NEW ACQUISITIONS TO FERSMAN MINERALOGICAL MUSEUM IN 2011–2012

Dmitriy I. Belakovskiy
Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, dmz@fmm.ru

Eight hundred and seventy-seven mineral specimens representing 488 mineral species from 59 countries, Antarctica, the oceanic floor, and space were catalogued into six collections of the main fund of the Fersman Mineralogical Museum, Russian Academy of Sciences, during 2011 and 2012. Among them, 160 mineral species were previously absent in the museum collection. Eighty-five of the new species are represented by type specimens (holotypes, co-types, or their fragments) of which twenty-seven minerals species were discovered by Museum staff members or with their participation. Of the new specimens, 645 (74%) were donated by 151 private persons and 3 organizations, including 104 (85 species) type specimens. The museum staff collected 85 items (10%). One hundred and twelve specimens were exchanged. Three specimens were purchased. Thirty-two mineral specimens (4%) were documented from previous acquisitions. The new acquisitions are surveyed by mineral species, geography, type of entry, and donor. Lists of new mineral species and mineral species missing in the museum are given.
4 table, 18 figures*, 10 references.
Keywords: Mineralogical museum, collection, new acquisitions, mineral species, mineral, meteorite.

Eight hundred and seventy-seven mineral specimens were catalogued into six collections of the main inventory of the museum in 2011–2012. The majority – 712 items – were placed into the systematic collection; 33 specimens were added to the collection of deposits; 60 items were entered into the collection of the formation and transformation of minerals (OP); 43 specimens were catalogued into the collection of crystals and synthetic compounds; 17 specimens became a part of the collection of ornamental stones and gems (PDK); and 12 specimens were catalogued into the collection of meteorites and impactites.

About 75% of items were acquired during 2011–2012 or shortly before this time. The remainder were acquired before, but were cataloguized later at that period after diagnostic.

The vast majority of mineral specimens (807) represent various mineral species for their morphology, properties, and other features. Seventy specimens are rocks, meteorites, impactites, mineraloids, mixtures of minerals, and other natural or partly natural phases, which are currently not approved by the Commission on New Minerals, Nomenclature, and Classification of International Mineralogical Association (CNMNC IMA) as mineral species. For example, some are products of coal waste fire or biogenic crystalline phases such as cholesterol. Stone artifacts, synthetic minerals, and other synthetic phases are included to this category.

The principles guiding the new acquisition for the collections of the main museum fund were reported in previous reviews of new acquisitions (Belakovskiy, 2001; 2003; 2004; 2006; 2011; Belakovskiy and Pekova, 2008).

Only the data on the specimens which were catalogued in the collections of the main museum fund in 2011–2012 are part of this review. Other acquisitions of this period, such as those processed for registration in inventory or assigned by the buying commission of the museum to the scientific or exchange accounts are not reported here. All given numerals refer to inventory numbers of the main fund.

Acquisitions classified by mineral species

The additions to the systematic collection during the surveyed period totalled 488 valid mineral species, 160 of which are new species for the museum. This includes 104 specimens which are type materials for 85 recently discovered new minerals (holotypes, co-types, and/or their fragments). Type materials include 27 new mineral species discovered by the museum staff or in collaboration with the museum staff.

The total number of mineral species in the museum as of December 31, 2012 is 3,450, after excluding the species received before for which the diagnostic appeared to be wrong.

* – all specimens from Fersman Mineralogical Museum, Russian Academy of Sciences.

Table 1. **Distribution of mineral species on the number of specimens (for those taken as more than 5 specimens)**

1.	Tenorite	31	6.	Goethite	10	11.	Anhydrite	7
2.	Quartz	24	7.	Magnetite	9	12.	Kurnakovite	6
3.	Calcite	15	8.	Epidote	9	13.	Labrador	6
4.	Gypsum	11	9.	Rhodonite	8	14.	Tephroite	6
5.	Cristobalite	11	10.	Schorl	8	15.	Fluorite	6

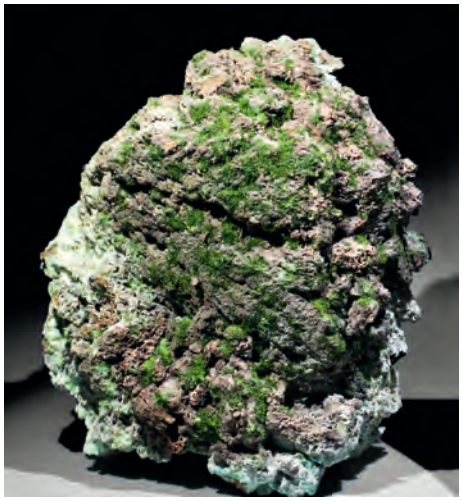
Three hundred and sixty-eight of the 488 mineral species are represented by a single specimen. Sixty-three mineral species are represented by two specimens. Forty-two species are represented by three or four specimens. Fifteen mineral species were taken as five or more specimens (Table 1). Two specimens contained a few mineral species, which is novel for the museum.

