

*Dedicated to the 100th anniversary
of founding the mineralogical collection
in the National Museum of Natural History
and 95 years since publishing
the First Museum catalogue*

A catalogue of the mineral species in the National Museum of Natural History, Sofia (Part 1)

Native elements, Sulphides and Sulphosalts, Oxides and Hydroxides, Halogenides

Chavdar KAROV, Ilia DIMITROV

Abstract. The new classified catalogue of mineral species is based on the systematics of KOSTOV (1993). It comprises all specimens registered in the Museum until 2001. Part 1 includes mineral species from the first four mineral classes: native elements, Sulphides and Sulphosalts, Oxides and Hydroxides, and Halogenides. Here 238 species, 10 varieties, and 5 secondary species are presented.

Key words: Catalogue, mineral species, native elements, sulphides, sulphosalts, oxides, hydroxides, halogenides, National Museum of Natural History

In 1902 Kurt Kamlah, grandson of Herman Angerchtain, a German merchant from Hamburg, made a present to the National Museum of Natural History (Museum of His Royal Highness Prince Ferdinand I at that time, founded 13 years earlier in 1889 by Prince Ferdinand I). The gift contained a rich collection of minerals. This set the beginning of the mineralogical section of the Museum. The collection included 724 specimens, which were collected during the second half of the 19th century. Most of the specimens derived from ore deposits in Europe - Andreasberg, Freiberg, Pribram, Transylvania, Idria, etc. This first collection and several smaller collections were described later in the first printed Museum Catalogue by the court dentist and outstanding geologist - mineralogist Dr. Wheeler. He used the sixth edition of the mineral

systematics of DANA (1901) for compiling the work (WHEELER, 1907). Dr Wheeler himself collected and added the first several specimens from Bulgaria to the mineral collection.

The exploitation of Bulgarian ore deposits started in the beginning of 20th century, which led to an increase in the number of specimens from Bulgaria. A mineralogical - geological exposition was opened in the Museum halls in October 1920 (BURESCH, 1953). After 1950 the Mineralogical collection was enriched with minerals from all over the world. The mineralogical collections were moved several times during the World War II air raids in 1943 and later in the 1950s due to the transfer of the Mineralogical department to the Geological Institute. Part of the old mineral specimens was damaged, lost or their original labels were mixed up.

Most of the new specimens obtained in the period 1950 - 1970 served as a basis of the new mineralogical exposition, opened after the restoration of the Museum in 1974 as an independent unit within the Bulgarian Academy of Sciences (PETRUSSENKO, 1989).

Nowadays the mineralogical collection numbers about 14 000 specimens collected from all over the world. The specimens are grouped in three funds: basic fund, fund for exchange and fund of research materials. Moreover, the collection includes meteorites and casts of meteorites - 7 specimens, about 1 500 rock samples and 40 precious and semi-precious stones of high quality.

Mineral specimens and collections of special interest are:

- The fullest set of mineral species, discovered and described for the first time in Bulgaria with Bulgarian names: the holotypes of *strashimirite*, *kostovite*, *hemusite*, *ardaite*, *orpheite*, *balkanite*, *bonchevite* (?), *vasilite*;

- The richest mineral collection from Madan ore region - 1082 specimens of unique galena, sphalerite, quartz and calcite crystal druses;

- The biggest collection (110 specimens of total weight about 2 tons) from "Surneshko kladenche" mine, Burgas ore region. It contains plate calcite crystals and druses of large size (some crystals reach dimensions of 35 cm) (KAROV, 1996);

- The largest crystals ever found in Bulgaria: *galena* - # (museum number) 1253 from mine "Fabrika", edge 12 cm; *emerald* #2507, from Urdini Lakes, Rila mountain, 9x2 cm; *amethyst* - #907, from Teshevo village, S. Pirin mountain, 20x11 cm; *kaolinite* - #429, from Glavanatsi village, Madzharovo region, 14 mm; *columbite* - #1036, from Vishteritsa quarry, West Rhodopi mountains, 20x17 cm; *muscovite* - # 735 Dolen village, Zlatograd region 14x31 cm; *pyrite* - #6928, from Madan ore region, 13.5x13.5x9 cm (KAROV, 1996).

The classification in the catalogue is based on the systematics of KOSTOV (1993) and some other manuals like LAZARENKO & VINAR (1975), FLEISCHER (1991), MANDARINO (1999), EVSEEV (2000), KOSTOV & MINCEVA-STEFANOVA (1981), PETRUSSENKO (1991), ESPENSHADE & MORRISON (1983) and some Internet sites. The specimens from the basic fund only are presented in this catalogue. It includes all specimens registered in the Museum until 2001. The last catalogue number is 7893.

The new Museum mineral catalogue will be issued in three parts. Part 1 includes mineral species, belonging to the first four mineralogical classes according to the systematics of KOSTOV (1993): Native elements, Sulphides and Sulphosalts, Oxides and Hydroxides, and Halogenides. Two hundred thirty eight species, 10 varieties, and 5 secondary species are presented here.

Legend:

Column: **Mineral classes, sub-classes, assemblages, groups, species and varieties**

- Names of mineral species are given by FLEISCHER (1991), afterwards their Bulgarian translation is given in brackets.
- All mineral species are in bold. For example: **Microlite**
- The mineral varieties are in bold and italic. For example: ***Yttromicrolite***
- Groups of not precisely determined minerals are in square brackets, bold and italic. For example: [***Indetermined secondary Mn mineralizations and concretions***]
- Mineral species or variety followed by "II" means species or variety of secondary importance in the sample. For example: **Birnessite II**, **Lapieite II**

Column: **Localities, region, country**

- The list of localities follows the scheme: it always begins with localities in Bulgaria, followed by localities in other European countries, Asia, Africa, North and South America, Australia and Antarctica.
- All localities in one region are separated by commas.
- All localities in one country are separated by semicolons.
- Countries are separated by dots.

Table 1
A catalogue of the mineral species in the National Museum of Natural History, Sofia (KOSTOV, 1993)
(part one)

Mineral classes, sub-classes, assemblages, groups, species and varieties	pieces	Localities, region, country	
	1	2	3
CLASS 1. NATIVE ELEMENTS			
1. Metals			
1.2. Nickel - Iron group			
Iron (Желязо)	4	Ozernaya Mt., Siberia, (Russia). Nivfag (Greenland).	
Nickel (Нюкел)	1	New Caledonia, Pacific Ocean (France).	
Awaruite (Авараитум)	4	Heazlewood, Tasmania (Australia).	
1.4. Gold group			
- <i>Amalgam (Амальгама)</i>	1	Aspen, Colorado (USA).	
Coper (Мег)	24	Vlaykov vrah, Tsar Asen mines - Panagyurishte reg.; Zidarovo mine, Burgas reg; Kremikovtsi dep., Sofia reg.; Dragodan vill., Kyustendil reg. (Bulgaria). Rheinbreitbach (Germany). Swanssea (Africa).	
		Mufulira mine (Zambia). Congo. Bisbee, Arizona; Beech Creek, Oregon; Fresno County, California; Houghton County, Michigan (USA). El Hierro Pinar del Rio (Cuba). Santa Rita (Mexico). S America. Australia. Poldory.	
		Langban (Sweden).	
		Sedmochislenitsi dep., Vtatsa reg. (Bulgaria). Andreasberg, Erzgebirge; Hartenstein, Saxony (Germany).	
		Pribram (Czech Republic). Japan.	
Lead (Олово)	1	Glagovishka river, Trun reg. (Bulgaria). Transylvania (Romania).	
Silver (Сребро)	8	Radhausberg, Salzburg (Austria). Mongolia. Manica (Mozambique).	
Gold (Злато)	9	S Africa. Sierra Gorda (Chile). Karabash, S Ural (Russia).	
Auricupride (Аурокупрід)	1	Almaden (Spain).	
1.5. Mercury group			
Mercury (Жубак)	3		
2. Semi - metals and nonmetals			

