

Zaire - Shaba - Likasi: Kasolo uranium deposit near Shinkolobwe

REM: discredited name. Syn. of **dewindtite**

2BA Stilleite 1956

Ramdohr P in: *Geotekton. Symp. zu Ehren von H. Stille* (1956) 481-483

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

4GB Studtite 1947

Vaes JF in: *Bull. Soc. belge Géol.* (1947) 70, B 212-226

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

REM: originally described as uranium carbonate. Later re-examination of type specimen shows studtite to be an uranium peroxide (Walenta K: *Amer. Min.* (1974) 59, 166-171)

8AK Swamboite 1981
Deliens M, Piret P in: Can. Min. (1981) 19, 553-557
Zaire - Shaba - Likasi: Swambo uranium prospect
 B - MRAC-KMMA-Tervuren - HT : RGM 13.690 (a few mm needles)

4DK Thoreaulite 1933
Buttgenbach H in: Ann. Soc. Géol. Belg. (1933) 56, 327-328
Zaire - Shaba - Manono: in Manono tin pegmatite
 B - ULG-Liège - HT : 2.067 and 2.068

7EC Threadgoldite 1979
Deliens M, Piret P in: Bull. Minéral. (1979) 102, 338-341
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 5.951 (micaceous crust)

7ED Triangulite 1982
Deliens M, Piret P in: Bull. Minéral. (1982) 105, 611-614
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 6.192 (a few mg)

Trieuite (Discr. name) 1935
De Leenheer L in: Natuurwet. Tijdschr. Gent (1935) 17, 91-95
Zaire - Shaba - Lubumbashi: Star of the Congo mine
 B - MRAC-KMMA-Tervuren - HT : RGM 10.810
 REM: discredited name. Syn. of **heterogenite-3R**

8FA Trikalsilite 1957
Sahama T, Smith JV in: Amer. Min. (1957) 42, 286
Zaire - Kivu - Rutshuru: Kabfumu (in nephelinite)

7EC Upalite 1979
Deliens M, Piret P in: Bull. Minéral. (1979) 102, 333-337
Zaire - Kivu - Mwenga: Kobokobo open pit
 B - MRAC-KMMA-Tervuren - HT : RGM 5.951 (a few mg)

5DF Urancalcarite 1984
Deliens M, Piret P in: Bull. Minéral. (1984) 107, 21-24
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 B - MRAC-KMMA-Tervuren - HT : 11.945 (about 50 mg)

Uranolepidite (Discr. name) 1932
Thoreau J in: Ann. Soc. Géol. Belg. (1932) 60, C 3-5
Zaire - Shaba - Likasi: Shinkolobwe uranium mine
 REM: discredited name. Syn. of **vandenbrandeite**

2CE Vaesite 1945
Kerr PF in: Amer. Min. (1945) 483-497
Zaire - Shaba - Kasompi open pit (between Likasi and Kolwezi)

4GB Vandenbrandeite 1932

Schoep A in: Ann. Mus. Congo belge, Tervuren (1932) 1, 3, 25-31

Zaire - Shaba - Kolwezi: Kalongwe copper deposit

F - MHN-Paris - T : 134-72

UK - BMNH-London - CT : 1933, 261-263

4GB Vandendriesscheite 1947

Vaes JF in: Bull. Soc. belge Géol. (1947) 70, 212-226

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

7EB Vanmeersscheite 1982

Piret P, Deliens M in: Bull. Minéral. (1982) 105, 125-128

Zaire - Kivu - Mwenga: Kobokobo open pit

B - UCL-Louvain-la-Neuve - HT : F 360 (a few mg)

4DD Varlamoffite 1947

Buttgenbach H in: Les minéraux de Belgique et du Congo belge. Ed. Vaillant-Carmanne, Liège (1947) 182-183

Zaire - Kivu - Pangi: Atondo tin deposit

B - ULG-Liège - CT

7AE Wakefieldite-(Ce)

Deliens M, Piret P in: Bull. Minéral. (1986) 109, 305

Zaire - Kivu - Mwenga: Kobokobo open pit

B - MRAC-KMMA-Tervuren - HT : RGM 5.895 (about 25 microcrystals)

F - MHN-Paris - CT : 178.119

US - NMNH-Washington - T : 136.817.00

7DF Wyartite 1959

Guillemin G, Protas J in: Bull. Soc. fr. Min. Crist. (1959) 82, 80-86

Zaire - Shaba - Likasi: Shinkolobwe uranium mine

B - MRAC-KMMA-Tervuren - HT : RGM 2.222 (cm flakes)