The mineral species in this table are reviewed below.

The unusual abundance of **tenorite** resulted from collection by the museum staff in July, 2012 at the second cinder cone of the North breach of the Great Fissure Tolbachik Eruption (GOPE). In the Tenorite fumarole opened by I.S. Lykova and the neighboring fumaroles, spectacular large crystals and aggregates of tenorite extremely variable in morphology were found. Tenorite occurs as flattened-elongated skeletal crystals up to 4 cm in size, filamentous crystals and their crossed aggregates, variously split crystals, dendrites, and twinned clusters. Two or three types frequently are neighbors in the same sample. The collected specimens surpass known specimens of tenorite from Vesuvius, Italy in aesthetics and diversity. This fact and the morphological diversity of tenorite from Tolbachik caused the introduction into the systematic collection of a great number of specimens of this single mineral species, which only occasionally forms interesting collection specimens. Of the other mineral specimens collected in the same trip, very interesting items of piypite with langbeinite (Fig. 1), dolerophanite with euchlorine, anglesite (transparent crystals up to 7 mm in size) with euchlorine, hematite, and sylvite are registered at present. In addition, CNMNC IMA is considering the applications for several apparent new mineral species whose specimens were collected during this trip. A.A. Antonov, D.I. Belakovskiy, V.N. Kalachev, P.V. Kalachev, I.S. Lykova, I.V. Pekov, and A.G. Turchkova collected these minerals during this trip. Type specimens of approved new mineral species pseudolyonsite, cupromolybdite, steklite, kra-

Fig. 1. Piypite. Bunches of dark green acicular crystals on volcanic cinder. Second Cinder Cone of the North Breach of GOPE, Tolbachik volcano, Kamchatka, Russia. Size of specimen 8 cm. Collected by museum. Systematic collection. FMM no. 93859. Photo: M.M. Moiseev.

Fig. 2. Pseudomorph after tree. Trunk is replaced by chalcedony. Calcite and agate are between trunk and peeled bark. Specimen was taken with fixing "Nevada, US", but most likely it came from Blue Forest, Eden Valley, Wyoming. Size of specimen 15 cm. Donation of D.I. Belakovskiy. OP collection. FMM no. OP 2611. Photo: D.I. Belakovskiy.



sheninnikovite, calciolangbeinite, starovaite and yaroshevskite found earlier by M.E. Zelensky at the second cinder cone of GOPE have already been catalogued into the museum collection.

Specimens of **quartz** and **chalcedony** catalogued into the museum collection in 2011–2012 are lithophyses of agate in rhyolite from Oregon and Nevada, US donated by Stephen Schuchman. Pseudomorphs of chalcedony after trees from Nevada, US, consisting of peeled pieces of bark overgrown by light bluish gray chalcedony and cemented by calcite (Fig. 2) are of interest. Pseudomorphs of chalcedony after the space between stem ossicles of crinoids in silicified limestone (followed by the dissolution of the ossicles), a novel and unusual specimen, makes a deep impression of fossilized screws (Fig. 3). This specimen, which was donated by M.M. Moiseev, came from the Komsomolsky quarry in the Donetsk area, Ukraine. A chalcedony flower carved from an agate geode and large spectacular varicolored cabochons of so called pietersite from Namibia, which is a quartz pseudomorph after a fibrous, diverse aggregate of an alkali amphibole in various tints of light blue and red, are catalogued into the PDK collection.

A cluster of parallel rhombohedra of honey calcite (gallery no. 34, Dodo, Sub-Polar Urals), a druse of Co-bearing calcite from Likasi, Democratic Republic of Congo, donated by N.N. Kamzolkin and A.F. Popov, and a transparent twinned crystal of calcite ca. 14 cm in size from the Kurunzhukul deposit, Northern Kazakhstan, donated by M.M. Moiseev, are the most interesting specimens of **calcite**. In addition, large cleavage fragments of calcite from the Peregrina mine, Guanajuato, Mexico with various fluorescence depending on the wavelength of UV light are catalogued into the collection for the exhibition Fluorescence of Minerals. An icon ultrasonically carved on nacre, designed and donated by M. Andreev, was catalogued into the PDK collection.

Gypsum. Druse of colorless and lustrous thin long-columnar crystals of gypsum from the San Timoteo mine, Portman, Cartagena, Murcia, Spain, donated by D.E. Tonkacheev, frequently draws the attention of visitors. Another specimen of gypsum from Spain (Consuelo mine, Chinchon, near Madrid) is a pseudomorph after glauberite. The author of this review brought a few clusters of colorless transparent crystals of gypsum up to 11 cm from the Naica mine, Chihuahua in Mexico. These clusters are similar in origin to gypsum from the Cave of Crystals found at this mine in 2000, where the size of crystals reaches 11 m. Spectacular clusters of pale sky blue split crystals of **anhydrite** came from the same mine.