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2.1. Bismuth group		
Bismuth (Бисмут)	12	Schneeberg; Hartenstein, Saxony (Germany). Jachymov (Czech republic). Kalima (Congo). Victoria (Australia).
Antimony (Антимон)	2	Sinya bara, Chiprovtsi reg. (Bulgaria). Allemont, Isere (France).
Arsenic (Арсен)	13	Kosti vill., Burgas reg. (Bulgaria). Schlema; Schwarzenberg, Erzgebirge (Germany). Jachymov; Pribram (Czech Republic).
Stibarsen (Стибарсен)	6	Sarawak, Kalimantan isl. (Malaysia). Pribram (Czech Republic).
2.3. Sulfur group		
Sulphur (Сяра)	53	Klisura vill, Sofia reg.; Kenan dere mine, Smolyan reg. (Bulgaria). Mahov mine; Tarnobrzeg (Poland). Sicily; Naples; Katalina (Italy). Tenerife Isl. (Spain). Carpathian Mts. (Romania). L'vov reg. (Ukraine). Shor - Su (Uzbekistan). Gaurdak (Turkmenia). Azumi volcano (Japan). Dombe grande (Angola). La Soufrière volcano, Guadeloupe Isl. (Mexico). Turrialba (Costa Rica). Bandung (Indonesia).
Rosicklite (Росицкитум)	1	Wentura County, California (USA).
2.4. Carbon group		
Diamond (Диамант)	2	Yakutia (Russia). Shaba (Congo).
Graphite (Графит)	13	Dam lake Antonivanovtsi quarry, Smolyan reg. (Bulgaria). Slavkov (Czech Republic). Styria (Austria). Keivy, Kola pen. (Russia). N Mozambique. Quebec (Canada). Petrozavodsk (Russia).
- Schungite (Шунгит)	2	
3. Carbides, Nitrides, Phosphides and Silicides		
Moissanite (synthetic)	1	Russia.
(Моисанит - синтетичен)		
CLASS 2. SULPHIDES		
AND SULPHOSALTS		
1. Metallic		
1.2. Ni-Co-Fe assemblage		
1.2.1. Axial		
1.2.1.1. Millerite group		
Millerite (Миллерит)	8	Kladno (Czech Republic). Glamordan (England).

1.2.2. Planar		
1.2.2.1. Parkerite group		
- <i>Lapieite II (Ланеум II)</i>	1	Hagendorf, Bavaria (Germany).
1.2.2.3. Mackinawite - Valleriite group	2	Kafveltorp (Sweden). Phalaborwa, Transvaal (S. Africa).
Valleriite (Валериум)	1	Pay-Khoy khrebet (Russia).
Yushkinit (Юшкинум)		
1.2.3. (Pseudo) isometric		
1.2.3.1. Orcelite - Heazlewoodite group		
Heazlewoodite (Хаузлвудит)	6	Heazlewood, Tasmania (Australia).
1.2.3.2. Pentlandite group	3	Kola pen. (Russia).
Pentlandite (Пентландит)		
1.2.3.3. Nickeline - Pyrrhotite group		
Breithauptite (Браутайтум)	1	Andreasberg (Germany).
Nickeline (Никулин)	8	Mansfeld; Schneeberg; Freiberg, Erzgebirge (Germany). Pribram; Medenec; Jachymov (Czech Republic).
Westerveldite (Вестервельдит)	1	Ilimaussaq (Greenland).
Pyrrhotite (Пирротин)	29	Petrovitsa mine, Madan reg.; Luybovna cheshma mine, Ardino reg.; Gyurgen dere mine, Madzharovvo; Mihalkovo vill., Smolyan reg.; Enyovche mine, Kurdzhali reg.; Bela reka, N Pirin Mt. (Bulgaria). Baia Mare; Herja (Romania). Trepca (Yugoslavia). Lungan (Austria). Piemonte (Italy). Kola pen. (Russia). Edmunda (Mozambique). Quebec (Canada).
Troilite II (Троилит II)	1	Buranga (Rwanda).
1.2.3.4. Linnaeite group		
Linnaeite (Линнеум)	1	Westphalia (Germany).
Siegenite (Зигенит)	1	Siegen, Westphalia (Germany).
Carrollite (Каролит)	1	Kambowe, Shaba (Congo).
Greigite (Греигит)	1	The bottom of Black sea.
1.2.3.5. Lollingite group		
Rammelsbergite (Раммельсбергит)	2	Atrevida mine, Catalonia (Spain).
Parammelsbergite (Парараммельсбергит)	1	Dobsina (Slovakia).
Safflorite (Сафлорит)	2	Schneeberg, Erzgebirge (Germany). Hodova Plana (Czech Republic).
Löllingite (Лёлингит)	8	Dolni Bory (Czech Republic). Kiatiala (Finland). Broken Hill;

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1.2.3.6. Pyrite - Marcasite group
Pyrite (Илупум)
 Weinerts Property Byaawatha, Victoria; Tasmania (Australia).

299	Deveti Septemvri, Strashimir, Fabrika, Gradishte, Sharenska, Batantsi, Petrovitsa, Borieva Reka, Erma Reka, Gyudyurska mines - Madan reg.; Enyovche mine, Kurdzhali reg; Zvezdel, Kurdzhali reg.; Ruen mine, Osogovo Mt.; Rosen mine, Vurli bryag mine, Surneshko kladenche mine, Burgas reg.; Chiprovtsi mine, Montana reg.; Kenan dere mine, Smolyan reg.; Vitosha Mt.; Medet mine, Radka mine, Panagyurishte reg; Pcheloyad mine, Haskovo reg.; Strandzha mine, M. Turnovo reg.; Gyurgen dere mine, Madzharovo; Govedarnika mine, Luki; Obrochishte vill., Dobrich reg.; Ignatievo vill., Varna reg.; Narechenksi bani vill., Smolyan reg. (Bulgaria). Neudorf; Hagendorf, Bavaria; Freiberg; Heidelberg; Gernrode, Harz; Friedland; Mansfeld (Germany). Pribram; Horky; Hvaletice reg.; Kutna Hora (Czech Republic). Baia Mare; Cavnic; Hunedoara (Romania). Trepca (Yugoslavia). Dobrevo vill., Kratovo reg. (Macedonia). Xanthe; Kassandra pen. (Greece). Roznava (Slovakia). Krakow (Poland). Ambasaguas; Rio Tinto, Huelva; Soria; Navajun, Logrono (Spain). Ilmaussaq (Greenland). Binntal, Wallis (Switzerland). Winterswyk (Holland). Madneuli (Georgia). Akchatau dep. (Kazakhstan). Maikaura (Tadzhikistan). Ozernoye dep., Siberia (Russia). Human (China). Nanisivik mine, Baffin island (Canada). Sweetwater mine, Missouri; Sparta, Illinois; Magma mine, Arizona (USA). Chihuahua (Mexico). Huanini (Bolivia). Huanzala; Quiruvilca; Huaron; Casa Palca (Peru). Gyurgen dere mine, Madzharovo reg.; Shumen reg. (Bulgaria). Turoszow; Lower Silesia; Pomorzany (Poland). Sokolova; Komorany; Most (Czech Republic). Rudabanya (Hungary). Schlema (Germany). Atrevida mine, Catalonia (Spain).
21	Marcasite (Марказум)