F - MHN-Paris - HT : V 5686

US - NMNH-Washington - T : 150.331.00

7BJ Zairite 1975

Van Wambeke L in: Bull. Soc. fr. Min. Crist. (1975) 98, 351-353

Zaire - Kivu - Lubero: Etaetu river

B - MRAC-KMMA-Tervuren - HT : RGM 14.065

3 List of the depositaries

- | | | |
|----|--|--|
| B | <p><i>Belgium</i>
 IRScNB-KBIN - Brussels</p> | <p>Institut royal des Sciences naturelles de Belgique
 Koninklijk Belgisch Instituut voor
 Natuurwetenschappen
 Section Minéralogie
 Rue Vautier 29
 1040 Brussels</p> |
| | <p>MRAC-KMMA - Tervuren</p> | <p>Musée royal de l’Afrique centrale
 Koninklijk Museum voor Midden-Afrika
 Leuvensesteenweg 13
 3080 Tervuren</p> |
| | <p>UCL - Louvain-la-Neuve</p> | <p>Université Catholique de Louvain
 Géologie et Minéralogie
 Bâtiment Mercator
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| | <p>ULG - Liège</p> | <p>Université de Liège
 Laboratoire de Minéralogie
 Bâtiment B 18
 Sart Tilman
 4000 Liège</p> |
| CH | <p><i>Switzerland</i>
 MHN - Genève</p> | <p>Musée d’Histoire Naturelle
 Département de Minéralogie
 Route de Malagnou 1208
 P.O. box 6434
 1211 Genève 6</p> |
| D | <p><i>Germany</i>
 IMK-TU - Berlin</p> | <p>Institut für Mineralogie und Kristallographie
 Technische Universität Berlin
 Ernst-Reuter-Platz 1
 10587 Berlin</p> |
| F | <p><i>France</i>
 ENSM - Paris</p> | <p>Ecole Nationale Supérieure des Mines
 Musée de Minéralogie
 Boulevard Saint-Michel 60
 75272 Paris Cedex 06</p> |

- MHN - Paris** Muséum d'Histoire Naturelle
Galerie Nationale de Minéralogie et de Géologie
Rue Geoffroy Saint-Hilaire 36
75005 Paris
- Sorbonne - Paris** See University of Paris 6
- U - Paris 6** Université Pierre et Marie Curie
Collection de Minéraux
Rue de Jussieu 34
75005 Paris
- UK** United Kingdom
BMNH-London British Museum
The National History Museum
Cromwell Road
London SW7 5BD
- US** *United States of America*
MNHN - Washington National Museum of Natural History
Smithsonian Institution
20560 Washington D.C.

4 The geological origin of the first described mineral species

4.1. Alluvial deposits

Luberoite	Lubero River - Kivu	Pt
Plumbomicrolite	Masisi- Mumba District - Kivu	Pb Ta
Rankamaite	Masisi- Mumba District - Kivu	Na Ta
Zairite	Etaetu River - Lubero - Kivu	Bi Fe

4.2. Granites and granitic pegmatites with Sn

Cesplumtantite	Manono - Shaba	Cs Pb
Thoreaulite	Manono - Shaba	Sn Ta
Varlamoffite	Atondo - Pangi - Kivu	Sn

4.3. Pegmatite with Nb and Be (Kobokobo - Mwenga - Kivu)

Althupite		Al Th U
Eylettersite		Al Th
Kamitugaite		AL Pb U
Kivuite		Th U
Metavanmeersscheite		U
Moreauite		Al U
Mundite		Al U
Phuralumite		Al U
Ranunculite		Al U
Threadgoldite		Al U
Triangulite		Al U
Upalite		Al U
Vanmeersscheite		U

4.4. Nephelinites (volcano Nyiragongo-Northern Kivu)

Andremeyerite		Ba Fe
Combeite		Na Ca
Delhayelite		Na Ca Al
Götzenite		Na Ca Ti
Trikalsilite	Kabfumu - Rutshuru - Kivu	K Al

4.5. Carbonatites (Lueshe - Rutshuru - Kivu)

Kalipyrochlore		K Nb
Lueshite		Na Nb

4.6. Stratiform ore deposits from Southern Shaba with Cu - Co - Ni - Cu

4.6.1. Primary mineraliation

Briartite	Prince Leopold mine - Kipushi	Cu Ge
Cattierite	Shinkolobwe - Likasi	Co
Gallite	Prince Leopold mine - Kipushi	Cu Ga
Oosterboschite	Musonoi - Kolwezi	Pd Cu
Renierite	Prince Leopold mine - Kipushi	Cu Zn Ge
Stilleite	Shinkolobwe - Likasi	Zn
Vaesite	Kalompi - Likasi	Ni