Cristobalite was received from various localities. Spherulites up to 3 cm with fayalite enclosed in obsidian from the Cougar Mt., Modoc Co., California in the United States were donated by S. Schuchman. A specimen of cristobalite from the Libya desert in Egypt consists of snow-white spherulites up to 2 mm in size in the Libya impact glass. However, the most unusual specimens of cristobalite were acquired from the Thomas Range, Utah, USA. There, in addition to the separate spherulites, cristobalite was found as thick spherulitic crusts on quartz druses in rhyolite and breccias, in which fragments of these crusts are cemented by calcite. Specimens of tridymite and natural quartz glass lechatelierite

Fig. 3. Chalcedony after crinoids in silicified limestone. Chalcedony fills space between stem ossicles of crinoids. Stem ossicles are dissolved causing strange shape of this pseudomorph like fossilized screws. Komsomolsky quarry, Donetsk area, Ukraine. Size of specimen 26 cm. Collected by museum (M.M. Moiseev). OP collection. FMM no. OP 2613. Photo: D.I. Belakovskiy.

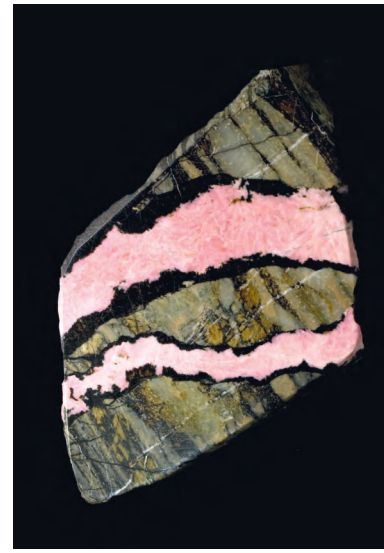


Fig. 4. Rhodonite. Druse of bright pink flattened crystals up to 2 cm in size with quartz and colorless fine-acicular crystals of cummingtonite. Conselheiro Lafaiete, Minas Gerais, Brazil. Size of specimen 10 cm. Donation of D.I. Belakovskiy. Systematic collection. FMM no. 93322. Photo: M.M. Moiseev.

Fig. 5. Rhodonite. Veinlets with black selvages (parsettensite) in cherty metasiltstone. South Faizulino deposit, Bashkiria, Russia. Size of specimen 12 cm. Donation of A.I. Brusnitsyn. Systematic collection. FMM no. 93917. Photo: M.M. Moiseev.

were collected from that and neighboring ancient fumaroles.

Eight of the ten catalogued specimens of **goethite** are from the Farafra Oasis, Matruh Governorate in Egypt. These are pseudomorphs after fancy concretions and pseudostalactites of pyrite and marcasite.

Of the catalogued specimens of **magnetite**, aggregates of oolites, with individual oolites up to 3 cm, from the Rudnogorsk deposit, Irkutsk area were donated by O.I. Gritsenko and "ontogenic" specimens from Dashkesan, Azerbaijan donated by B.Z. Kantor, are of the most interest.

Half of the catalogued specimens of **epidote** were collected by D. Toland and D.I. Belakovskiy from cavities in skarn at the classic locality Green Monster Mountain, Prince of Wales Island, Alaska, USA. These are dark green pinacoid-prismatic twinned crystals and sheaf-like clusters of high quality; they supplement the existing collection of epidote from this locality. The remaining specimens are tabular pseudohexagonal crystals up to 8 cm in size and isometric pseudoctahedral crystals and clusters of crystals of various habits from Kharan, Baluchistan, Pakistan. Although these new collection specimens are from the abundant find of a few years ago, the museum specimens are some of the best from this locality and the morphology of epidote is well characterized.

A cluster of bright pink flattened crystals up to 2 cm in size with quartz and finely acicular cummingtonite from Conselheiro Lafaiete, Minas Gerais, Brazil (Fig. 4) stands out among the new specimens of **rhodonite**. A series of specimens of rhodonite along with **tephroite**, pyroxmangite, braunite, caryopilite, parsettensite, alleghanyite, and other minerals typical of contact-metasomatic rhodonite deposits was donated by A.I. Brusnitsyn (mainly from the Ural deposits) and L.A. Pautov, D.I. Belakovskiy, and A.L. Galkin, who collected specimens at localities in Kirgizstan and Ukraine (Fig. 5).

Most specimens of **schorl** donated to the museum in 2011–2012 are from Tsitondroina, Fianarantsoa province, Madagascar. These are hoper crystals of various morphologies up to 11 cm in size with well-shaped lustrous faces. A lot consisting of few hundred specimens in 2011 at the Denver mineral show was quickly snapped up and similar specimens have not been observed since.

Most of the new specimens of very nice iridescent **labradorite** are from Madagascar. These specimens were added to the PDK collection. One zoned 8 cm crystal of labradorite acquired from Ylamaa in Finland was donated by T. and L. Holm. One specimen consists of lapilli crystals collected at cinder cones in the region of the South breach of GFTE, Kamchatka.