- 1.2.3.7. Cobaltite group
Cobaltite (Кобалтум)
Gersdorffite (Тепсгопфум)
- 5 Skiterud (Norway). Kipushi, Shaba (Congo). Ontario (Canada). Broken Hill (Australia).
- 2 Dobsina (Slovakia). Bou-Azzer (Morocco).

1.2.3.8. Arsenopyrite group
Arsenopyrite (Арсенопирит)

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| 25 | Gradishte, Strashimir, Konski Dol mines - Madan reg., Ruen mine,
Osogovo Mt.; Govezhda mine, Montana reg. (Bulgaria). Freiberg
(Germany). Kutna Hora (Czech Republic). Lungan (Austria).
Trepca (Yugoslavia). Panasqueira dep. (Portugal). Darasun dep.,
Transbaikalia (Russia). Chihuahua (Mexico). |
| 1 | Gudmundstorp (Sweden). |

Gudmundtite (Гудмундтийт)

1.2.3.9. Skutterudite group

Skutterudite (Скюттерудит)

- *Chloanthite (Хлоантиттум)*
 1.3. Ti-K-Mn assemblage

1.3.1. Axial

1.3.1.1. Raguinite group
Rasvumite (Расвумиттум)

1.3.3. (Pseudo) isometric

1.3.3.1. Alabandite group
Alabandite (Алабандиттум)

1.4. Mo-W-Sn assemblage
Molybdenite (Молибдениттум)

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|----|---|
| 21 | Pribram; Medenec; Hodova Plana; Jachymov (Czech Republic).
Schneeberg, Erzgebirge (Germany). Atrevida mine, Catalonia
(Spain). Irtem (Morocco). |
| 5 | Erzgebirge (Germany). Slovakia. |
| 2 | Rasvumchorr, Khibiny, Kola pen. (Russia). |
| 2 | Obrochishte vill., Dobrich reg. (Bulgaria) |
| 29 | Vlaykov vrah, Panagyurishte reg.; Vitosha Mt., Plana Mt. - Sofia
reg.; Burdtse mine, M. Turnovo reg.; Bukite mine, Osogovo Mt.;
Samurski dol, Chepelare, Smolyan reg.; Bliznak Lake, Rila Mt.
(Bulgaria). Krupka; Teplice reg. (Czech Republic). Xanthe (Greece).
Catalonia (Spain). White Sea reg.; Turnaus, Caucasus Mt. (Russia).
Ondor-Tsagan (Mongolia). Zambezia (Mozambique). Pinal
County, Arizona (USA). Kingsgate, New South Wales (Australia). |

1.5. Zn-Pb-Cu assemblage

1.5.2. Planar

1.5.2.1. Covellite group
Covellite (Ковеллиттум)

- | | |
|----|---|
| 10 | Vlaykov vrah, Radka mines, Panagyurishte reg. (Bulgaria). Bor
mine (Yugoslavia). Calabona mine, Sardinia (Italy). Summitville,
Colorado (USA). Broken Hill (Australia). |
|----|---|

1	2	3
Umanosite (Уманшум)	1	Habri, Moravia (Czech Republic).
1.5.3. (Pseudo) isometric		
1.5.3.1. Domeykite group		
Cuprostibite (Кунпростибит)	2	Ilimaussaq (Greenland).
1.5.3.2. Chalcocite group		
Chalcocite (Халкокитум)	15	Vurli bryag mine, Burgas reg.; Chelopech dep., Pirdop reg.; Kremikovtsi dep., Sofia reg. (Bulgaria). Mansfeld (Germany). Vrancice (Czech Republic). mine De M'Passa (Congo). Lagoon (S. Australia).
Djurleite (Джурлеум)	2	Lagoon (S. Australia).
Digenite (Дигенитум)	2	Bukov, Moravia (Czech Republic). Langban (Sweden).
Berzelianite (Берцелланитум)	7	
1.5.3.3. Bornite - Chalcopyrite group		
Bornite (Борнитум)	9	Plakalnitsa mine, Vratsa reg.; Radka mine, Panagyurishte reg.; Strandzha mine, M. Turnovo reg. (Bulgaria). Polkovice (Poland). S Africa. Zacatecas (Mexico).
Djurleite (Джурлеум)	345	Strashimir, Konski Dol, Karaalievsko, Mogilata, Gyudyurska, Batantsi, Gradishte, Petrovitsa, Erma Reka, Osikovo, Kroushev Dol, Murzyan mines - Madan reg.; Vurli bryag, Surneshko kladenche, Rosen mines - Burgas reg.; Elshitsa mine, Medet mine - Panagyurishte reg.; Enyovche mine, Zvezdel dep., Kurdzhali reg.; Kenan dere mine, Smolyan reg.; Davidkovo vill., Smolyan reg.; Kremikovtsi dep. Sofia reg.; Luybovna cheshma mine, Ardino reg.; Pcheloyad mine, Haskovo reg.; Strandzha mine, M. Turnovo reg.; Gyurgen dere mine, Momina skala mines - Madzharovo reg.; Sedmochislenitsi dep., Vratsa reg.; Chelopech dep., Pirdop reg. (Bulgaria). Andreasberg, Harz; Hessen; Westphalia; Freiberg; Hagendorf (Germany). Kladno (Czech Republic). Banska Stavnica (Slovakia). Lungan; Leogang, Salzburg (Austria). Trepca (Yugoslavia). Baia Mare (Romania). Kaveltorp; Kallmora (Sweden). Ilimaussaq; Ivigtut (Greenland). Madneuli (Georgia). Armenia. Dal'negorskoye dep.; Kola pen.; Norilsk; Ozernoye, Siberia (Russia). Seigoshi (Japan). Manica (Mozambique). Cave-in-Rock, Illinois; Hoxir, Arkansas; California (USA). Pinar del Rio (Cuba). Zocatecas