4.6.2. Secondary mineralization

4.6.2.1. Cu - Co - Ni secondary minerals

Buttgenbachite	Likasi open pit - Likasi	Cu
Claringbullite	Msesa - Likasi	Cu
Comblainite	Shinkolobwe - Likasi	Ni Co
Cornetite	Star of the Congo mine (Lubumbashi)	Cu
Florencite-(La)	Shinkolobwe - Likasi	La Ce
Gysinite-(Nd)	Kasompi - Likasi	Pb REE
Heterogenite-2H	Mindigi - Likasi	Co
Julienite	Shamitumba - Likasi	Na Co
Kipushite	Kipushi - Lubumbashi	Cu Zn
Kolwezite	Musonoi - Kolwezi	Cu Co
Likasite	Likasi open pit - Likasi	Cu
Ludjibaite	Ludjiba - Likasi	Cu
Schuilngite-(Nd)	Kasompi - Likasi	Pb Cu REE

4.6.2.2. U secondary minerals

Astrocyanite-(Ce)	Musonoi - Kolwezi	Cu REE U
Becquerelite	Shinkolobwe - Likasi	Ca U
Bijvoetite-(Y)	Shinkolobwe - Likasi	REE U
Billietite	Shinkolobwe - Likasi	Ba U
Cousinite	Shinkolobwe - Likasi	Mg U
Cuprosklodowskite	Kambove - Likasi	Cu U
Curite	Shinkolobwe - Likasi	Pb U
Demesmaekerite	Musonoi - Kolwezi	Pb Cu U
Derriksite	Musonoi - Kolwezi	Cu U
Dewindtite	Shinkolobwe - Likasi	Pb U
Dumontite	Shinkolobwe - Likasi	Pb U
Fourmarierite	Shinkolobwe - Likasi	Pb U
Françoisite-(Nd)	Eastern Kamoto - Kolwezi	REE U
Guilleminite	Musonoi - Kolwezi	Ba U
Ianthinite	Shinkolobwe - Likasi	U
Kamotoite-(Y)	Eastern Kamoto - Kolwezi	Y U
Kasolite	Shinkolobwe - Likasi	Pb U
Lepersonnite-(Gd)	Shinkolobwe - Likasi	Ca REE U
Marthozite	Musonoi - Kolwezi	Cu U
Masuyite	Shinkolobwe - Likasi	Pb U
Metaschoepite	Shinkolobwe - Likasi	U

Metastudtite	Shinkolobwe - Likasi	U
Metavandendriesscheite	Shinkolobwe - Likasi	Pb U
Oursinite	Shinkolobwe - Likasi	U
Paraschoepite	Shinkolobwe - Likasi	U
Parsosite	Shinkolobwe - Likasi	Pb U
Protasite	Shinkolobwe - Likasi	Ba U
Richetite	Shinkolobwe - Likasi	Pb U
Roubaultite	Shinkolobwe - Likasi	Cu U
Saleeite	Shinkolobwe - Likasi	Mg U
Sayrite	Shinkolobwe - Likasi	Pb U
Schoepite	Shinkolobwe - Likasi	U
Sengierite	Luiswishi - Lubumbashi	Cu U
Shabaite-(Nd)	Eastern Kamoto - Kolwezi	Ca REE U
Sharpite	Shinkolobwe - Likasi	Ca U
Skłodowskite	Shinkolobwe - Likasi	Mg U
Soddyite	Shinkolobwe - Likasi	U
Studtite	Shinkolobwe - Likasi	U
Swamboite	Swambo - Likasi	U
Uranocalcarite	Shinkolobwe - Likasi	Ca U
Vandenbrandeite	Kalongwe - Kolwezi	Cu U
Vandendriesscheite	Shinkolobwe - Likasi	Pb U
Wyartite	Shinkolobwe - Likasi	Ca U

5 References

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6 Questionnaire

Do you store in your institute or museum type mineral specimens from Zaire not mentioned here - please let us know! You can use this form also for corrections or completions. Thank you in advance!

MINERAL NAME:

Reference of the first description:

Type locality:

The depository of the type specimen with specifications concerning this specimen:

Remarks:

Signature:

Address:

MINERAL NAME:

Reference of the first description:

Type locality:

The depository of the type specimen with specifications concerning this specimen:

Remarks:

Signature:

Address:

Please send the filled in questionnaire(s) to Dr. Michel DELIENS, Section de Minéralogie et de Pétrographie, Institut royal des Sciences naturelles de Belgique, Rue Vautier 29, B - 1040 Bruxelles, BELGIUM.