A group of well-shaped crystals of **kurnakovite** of various forms from Boron, Kramer District, Kern Co., California in the United States was catalogued into the collection of crystals. Size of the crystals ranges from 4 to 6 cm.

The acquired **fluorite** is from various localities. The Russian specimens are colorless, transparent rhombododecahedral and cuboctahedral crystals up to 5 cm from a ven-

tilation shaft at the Nikolaevsk mine in the Dalnegorsk district, Primorskii krai (Fig. 6). One good specimen was received from each of the famous old deposits in Mogov, Tajikistan and Akchatau, Kazakhstan (donation of O.A. Lopatkin and N.S. Lukinykh). Y-bearing fluorite from the White Cloud pegmatite, Colorado, United States was donated by I.V. Pekov.

One of the principal acquisition priorities of the museum is to collect a systematic collection which is as complete as possible with known mineral species. The mineral species, catalogued in 2011 to 2012, which are new to the museum are given in Table 2. In this list, mineral species catalogued as type material or its fragments are marked by T; mineral species discovered by the museum staff or in collaboration with the museum staff are asterisked.

As mentioned earlier, the museum catalogue now has ca. 3400 mineral species of the ca. 5000 known species. Minerals species which are absent in the museum collection are listed at the end of this article.

New acquisitions classified by geography

In 2011–2012 the museum received items from 59 countries (Table 3), Antarctica, and the ocean floor; eleven specimens have no geographical reference (these are mainly synthetic minerals). In addition, four specimens originate from the Pacific floor, one is from Antarctic, and twelve are of space origin.

The domestic items are reviewed from localities from west to east. Then, the acquisitions from the republics of the Former Soviet Union are reported followed by those from other countries in descending number of specimens.

Russia

Three hundred and seventy-five domestic items (ca. 43% of total number) are distributed by regions as follows: Kola Peninsula (51), Karelia (19), Central Russia (14), Caucasus (23), Urals (77), Siberia (97), Primorskii krai (16), Magadan area (5), Kamchatka and Kurile (59). Another fourteen specimens are minerals synthesized in Russia and Russian specimens without detailed reference.

The fifty-one specimens (44 mineral species) from the **Kola Peninsula** come from the following major localities of this region: 23 (17 mineral species) from **Khibiny**, 18 (18) from **Lovozero massif**, 6 (6) from **Kovdor**, and 3 (2) from **Keivy**.

Fig. 6. Fluorite. Colorless rhombododecahedral crystal of 5 cm in size on fine-crystalline quartz. Nikolaevsk mine, Dalnegorsk, Primorsk krai, Russia. Size of specimen 12 cm. Donation of D.I. Belakovskiy. Systematic collection. FMM no. 93655. Photo: M.M. Moiseev.

Type specimens of four new mineral species (davinciite, kazanskyite, carbobystrite, eksplexite) were donated by A.P. Khomyakov and I.V. Pekov and found in Khibiny. In addition, other minerals added from Khibiny are lucasite-(Ce), orickite, chlorbartonite, and kulsonite. A crystal of eudialyte in apatite, from the former collection of A.S. Podlesny and donated by V.G. Grishin, should be highlighted among the other specimens from Khibiny. Vigrishinite, yegorovite, alluaivite, and vitusite-(Ce) are type specimens added to the museum from the Lovozero massif. Like other specimens from this massif catalogued in 2011–2012, these were donated by A.P. Khomyakov, I.V. Pekov, and V.G. Grishin. A very nice specimen with multicolor crystals of quintinite-2*H* in magnetite is from **Kovdor**; the species diversity of the museum collection from this massif was increased by the addition of specimens of tacharanite, gorceixite, and sodalite. A type of fluortalenite-(Y) and goethite unusual for the region from the Serpovidniy Ridge (donation of A.V. Voloshin) should be mentioned among acquisitions from the **Keivy** district.

About half of the 19 items from Karelia are specimens from old collections from the Lupikko, Pitkyranta district, among which chrysoberyl should be mentioned. Most of the other specimens from Karelia are shungite, which are better in quality than previous specimens. Menshikovite was catalogued as type material (donation of A.Yu. Barkov).