		(Mexico). Huancavelica (Peru). Rosebery, Tasmania (Australia).
Stannite (Cманит=сманин)	3	Cornwall (England). Verneksov (Czech Republic).
Betekhtinite (Бетекхтинит)	1	Dzhezkazgan (Kazakhstan).
Briartite (Бриартум)	3	Kipushi, Shaba (Congo).
Sakuraiite (Сакурайтум)	1	Hyogo pref. (Japan).
Cubanite (Кубанитум)	1	Quebec (Canada).
Hemusite (Хемуситум)	1	Kawazu mine (Japan).
1.5.3.4. Sphalerite - Wurtzite group	801	Mogilata, Fabrika, Osikovo, Strashimir, Baram, Petrovitsa, Batantsi, Konski Dol, Sharenka, Gradishte, Shumachevski Dol, Erma reka, Golyam Palas, Gyudyurska mines - Madan reg.; Arda, Momina skala, Gyurgen dere mines - Madzharovvo reg.; Vurli bryag mine, Burgas reg.; Pcheloyad mine, Spahievo mine - Haskovo reg.; Kenan dere mine, Smolyan reg.; Ruen mine, Osogovska Mt., Sedmochislenitsi dep., Vratsa reg.; Chiprovtsi mine - Montana reg.; Chelopech dep., Pirdop reg. (Bulgaria) Freiberg; Hagendorf; Oberharz; Andreasberg; Schlema; Raibal (Germany). Horky; Pribram; Kutna Hora; Nova ves, Moravia; Vrancice; Kladno (Czech Republic). Banska Stavnica; Poproch (Slovakia). Slonsk reg.; Olkusz; Trzeblinka, Silesia (Poland). Baia Mare; Herja; Cavnic (Romania). Trepca (Yugoslavia). Dobrevo vill., Kratovo reg. (Macedonia). Picos de Europa; Rio Tinto, Huelva; Ribes, Catalonia (Spain). Dannemora (Sweden). Kvanefjeld; Ilmaussaq; Ivigtut (Greenland). Glamorgan (England). Binntal (Switzerland). Kvansinskoje dep. (Georgia). Da'negorskoye dep.; Ozernoye; Darasun; White Sea reg. (Russia). Ikuno mine, Hyogo Pref. (Japan). Sidi Bou Auan; Sedzh - Hase mine (Tunisia). Mt. St. - Hilaire, Quebec (Canada). Little Rock, Arizona; Elmwood Mine, Tennessee (USA). Huaron; Sidiwilca (Peru). Broken Hill; Hercules mine, Mount Read, Tasmania (Australia).
Wurtzite (Виртумум)	9	Arda mine, Madzharovvo reg. (Bulgaria). Pribram (Czech Republic).
Greenockite (Груюнокитум)	3	Trzeblinka (Poland). Rachezshusen, Marburg (Germany). Hagendorf (Germany).

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1.5.3.5. Enargite group Enargite (Enaprzum)	5	Zapachitsa dep., near Bov vill.; Chelopech dep., Pirdop reg. (Bulgaria). Bor mine (Yugoslavia).
1.5.3.6. Tetrahedrite - Tennantite group Tetrahedrite (Tempaegpum)	6	Strashimir mine, Madan reg.; Persenk mine, Luki reg. (Bulgaria). Andreasberg (Germany). Cavnik (Romania). Roznava (Slovakia). Huaron (Peru).
Tennantite (Тенантум)	13	Zapachitsa dep., near Bov vill. (Bulgaria). Leogang, Salzburg (Austria). Cornwall (England). Kipushi, Shaba (Congo). Leonard mine, Montana (USA). Brand mine, Freiberg (Germany). Kipushi, Shaba (Congo). Tsumeb (Namibia). Pay-Khoy khrebet (Russia). Tsumeb (Namibia).
Freibergerite (Фрајбергум)	1	
Renierite (Рениерум)	3	
Sulvanite (Сулванит)	2	
Germanite (Германит)	1	
1.5.3.7. Galena group Galena (Галенум)	775	Mogilata, Fabrika, Osikovo, Strashimir, Baram, Sharenka, Gradishte, Petrovitsa, Batantsi, Konski Dol, Shumachevski Dol, Gyudyurska, Erma Reka, Karaalievsko, Kroushev Dol mines - Madan reg.; Gyurgen dere, Momina skala mines - Madzharovgrad; Kremikovtsi dep. Sofia reg.; Boevo vill., Zlatograd reg.; Zvezdel dep., Kurdzhali reg.; Kenan dere mine, Smolyan reg.; Spahievo mine, Haskovo reg.; Govedarnika mine, Luki reg.; Ruen mine, Osogovo Mt.; Sedmochislenitsi dep., Vratsa reg. (Bulgaria). Freiberg, Erzgebirge; Oberharz; Schlema; Raibal; Neudorf, Andreasberg, Harz (Germany). Pribram; Nova ves, Moravia; Horky; Harachov (Czech Republic). Banska Stavnica (Slovakia). Olkusz; Trzeblinka, Silesia; Stanislawow (Poland). Bleiberg (Austria). Trepca (Yugoslavia). Dobrevo vill., Kratovo reg. (Macedonia). Herja; Salnik (Romania). Binntal (Switzerland). Saint Prics, Saone et Loire (France). Kallmora; Sala (Sweden). Ilmaussaq; Ivigtut (Greenland). Ozernoye, Siberia; Dal'negorskoye dep. (Russia). Seikoshi (Japan). Sidi Bou Auan; Gulbei (Tunisia). Tsumeb (Namibia). Oujda (Morocco). Little Rock, Arizona;

1	2	3
Clausthalite (Клаустаум)		Sweetwater mine, Missouri (USA). Huaron (Peru). Broken Hill; Kimberley (Australia).
Altaite (Алтаум)	2	Predborice; Horni Hostice (Czech Republic).
1.6. Ag-Au-Hg assemblage	1	Stanija (Romania).
1.6.1. Axial		
1.6.1.1. Balkanite group		
Balkanite (Балканум)	1	Sedmochislenitsi dep., Vratsa reg. (Bulgaria).
1.6.2. Planar		
1.6.2.1. Krennerite group		
Krennerite (Кренерум)	1	Sacaramb (Romania).
Sylvanite (Сиљванум)	3	Sacaramb; Baia de Aries (Romania).
Kostovite (Костовум)	1	Chelopech dep., Pirdop reg. (Bulgaria).
Nagyagite (Нагягум)	1	Sacaramb (Romania).
1.6.3. (Pseudo) isometric		
1.6.3.1. Argentite - Stromeyerite group		
Argentite (Аргентум)	3	Sacaramb (Romania). Pribram (Czech Republic). Brand mine, Freiberg (Germany).
Acanthite (Аканум)	1	Moldava (Czech Republic).
Hessite (Хесум)	1	Sado mine (Japan).
Cervelleite (Сербелеум)	1	Sonora (Mexico).
1.6.3.2. Dyscrasite group		
Aurostibite (Ауростибум)	1	Krasna Hora; Pribram (Czech Republic).
1.6.3.3. Cinnabar group		
Cinnabar (Цинабарум)	24	Chiprovtsi mine, Montana reg. (Bulgaria). Rakosh (Czech Republic). Rudnany (Slovakia). Idria (Slovenia). Leogang (Austria). Almaden; Cindad Real (Spain). Nikitovka (Ukraine). Guizhou (China). Cinnabar Creek, Alaska (USA).
Tiemannite (Туманум)	1	Marysville, Utah (USA).
<u>2. Sulphosalts</u>		
2.1. Cu-Pb-(Fe,Sn) assemblage		
2.1.1. Axial		
2.1.1.1. Chalcostibite group		