Table 2. **Mineral species novel for museum received in 2011–2012**

1. Agardite-(Nd) T
2. Aklimaite T
3. Alcaparrosaite T
4. Alexandrovaite T*
5. Alluaivite T
6. Aluminocopiapite
7. Ambrinoite
8. Ammoniomagnesiovoltaite
9. Anatacamite
10. Anorpiment T
11. Anyuite T
12. Arangasite T
13. Arhbarite
14. Bayldonite
15. Beshtauite T*
16. Bitikleite-(SnFe) T
17. Boyleite
18. Brandholzite
19. Byzantievite T*
20. Calciolangbeinite T*
21. Capgarronite
22. Carbobystrite T
23. Carlgieseckeite-(Nd) T
24. Chabazite-Mg
25. Changoite
26. Chlormayenite
27. Christofschäferite-(Ce) T*
28. Claringbullite
29. Cobaltoblodite T*
30. Cordylite-(La) T*
31. Cuprokalininite T
32. Cupromolybdite T
33. Daliranite
34. Davinciite T
35. Demicheleite -Cl
36. Demicheleite-Br
37. Dorallcharite
38. Dymkovite T
39. Edgrewite T
40. Efremovite
41. Ekplexite T
42. Eltyubyuite T
43. Fangite
44. Ferhodsite T
45. Ferrikaersutite
46. Ferrinatrite
47. Ferrotochilinite T
48. Ferrovalleriite T
49. Fluorchegemite T
50. Fluorocronite T
51. Fluoro-magnesiohastingsite
52. Fluoro-potassic-pargasite T
53. Fluororichterite T
54. Fluor-schorl
55. Galuskinite T
56. Gelosaite
57. Günterblassite T*
58. Hielscherite T
59. Hillesheimite T*
60. Hughesite
61. Hydrochlorborite
62. Hydroxylchondrodite T
63. Hydroxyledgrewite T
64. Hydroxymanganopyrochlore T
65. Irarsite T
66. Irinarssite T
67. Jadarite
68. Jonassonite
69. Juangodoyite
70. Junoite
71. Kadyrelite T
72. Kasatkinite T
73. Kazakhstanite T
74. Kazanskyite T
75. Kirchhoffite T*
76. Kobokoboite
77. Kobyashevite T*
78. Kokchetavite
79. Kottenheimite T
80. Krasheninnikovite T
81. Krasnoite
82. Kumdykolite
83. Kunatite
84. Kuzminite
85. Lahnsteinite T*
86. Langbanshyttanite T*
87. Laptevite-(Ce) T*
88. Larosite
89. Lavinskyite T
90. Lavoisierite
91. Lileyite T
92. Manganoblödite T*
93. Manganoquadratite
94. Mariinskite T*
95. Markcooperite
96. Mattheddleite
97. Megawite T
98. Mejillonesite T
99. Mendeleevite-(Ce) T*
100. Mendozavilite-NaCu
101. Menshikovite T
102. Mikasaite
103. Natropharmacoalumite
104. Nelenite
105. Nickelpicromerite T*
106. Nimite
107. Nioboaeschynite-(Ce)
108. Noonkanbahite
109. Nowackiite
110. Odintsovite T
111. Okhotskite
112. Orlovite T*
113. Osumilite-(Mg) T*
114. Oxyplumboromeite
115. Oxy-rossmanite T
116. Palmierite
117. Parvo-manganotremolite
118. Pavlovskyite T
119. Perrierite-(La) T*
120. Pertlikite T
121. Piemontite-Pb T*
122. Plimerite
123. Pseudolyonsite T
124. Pumpellyite-Al
125. Qingheiite
126. Rabbittite
127. Rauchite T
128. Rongibbsite
129. Rooseveltite
130. Rusinovite T
131. Santarosaite
132. Sarrabusite
133. Schüllerite T*
134. Scottyite
135. Souzalite
136. Starovaite T
137. Steklite T
138. Št pite
139. Steropesite
140. Sveinbergite T
141. Švenekite
142. Tashelgite T
143. Ternesite T
144. Thermessaite
145. Thorneite
146. Tubulite
147. Uchucchacuaite
148. Umbrianite T
149. Vigrishinite T*
150. Vladykinite
151. Wesselsite
152. Whitecapsite T*
153. Willemseite
154. Windhoekite T*
155. Witzkeite T
156. Yangite T
157. Yaroshevskite T
158. Yegorovite T
159. Yttriaite-(Y) T*
160. Yuanfuliite

Acquisitions from **Central Russia** are basically minerals from the Moscow area (vivianite, chalcedony). The species diversity was increased by the addition of a few minerals. Epsomite, heulandite-Ca, and aluminocopiapite (a new species for the museum) identified in the specimens from the Gzhel quarry are among them. The minerals previously not catalogued from the Moscow area were found, identified and donated by M.M. Moiseev and I.A. Novikov. Acicular spherulites of strontianite up to 2 cm in diameter from the barren Vodino sulfur deposit near Samara (donation by T.V. Pashko) are also noteworthy.

Two specimens of honey-colored, large lamellar whewellite crystals in a marl concretion from **Krasnodar krai** were donated by S.V. Popov. These specimens are from an outcrop at the Pshish River.

Half of the items from the **Caucasus** are type specimens of recently discovered minerals from the Lakargi Mount in the Upper Chegem Ridge,

Table 3. **Distribution of new entries by countries**

1. Russia	375	21. China	8	41. Czech Republic	3
2. United States	88	22. Namibia	8	42. Switzerland	3
3. Germany	27	23. Morocco	7	43. South Africa	3
4. Mexico	24	24. Pakistan	7	44. Belorussia	2
5. Hungary	18	25. Japan	7	45. Bolivia	2
6. Kazakhstan	16	26. Austria	6	46. Great Britain	2
7. Madagascar	16	27. Norway	6	47. Dania	2
8. Ukraine	16	28. Spain	5	48. Zimbabwe	2
9. Brazil	15	29. Myanmar	5	49. Iran	2
10. Romania	15	30. Turkmenistan	5	50. Island	2
11. Chile	15	31. Democratic Republic of Congo	4	51. Poland	2
12. Egypt	14	32. Kirgizstan	4	52. Bosnia and Herzegovina	1
13. Canada	13	33. Macedonia	4	53. Greece	1
14. Tajikistan	13	34. Finland	4	54. Dominican Republic	1
15. Australia	13	35. Ethiopia	4	55. Israel	1
16. Italy	12	36. Azerbaijan	3	56. Indonesia	1
17. Bulgaria	11	37. Argentina	3	57. Niger	1
18. Sweden	11	38. Afghanistan	3	58. Serbia	1
19. Peru	9	39. Slovakia	3	59. France	1
20. India	8	40. Thailand	3		

Note: In addition, four specimens came from the Pacific floor, one is from Antarctic and twelve are of space origin.

Kabardino-Balkaria. This extremely interesting locality recently became a source of minerals found in carbonate xenoliths from ignimbrite lava. Holotypes and co-types of megawite, rusinovite, pavlovskyite, irinarssite, fluorchegemite, edgrewite, hydroxyledgrewite, aklimaite, eltyubyuite, and bitikleite-(SnFe) were catalogued into the systematic collection. Subsequently, bitikleite-(SnFe) was renamed to dzhuluite (Grew *et al.,* 2013) by CNMNC IMA. These specimens were received from I.O. Galuskina, E.V. Galaskin, A.E. Zadov and others who collected and examined them. The Belaya Rechka deposit near the settlement of Nickel is one of the traditional sources of new acquisitions. Holotypes of two new minerals, rauchite and dymkovite, donated by I.V. Pekov and V.V. Levitsky are from there. Also from this deposit is a new specimen with crystals of strontianite up to 5 cm in size on barite. A holotype of beshtauite is from the Beshtau Mount. Cuspidine and ferrimolybdite from Tyrnyauz (donation of E.M. Spiridonov and O.V. Kononov) and a large hand specimen with spectacular clusters of crystals of colorless barite on dark brown calcite within a septarian nodule from the Lower Cretaceous sediments near the Uchkeken village, Karachaevo-Cherkesia (donation of V.V. Levitsky) are noteworthy other additions from the Russian Caucasus.

The seventy-seven specimens from the **Urals** consist of forty-five mineral species, of which hydroxylchondrodite, yttriaite-(Y), kasatkinite, kobyashevite, mariinskite, nickelpicromerite, ferhodsite, and fluororichterite are holotypes. In addition, a series of unique mineral samples from burnt rocks from the waste banks of coal opencasts in the Chelyabinsk basin, South Urals comprise a new type material. These assemblages were donated to the museum by B.V. Chesnokov, a famous Ural mineralogist. Due to their partially man-caused origin, they are not approved by CNMNC IMA as a new mineral species. Nevertheless, they do exist and contribute to the study of natural mineral-forming processes which occur after human activities. In some cases, similar minerals were found in a true natural environment (for example, avdoninite and steklite). In addition, there are mineral species of this type of origin approved by CNMNC IMA before the decision to discriminate against phases with an imperfect natural origin (for example, downeyite and godovikovite.) Despite the decision of the Commission, B.V. Chesnokov published some phases with their proper names (Chesnokov *et al.,* 1998; Avdonin and Polenov, 2007). The specimens given by him were catalogued into the systematic collection under their original names. These are orthorhombic *ammonite* $Zn(NH_3)_2Cl_2$, hexagonal *ignicolorite* $FeS_2 \bullet 0.7CaCO_3 \bullet 2.8H_2O$, tetragonal *ovchinnikovite* $4FeS \bullet FeO \bullet 3CaO \bullet CaCO_3$, cubic *perkovaite* $CaMg_2(SO_4)_3$, orthorhombic *podnoginite* γ $Ca_2[SiO_4]$ (analog

of calciolivine) and tetragonal *torbakovite* $3CaO \bullet Fe_2O_3 \bullet CaCl_2$. Several hand specimens of tobermorite composed of snow-white spherulitic crusts consisting of fine, acicular crystals should be mentioned among the most interesting Ural specimens. These are some of the best specimens of tobermorite (donation of A.B. Loskutov and E.A. Novgorodova). The same can be said of nioboaeschinite-(Ce), relatively recently found in mine 97, Ilmeny Mountains (Fig. 7). Separate crystals with rough lateral striations reaching 6 cm in size are combined into a near-parallel aggregate. Restoration of this specimen does not reduce its value. The series of specimens from the Ural rhodonite deposits was aforementioned.