	1	2	3
Emplectite (Емплектитум)	1	1	Gunson copper mine (S. Australia).
2.1.1.2. Aikinite group			
Junoite (Джуноум)	1	1	Juno mine, Tennant Creek (N. Australia).
2.1.1.3. Galenobismutite group			
Heyrovskyite (Хеюровскум)	3	3	Horky (Czech Republic). Furka Pass (Switzerland).
Kobellite (Кобелит)	1	1	Klatovy (Czech Republic).
Galenobismutite (Галенобисмутум)	1	1	Untersulzbachtal, Salzburg (Austria).
Bonchevite (Бончевитум) - (Discredited = Galenobismutite + Pekoitite)	4	4	Narechenski bani vill., Smolyan reg. (Bulgaria).
Eclarite (Екларитум)	1	1	Hollersbachtal, Salzburg (Austria).
2.1.1.4. Boulangerite group			
Boulangerite (Буланжеритум)	10	10	Pribram (Czech Republic). Trepca (Yugoslavia). Baia Mare (Romania). Donets Basin (Ukraine). Transbaikalia (Russia).
- Plomosite (Пломозит)	1	1	Herja (Romania).
Zinkenite (Цинкенитум)	6	6	Palat vill., Blagoevgrad reg. (Bulgaria). Wolfsberg dep., Harz; Noumuler (Germany). Malo Zelezno (Slovakia). Ribes de Freser, Catalonia (Spain). Darasun, Transbaikalia (Russia).
Robinsonite (Робинсонитум)	2	2	Malo Zelezno (Slovakia).
Jamesonite (Джејмсонитум)	8	8	Noumuler (Germany). Kutna Hora (Czech Republic). Poproch (Slovakia). Trepca (Yugoslavia). Cornwall (England). Darasun, Transbaikalia (Russia). Akaiva deposit (Japan).
Ardaite (Ардаитум)	1	1	Transbaikalia (Russia).
Gratonite (Гратонитум)	1	1	Madzharovo reg. (Bulgaria).
Meneghinite (Менегинитум)	3	3	Sidi Bou Auan (Tunisia).
Berthierite (Бертиеритум)	5	5	Burdtsse mine, M. Turnovo reg. (Bulgaria). Bottino mine, Tuscany (Italy).
2.1.2. Planar			Ribnovo vill., Blagoevgrad reg. (Bulgaria). Pribram; Kutna Hora (Czech Republic). Valcros (France).
2.1.2.1. Jordanite group			
Geocrontite (Геокронитум)	3	3	Waldsassen, Bavaria (Germany). Pribram (Czech Republic).
Jordanite (Йорданитум)	2	2	Transbaikalia (Russia).
Aleksite (Алекситум)	1	1	Lenzenbach, Binntal (Switzerland).
2.1.2.2. Cylindrite group			Keystone, Nye county, Nevada (USA).

	1	2	3
Cylindrite (Цилиндрит)	2	2	Huanini (Bolivia).
Franckeite (Франкеум)	2	2	NE, Russia. Huanini (Bolivia).
Lengenbachite (Ленгенбахит)	2	2	Lengenbach, Binntal (Switzerland).
2.1.3. Pseudoisometric			
2.1.3.1. Bournonite - Wittichenite group		2	Wittichen deposit (Germany).
Wittichenite (Виттихенит)		2	Schlema; Westphalia (Germany). Pribram (Czech Republic). Trepca (Yugoslavia). Ribes, Catalonia (Spain). Quiruvilca (Peru).
Bournonite (Бурнонит)		9	Lengenbach, Binntal (Switzerland).
Seligmanite (Селигманит)	1	1	
2.1.3.2. Plagonite group		3	Massiac; Haute-Joire (France). Herja (Romania).
Senseyite (Сенсейит)		3	
2.2. Ag-(Pb,Ti)-Hg assemblage		2	Ilmaussaq (Greenland). Rotgulden, Salzburg (Austria).
2.2.1. Axial			
2.2.1.1. Pavonite - Ramdohrite group		2	
Gustavite (Густавит)		2	
2.2.2. Planar		1	Haegendorf, Solothurn (Switzerland).
2.2.2.1. Pyrostilpnite group		4	Alsar (Macedonia).
Smithite (Смитайт)		1	
2.2.2.2. Lorandite group		2	Kutna Hora (Czech Republic).
Lorandite (Лорандит)		1	Baia Mare (Romania).
2.2.3. Pseudoisometric		8	Pribram; Jachymov (Czech Republic). Freiberg (Germany). Quiruvilca (Peru).
2.2.3.1. Matildite - Freieslebenite group		8	Pribram; Jachymov (Czech Republic). Schlema, Erzgebirge (Germany).
Miargyrite (Миаргирит)		2	Medenec (Czech Republic). Freiberg (Germany).
Andorite (Андорит)		1	Moldava (Czech Republic).
2.2.3.2. Pyrargyrite - Polybasite group		4	Pribram (Czech Republic).
Pyrargyrite (Пираргирит)			
Proustite (Прустит)			
Polybasite (Полибазит)			
Pearceite (Пирсит)			
Stephanite (Степханит)			
3. Semi - Metallic			
3.1. Axial			

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3.1.1. Bismuthinite - Stibnite group			
Bismuthinite (Бисмутинит)	9	Strandzha mine, M. Turnovo reg.; Urdini Lakes, Seven Rila Lakes, Rila Mt. (Bulgaria). Ustarasai (Uzbekistan).	
Stibnite (Стибнит=антимонит)	52	Ribnovo vill., Blagoevgrad reg.; Drugoseltsi vill., Topolovgrad reg.; Mareshnitsa, Haskovo reg.; Kremenitsa, Blagoevgrad reg.; Belasitsa Mt.; Madzharovo reg. (Bulgaria). Stollberg, Harz; Thuringia (Germany). Pribram (Czech Republic). Pezinok (Slovakia). Cavnic; Baia Mare; Baiut (Romania). Alsar (Macedonia). near Belgrade (Serbia). Drama reg. (Greece). Murat-Dag (Turkey). Pereta and Cetine mines, Tuscany (Italy). Kadamdzhai (Kirghisia). Hunan Prov. (China). Hillgeone, New South Wales (Australia). Sarawak, Kalimantan isl. (Malaysia). Nishinomaki mine, Gumma pref. (Japan).	
3.2. Planar			
3.2.1. Tetradymite group			
Tetradymite (Тетрадымит)	1	Karnten (Austria).	
3.2.2. Orpiment group			
Getchellite (Гечеллит)	1	Khaidarkan (Kirghisia).	
Orpiment (Аурпунгменин)	24	Mareshnitsa, Haskovo reg. (Bulgaria). Banat (Romania). Taurus (Turkey). Hall, Tyrol (Austria). Loukhumi (Georgia). Khaidarkan (Kirghisia). Men-Kyule, Yakutia (Russia). Quiruvilca (Peru). Mareshnitsa, Haskovo reg.; Madzharovo reg. (Bulgaria). Andreasberg (Germany). Moldova Noua (Romania). Alsar (Macedonia). Albania. Binntal (Switzerland). Siena (Italy). Chernogolovo mine (Ukraine). Loukhumi (Georgia). Khaidarkan (Kirghisia).	
3.2.3. Realgar group			
Realgar (Реалгар)	18	Clausthal, Harz (Germany). Pezinok (Slovakia). Sarawak, Kalimantan isl. (Malaysia).	
4. Oxsulphides			
Kermesite (Кермесит)	6		
Sarabaite (Сарабайт)	1		

CLASS 3. OXIDES AND HYDROXIDES

1. Metallic oxides and hydroxides

1.1. Be-Al-Mg assemblage

1.1.1. Chrysoberyl group

3

2

1

Chrysoberyl (Хризоберил)	12	Urdini Lakes, Rila Mt.; Dolen vill., Zlatograd reg. (Bulgaria). Marsikov, Moravia (Czech Republic). Alt Emporda, Catalonia (Spain). Val di Rabbi, Trento (Italy). Takovaya, Ural (Russia). Pennington County, South Dakota (USA).
1.1.2. Spinel group		
Spinel (Шпинел)	19	Bela reka, N. Pirin Mt. (Bulgaria). Aker (Sweden). Kukhial, Pamir (Tadzhikistan). Aldan, Yakutia (Russia). L. Lherz.
Hercynite (Херцинит)	2	Bohemia (Czech Republic). Val di Fassa, Tyrol (Italy).
Gahnite (Гаунит)	5	Vishteritsa quarry, W. Rhodopi Mts.; Vishnevo vill., Smolyan reg.; Smilovene mine, Koprivshtitsa reg. (Bulgaria).
1.1.3. Corundum group		
Corundum (Корунг)	21	Trebice, Bohemia; Moravia (Czech Republic). Sivets, Prilep; Selechka Mt. (Macedonia)
- Ruby (Рубин)	23	Naxos Isl. (Greece). Yakutia; Ilmeny, S. Ural (Russia). Karatau Range (Kazakhstan). Ban Houei Sai (Laos). Manica (Mozambique).
- Sapphire (Сапфир)	12	Harts Range, Northern Territory (Australia).
- Leucosapphire (Левкосапфир)	1	
- Emery II (Шмидрел II)	1	
Diaspore (Диаспор)	8	Spanievo mine, Haskovo reg. (Bulgaria). Selechka Mt. (Macedonia). Kytahya (Turkey). Dolni Bory (Czech Republic).
Böhmite (Бъомит)	2	Banska Stavnica (Slovakia).
Gibbsite (Гібсит)	2	Java Isl. (Indonesia). Norway.
1.1.4. Högbomite group		
Högbomite (Хьогбомит)	1	Gamba (Brazil). Java Isl. (Indonesia).
Hibonite (Хибонит)	2	Vallatjvaratj (Sweden).
Magnetoplumbite (Магнетоплумбіт)	1	Esiva (Madagascar).
1.1.5. Periclase - Brucite group		
Periclase (Переклаз)	3	Langban (Sweden). Monte Somma, Vesuvius (Italy). Synthetic.
Brucite (Бруцит)	8	Kumanovo (Macedonia). E. Pyrenees (Spain). Trento (Italy). Langban (Sweden). Da'negorskoye dep.; Khabarovsk territory (Russia). Khromtau (Kazakhstan).
Theophorastite (Теофрастум)	4	Lord Brassey mine, Heazlewood, Tasmania (Australia).
Jamborite (Джамборит)	1	Bologna (Italy).

1.2. Fe-Mn-V assemblage
1.2.1. Magnetite - Chromite group

Magnetite (Магнетит)	63	Seven Rila Lakes, Rila Mt.; Zeleni rid, Rila Mt.; Krumovo vill., Yambol reg.; Krepost vill., Haskovo reg.; Bela reka, N. Pirin Mt.; Kremikovtsi dep., Sofia reg.; Rosen mine, Burgas reg.; Dzhebel vill., Kurdzhali reg.; Vladaya vill., Sofia reg.; Kroyachevo vill., Ardino reg.; Strandzha mine, M. Turnovo reg. (Bulgaria). Rubeland, Harz (Germany). Vlastejovice; N. Moravia (Czech Republic). Salzburg; Tyrol (Austria). Banat (Romania). Ruda glava (Yugoslavia). Capo Calamita, Elba (Italy). Kiruna dep. (Sweden). Krivoi Rog (Ukraine). Kovdor, Kola pen.; Ural (Russia). Dashkesan dep. (Azerbaijan). Annapurna peak, Himalayas (Asia). Tamagot mine (Mauritania). Phalaborwa, Transvaal (S. Africa). Arkansas (USA). Minas Gerais (Brazil). Iron Monarch mine. Lord Brassey mine, Heazlewood, Tasmania (Australia).
- Titanomagnetite (<i>Titanомагнетит</i>)	2	Krzemionka (Poland). Mushugoi Huduk (S. Mongolia).
Franklinite (Франклинит)	2	Franklin mine, New Jersey (USA).
Chromite (Хромит)	53	Dobromirtsi dep., Zlatograd reg.; Yakovitsa vill., Kurdzhali reg., Golyamo Kamenyane vill., Krumovgrad reg. (Bulgaria). Waldenburg (Germany). Sudetes Mt. (Poland). Radusha (Macedonia). Guleman; Erzechit (Turkey). Saranovskoye dep., Ural (Russia).
1.2.2. Hematite group		
Hematite (Хематит)	76	Kremikovtsi dep., Sofia reg.; Dobromirtsi dep., Zlatograd reg.; Rosen, Cherveno zname, Vurli bryag mines, Burgas reg.; Krepost vill., Haskovo reg.; Breznik, Sofia reg.; Buhovo vill., Sofia reg.; Bov vill., Sofia reg.; Tsurvaritsa vill., Kyustendil reg.; Trun reg.; Strandzha, Propada mines, M. Turnovo reg. (Bulgaria).
- Specularite (Спекуларит)	29	Andreasberg, Harz; Ilmenau, Thuringia; Osnabruck; Lam-dil; Hagendorf, Bavaria (Germany). Pribram; Rakosh; Horni Blatna (Czech Republic). Rzhanovo; Damyan mine (Macedonia). Laurium (Greece). Rio Marina, Elba Isl. (Italy). Jumillia (Spain). Egrémont, Cumbria; Glamorgan (England). Gothard tunnel; Aegineftal; Binntal (Switzerland). Ilimaussaq (Greenland). Krivoi Rog