Altai krai is represented by ten hand specimens where all but two (polished plates of dark lilac stichite replacing chromite from the Kaznakhta Valley, Terekta Ridge) originate from the Rubtsovsk deposit and supply a rather representative mineralogical collection from this interesting locality. This collection is comprised of high-quality crystals of cuprite, dendrite of native copper, and miersite. A magnificent cluster of isometric concretions of azurite donated by K.S. Berdysheva is particularly noticeable (Fig. 8).

One specimen, a holotype of tashelgite, originates from **Mountain Shoriya**.

Eight specimens were received from the **Krasnoyarsk krai**, among which are holotypes of the new species ferrotochilinite and ferrovalleriite from the Oktyabrsk mine near town Talnakh.

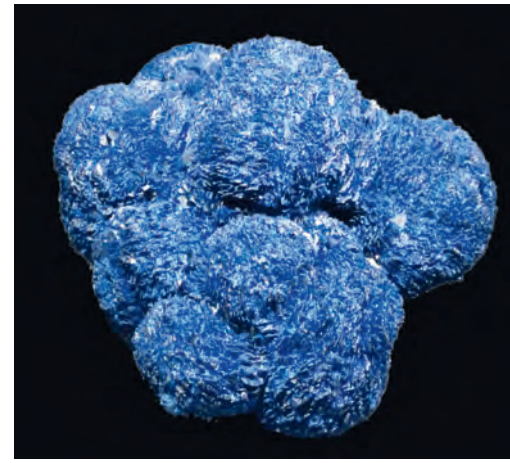
The **Republic of Tyva** (11 specimens) is basically represented by mercury minerals, consisting of kadyrelite, corderoite, lavrentievite, eglestonite, and kuzminite from the Arzak and Kadyrel occurrences (collection of V.I. Vasil'ev).

Baikal region, Irkutsk area, and Transbaikal region. Fifty five specimens (34 mineral species) were received from these regions. Cordilite-(La), cuprokalininite, odintsovite, pavlovskyite, and galuskinite brought by L.Z. Reznitsky, E.V. and I.O. Galuskin, A.A. Konev, and P.M. Kartashov are among the holotypes of mineral species. Most of the items are newly processed from old collections of A.A. Konev from the Murun massif including lamprophyllite, eudyalite, noonkanbahite (previously described as K-batisite) and kalsilite. Tausonite and recently discovered vladykinite received from N.V. Vladykin are from the same locality. Specimens of zircon, phlogopite and fluorapatite from old collections of K.I. Klopotov which were collected from various occurrences near town Slyudyanka were catalogued. He donated from his new collections a very bright specimen of agardite-(Y) from Sherlova Gora (Fig. 9). Oolites of magnetite from the Rudnogorsk deposit near town Zheleznogorsk were aforementioned.

Yakutia is represented by 19 specimens (15 mineral species). Type specimens include arangasite and fluorocronite from G.N. Gamyanin and P.M. Karatshov and yuanfuliite from the Tayoznoe deposit examined by V.V. Rudnev, but approved according to the earlier application of Chinese researchers, who

Fig. 7. Nioboaeschenite-(Ce). Cluster of columnar crystals up to 6 cm in size. Mine 97, Ilmeny Mountains, South Urals, Russia. Size of specimen 11 cm. Donation of K.A. Zakharov, S.V. Kolisnichenko and V.A. Popov. Systematic collection. FMM no. 93888. Photo: M.M. Moiseev.

Fig. 8. Azurite. Cluster of spherulitic concretions up to 5cm in size. Rubtsovsk mine, Altai krai, Russia. General size of specimen 10 cm. Donation of K.S. Berdysheva. Systematic collection. FMM no. 93817. Photo: M.M. Moiseev.



described a specimen from China. A series of specimens of innelite, harmotome, and edingtonite originate from the Inagli massif near the town of Aldan. V.V. Sharygin gave niererite, shortite, and halite from unusual assemblages in the Udachanaya East kimberlite pipe, Daldyn field. A nugget of native bismuth (donation of G.N. Gamyanin) found near the settlement of Omchinkandya on the Oimyakon River (Fig. 10) should be mentioned.

Almost all sixteen specimens (14 mineral species) from the Primorskii krai are from deposits near Dalnegorsk; most are from the Serebryanaya vein at the Nikolaevsk mine. These collections belonged to O.L. Sveshnikova. In addition to common minerals, miargirite, akantite, and andorite were catalogued from this vein. Fluorite from this locality was previously discussed.

In addition to holotypes of anyuite and rooseveltite, new mineral species for the museum, several specimens of the Seimchan meteorite were received from the **Magadan area**. One of them, donated by V.N. Kalachev, is an extremely spectacular large plate whose central part is acid-etched; this results in the well-known Widmanstatten pattern and crystals of schraibersite. The initial polishing is preserved in the 6 mm wide rim that was protected from acid (Fig. 11). This old way to prepare meteorite plates displays a difference between the etched and fresh surfaces, which frequently causes a mistaken assumption that the rim is natural.