1 2 3

		(Ukraine). Shabry, Ural (Russia). Spring creek Honde (Mozambique). Anti-Atlas Mt. (Morocco). Saia (Angola). Zaghouan (Tunisia). N'Chwaning mines (S. Africa). Zuerat (Mauritania).
		Quebec (Canada). La Paz County, Arizona; Arkansas (USA). Minas Gerais (Brazil). Copper Mine (S. Australia).
	65	Kremikovtsi dep., Sofia reg. (Bulgaria). Eisern, Siegen; Thuringia; Harz (Germany). Pribram; Vrancice; Krasnohorske Podhradie (Czech Republic). Minas Gerais (Brazil). Anti-Atlas Mt. (Morocco). Atterode, Quissama-Libolo (Angola). Akjoujt reg. (Mauritania). Dundas, Tasmania (Australia).
	8	Kremikovtsi dep., Sofia reg. (Bulgaria). Harz (Germany). Cornwall (England).
	1	Heterogenite (Хемерогенит) 1.2.3. Bixbyite - Manganite group - <i>Indetermined secondary Mn mineralizations and concretions</i> - <i>[Неонпегелени вторични Mn - ви минерализации и конкремции]</i> Manganite (Манганит)
	10	Kremikovtsi dep., Sofia reg.; Enyovche mine, Kurdzhali reg.; Ignatievo vill., Varna reg. (Bulgaria). Plevna vill. (Greece). Ural (Russia). Tachgagalt (Morocco). Gelb Mogreni (Mauritania).
	9	Kremikovtsi dep., Sofia reg.; Ignatievo vill., Varna reg. (Bulgaria). Ilmenau, Thuringia; Ilfeld, Harz (Germany).
	2	Onrenstock, Thuringia (Germany). Fukushima (Japan).
	3	Ilmenau, Thuringia (Germany).
	3	Tachgagalt (Morocco).
	5	Kremikovtsi dep., Sofia reg.; Enyovche mine, Kurdzhali reg.; Madzharovo reg. (Bulgaria). Franklin, New Jersey (USA).
	16	Kremikovtsi dep., Sofia reg.; Enyovche mine, Kurdzhali reg. (Bulgaria). Ilmenau, Thuringia; Schwarzenberg, Erzgebirge; Hagendorf, Bavaria (Germany). Transylvania (Romania). Karlsberg (Sweden). N. Ural (Russia).
	4	Kochash vill., Harmanli reg. (Bulgaria). Mistake mine, Arizona (USA).
	1	Marsov (Czech Republic).
		Ramsdellite (Рамзделит) Cryptomelane (Кримомелан)

		3
1	Hollandite (Холлангум)	2
	Coronadite (Коронагум)	3
	Birnessite II (Бирнекум II)	1
	Rancieite (Ранскуеум)	1
	Todorokite (Тодорокум)	1
	Romanechite (Романешум=псиломелан)	17
2	1.3. Ti-Nb-Zr assemblage	
	1.3.1. Rutile group	
	Rutile (Ритула)	24
		Marchevo vill., Teshevo vill., G. Delchev reg.; Divisilovo vill., Krumovgrad reg.; Lozen Mt., Vitosha Mt., Sofia reg.; Turiya vill., Kazanluk reg.; Chepelare, Smolyan reg.; Ihtiman reg. (Bulgaria). Dobra Voda (Czech Republic). Salzburg (Austria). Binntal; Stalvedrostollen; Iragna (Switzerland). El Figuero, Catalonia (Spain). Irpeics (France). Kapudzhuk; Pargachai dep. (Azerbaijan). Mt. St. Hilarie, Quebec (Canada). Minas Gerais (Brazil). Bobruvka, Moravia (Czech Republic). Genoa (Italy). Trient (Switzerland).
	Brookite (Брукум)	5
	Anatase (Анатаз)	8
	Cassiterite (Каситерит)	33
	Baddeleyite (Баддлийт)	3
	Belyankinite (Белянкинит)	1
	Tazheranite (Тажеранит)	1
3	1.3.3. Columbite - Tantalite group	
	Columbite (Колумбит) - Tantalite (Танталит)	18
	Vishteritsa quarry, W. Rhodopi Mts.; Smilovene quarry, Koprivshtitsa reg. (Bulgaria). Hagendorf, Bavaria (Germany).	

1	2	3
Ilimaussaq (Greenland). Zaporozh'ye reg. (Ukraine). Ilmeny, Ural (Russia). Zimbabwe. Alto Ligonha (Mozambique). Wodgina (Australia).		
Vodginite (Воджинит)	2	
Ixiolite (Иксуолит)	1	Kovdor dep., Kola pen. (Russia). Tanco mine, Manitoba (Canada).
Thoreaulite (Тороалит)	2	Alto Ligonha (Mozambique).
Gerasimovskite (Герасимовецкит)	1	Congo.
		Lovozero, Kola pen. (Russia).
1.3.4. Euxenite group		
Euxenite (Евксенит)	5	Ingelsbo (Sweden). Ribaue (Mozambique). Antsirabe (Madagascar).
Fersmite (Ферсмит)	1	Khibiny, Kola pen. (Russia).
Brannerite (Браннерит)	1	Iragna (Switzerland).
Aeshymnite (Ешинит)	4	Ticino (Switzerland). Hopffeldboden (Austria). Ilmeny, Ural (Russia).
Samarskite (Самарскит)	5	Vishteritsa quarry, W. Rhodopi Mts.; Smilovene quarry, Koprievshtitsa reg.; Dolno Osenovo vill., Blagoevgrad reg. (Bulgaria).
Tanteuxenite (Тантевксенит)	2	Chepelare, Smolyan reg. (Bulgaria).
Ishikawaite (Ишикаваит)	1	Seven Rila Lakes, Rila Mt. (Bulgaria).
Vigezzite (Вигеззит)	1	Val Vigezzo, Alps (Italy).
1.3.6. Ilmenite group		
Ilmenite (Илменит)	15	Vishteritsa quarry, W. Rhodopi Mts.; Topolovgrad reg., Sakar Mt.; Vitosha Mt., Sofia reg.; Chepelare, Smolyan reg. (Bulgaria). Harz (Germany). Norway. Khibiny, Kola pen. (Russia). Lac Tio, Quebec (Canada). Portland, Victoria (Australia).
Pseudobrookite (Псевдобрукит)	1	Jumilla (Spain).
Davidite (Дафугум)	2	Crockers well olary (S. Australia).
1.3.7. Perovskite group		
Perovskite (Перовскит)	15	Zlatoust, Ural; White Sea reg.; Tazheran massif, Siberia (Russia). Bitchu, Okayama (Japan). Kimberley Divison (W. Australia).
1.3.8. Pyrochlore group		
Pyrochlore (Пирохлор)	7	Ilimaussaq (Greenland). Transbaikalia, Siberia (Russia). Leushe (Zaire).
Microlite (Микролит)	2	Smilovene quarry, Koprivshtitsa reg. (Bulgaria). Alto Ligonha (Mozambique).
- <i>Yttromicrolite (Иттромикролит)</i>	1	Kararfvet mine (Sweden).
Plumbomicrolite (Плюмбомикролит)	1	Kola pen. (Russia).
Bariopyrochlore (Бариопирохлор)	1	Khibiny, Kola pen. (Russia).

	1	2	3
1.3.9. Fergusonite group			
Fergusonite (Фергюсонит)	2	Ytterby (Sweden).	Ural (Russia).
1.4. Zn-Cu-Pb(U) assemblage			
1.4.1. Zincite - Tenorite group			
Zincite (Цинкит)	1	Franklin mine, New Jersey (USA).	
Tenorite (Тенорит)	2	Kremikovtsi dep., Sofia reg. (Bulgaria). Pinal County, Arizona (USA).	
Cuprite (Куприт)	28	Kremikovtsi dep., Sofia reg.; Vlaykov vrah, Tsar Asen mines - Panagyurishte reg. (Bulgaria). Reichenbach; Harz (Germany). Cornwall (England). Ekaterinburg, Ural (Russia). Erdenet (Mongolia). Manhinga (Angola). Shaba (Congo). Tsumeb (Namibia). Morenci, Arizona (USA). Adelaide (Australia).	
Delafoseite (Делафосит)	3	S. Ural (Russia). Bisbee, Arizona (USA).	
Crednerite (Креднерит)	1	Mendip Hills, Somersetshire (England).	
Murdochite (Мърдокит)	1	Socorro County, New Mexico (USA).	
1.4.2. Plattnerite group			
Massicot (Масикот)	1	?	
Minium (Миниум)	2	Maricopa County, Arizona (USA). Kastellberg.	
1.4.3. Uraninite - Schoepite group			
Uraninite (Уранит)	6	Bulgaria. Pribram; Petrovice; Slavkovice, Moravia (Czech Republic). Hagnendorf (Germany).	
2. Semi - metallic and nonmetallic oxides			
2.1. Senarmontite group			
Valentinite (Валентинит)	4	Belasitsa Mt. (Bulgaria). Pezinok (Slovakia). Limoges (France). Algeria.	
Bismite (Бисмит)	2	Johanngeorgenstadt, Saxony (Germany).	
2.2. Bistromite - Schafarzikite group			
Apuanite (Апуанит)	2	Val di Castello, Tuscany (Italy).	
Namibite (Намібіт)	1	Benambra, Victoria (Australia).	
2.3. Stibiconite group			
Stibiconite (Стибіконіт)	4	Kremenitsa, Blagoevgrad reg. (Bulgaria). Belvedere, Furkapass (Switzerland). Vrancice (Czech Republic). La Sanguinede, Herault (France).	
Bindheimite (Біндхайміт)	2		
Stetefeldtite (Стетевальдіт)	3	Dundas, Tasmania (Australia).	
Mopungite (Монунгіт)	1	Siena (Italy).	

	1	2	3	
CLASS 4. HALOGENIDES				
1. Fluorides				
1.1. Fluorite group				
Fluorite (Флюорит)	180	Mihalkovo vill., Yugovo vill. - Smolyan reg.; Palat vill., Blagoevgrad reg. (Bulgaria). Freiberg; Oberwolfach; Hagedorf; Pohla; Harz (Germany). Cinovec; Vlastejovice; Bestvina; Moldava; Nedvedice, W. Moravia; Harachov (Czech Republic). Stregon; Stanislawow, Silesia; Kletno (Poland). Dinanzh (Belgium). El Papiol, Catalonia; Asturias (Spain). Elbachalm, Amerthal (Austria). Laurium (Greece) Derbyshire (England). Dal'negorskoye dep.; Transbaikalia, Siberia; White Sea reg. (Russia). Tashkent reg. (Uzbekistan). Kent (Kazakhstan). Kharairan, Khalih-Khalboo; Ondor-Tsagan (Mongolia). Hunan (China). Zriba; Zebra; Zagoan (Tunisia). Manica (Mozambique). Namibia. Monte Chivira (Angola). Quebec (Canada). Minerva Mine, Cave in Rock, Illinois (USA). Minas Santana, Sonora (Mexico). Lovozero, Kola pen.; Rasvumchorr Mt., Khibiny., Kola pen. (Russia). Kwanefjeld (Greenland).		
Kazakhstan. Transbaikalia, Siberia (Russia).	7			
Moldava (Czech Republic).	1			
1.3. Cryolite group				
Cryolite (Криолит)	29	Ilimaussaq; Ivigtut (Greenland). Transbaikalia, Siberia (Russia).		
Cryolithionite (Криолитионит)	2	Ilimaussaq (Greenland).		
Thomsenolite (Томсенолит)	7	Ilimaussaq (Greenland). Transbaikalia, Siberia (Russia).		
Jarlite (Ярлит)	2	Ilimaussaq (Greenland).		
Chiolite (Хиолит)	1	Ilimaussaq (Greenland).		
Weberite (Веберит)	1	Ilimaussaq (Greenland).		
Ralstonite (Ралстонит)	1	Ilimaussaq (Greenland).		
Boggildite (Бъргилдит)	1	Ilimaussaq (Greenland).		
Fluellite (Флюеллит)	3	Richelle (Belgium). Kapunda (Australia).		
1.4. Prosopite group				
Prosopite (Прозопит)	2	Ilimaussaq (Greenland).		
Gearksutite (Гарксутит)	1	Ilimaussaq (Greenland).		

	1	2	3
Creelite (Кругум)			
2. Chlorides, Bromides and Iodides			
2.2. Na-Ca-K assemblage			
2.2.1. Halite group			
Halite (Халтум)			
	55	Atanasovsko ezero, Burgas reg.; Provadiya reg. (Bulgaria). Rhon (Germany). Bochnia (Czech Republic). Wieliczka; Inowrocław-Kłodawa (Poland). Salnik; Telega (Romania). Sallent; Cardona mine, Catalonia (Spain). Cheshire (England). Artemovsk; Solotvino (Ukraine). Solegorsk (Byelorussia). Solikamsk dep. (Russia). Khodzha-Achkan (Kirghisia). Egypt. Salton Sea, California (USA).	
Sylvite (Сулфтин)			
	9	Sallent (Spain). Solegorsk (Byelorussia). Ural; Solikamsk dep. (Russia). Salton Sea, California (USA).	
Sal ammoniac (Саламуак)			
2.2.2. Carnallite group			
Carnallite (Карналит)	1	Kladno (Czech Republic).	
		Sallent (Spain).	
Chlorargyrite (Хлораргирит)			
2.3. Cu-Ag-Pb-Hg assemblage			
2.3.1. Nantokite - Chlorargyrite group			
Iodargyrite (Иодаргирит)	4	Broken Hill (Australia).	
Tolbachite (Толбачит)	2	Vrancice (Czech Republic). Broken Hill (Australia).	
	1	Kamchatka pen. (Russia).	
Atacamite (Амакамит)			
2.3.2. Atacamite group			
Paratacamite (Паратамакамит)	4	Quetena mine; Copiapo, Atakama (Chile). Sunson Mt., Port Augusta (S. Australia).	
	1	Sierra Gorda (Chile).	
Boleite (Болеит)	2		
2.3.3. Boleite group			
Mendipite (Мендипит)	2	Mendip Hills, Somersetshire (England).	
Laurionite (Лаурионит)	1	Lauriun (Greece).	
Nadorite (Надорит)	1	Hammam, N'Bails (Algeria).	
Onoroatoite (Оноратоит)	1	Cetine di Cotoriano, Siena (Italy).	

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Authors' addresses:

Chavdar Karov

Ilia Dimitrov

National Museum of Natural History

Tsar Osvoboditel Blvd. 1

1000 Sofia, Bulgaria

E-mail: lakichepelare@abv.bg

**Каталог на минералните видове в Националния
природонаучен музей, София (част 1).
Самородни елементи, сулфиди и сулфосоли,
оксиди и хидроксиди, халогениди**

Чавдар КАРОВ, Илия ДИМИТРОВ

(Р е з ю м е)

Новият каталог на минералите в Националния природонаучен музей е базиран на систематиката на Костов (1993). Каталогът включва образците, инвентирани в основния минераложки фонд до 2001 г. Първата част включва първите четири минераложки класа - самородни елементи, сулфиди и сулфосоли, оксиди и хидроксиди, халогениди. От тези класове в каталога са представени 238 минерални вида, 10 разновидности и 5 вида с второстепенно значение в образците.