Kamchatka turned out to be one of the leading domestic regions which supplied specimens (58) in 2011–2012. That was possible due to the museum collections in 2012 in the district of the Tolbachik volcano. Results of these collections were discussed above.

The **Kurile Islands** (Kunashir Island, Mendeleev volcano) is represented by one spectacular specimen of native sulfur donated by A.D. Babansky.

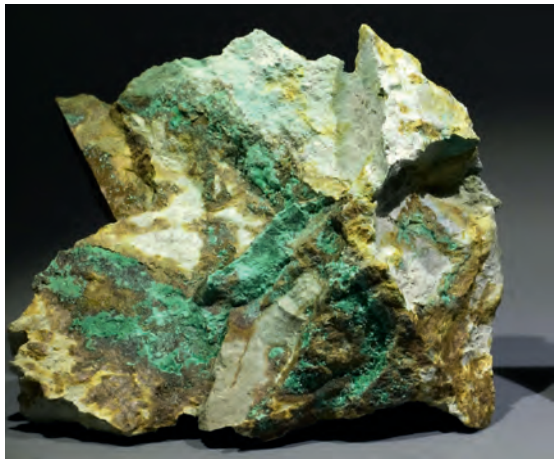
Republics of the Former Soviet Union

In total, 59 specimens were received from the Republics of the Former Soviet Union. These specimens were basically collected during the Soviet period, although most were recently donated. Some of them were delivered to the museum through the countries outside the CIS.

Kazakhstan (16). In addition to the specimens from the classic deposits: hoper blocky fluorite from Akchatau, cosalite from Kara-Oba, eosphorite from Ognevka in the Kalba Ridge, and picture moss agate from Pstan, Balkhash region, the systematic collection was increased by new rare minerals. Kazakhstanite (holotype) donated by E.A. Anikovich and recently found in the eclogite of the Kokshetav massif kokchetavite and kumdykolite, which are polymorph modifications of microcline and albite, respectively, are among them.

There were the same number of acquisitions from **Ukraine**. An exceptional specimen of groutite from the Zavallya graphite deposit, Kirovograd area should be the first to be mentioned. This is one of the best speci-

Fig. 9. Agardite-(Y). Green radial bunches of fine-acicular crystals. Sherlova Gora, Transbaikal region. Donation of K.I. Klopotov. Size of specimen 8 cm. Systematic collection. FMM no. 93857. Photo byM.M. Moiseev.
Fig. 10. Bismuth. Rounded nugget of native bismuth with enclosed cryatals of cassiterite. Omchikandya, Oimyakon River, Yakutia, Russia. Size of specimen 7 cm. Donation of G.N. Gamyanin. Systematic collection. FMM no. 93885. Photo: M.M. Moiseev.



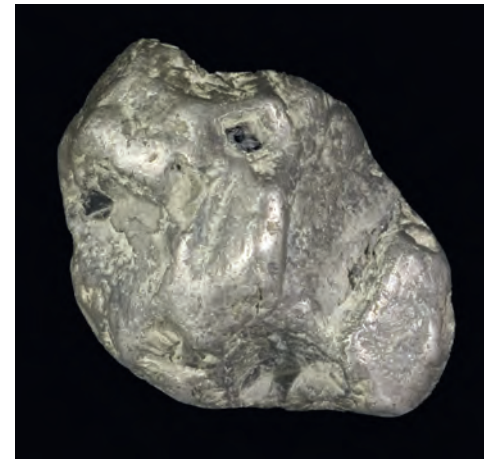


Fig. 11. Meteorite Seimchan. Polished acid-etched plate. Margins were preserved against acid. Found near settlement Seimchan, Magadan area, Russia. Size of specimen 20 cm. Donation of V.N. Kalachev. Collection of meteorites and impactites. FMM no. MET 55. Photo: D.I. Belakovskiy.

Fig. 12. Sylvite after langbeinite. Crystal of langbeinite (combination of tetrahedron and cube) is replaced by sylvite. Y block 700 foot level, Mosaic mine, Carlsbad, New Mexico, US. Size of specimen 5 cm. Donation of D.I. Belakovskiy. OP collection. FMM no. OP 2640. Photo: M.M. Moiseev.

mens of this mineral species consisting of open-work aggregates of weakly split crystals up to 1 cm in size on calcite-phlogopite rock. An unusual pseudomorph of chalcedony after stems of crinoids was described above. This and specimens of rhodonite from the Glimeya deposit, Rakhiv district, Zakarpattia area were donated by A.L. Galkin.

Tajikistan (13). Holotypes of new minerals found by L.A. Pautov, A.A. Agakhanov, and V.Yu. Karpenko, the museum staff, from the Darai-Pioz alkaline massif are of the most interest. These are mendeleevite-(Ce), kirchhoffite, byzantievite, orlovite, alexandrovaite, and Laptevite-(Ce).

Specimens of gypsum, calcite, and metacinnabar from the Fata-Morgana Cave in settlement Gaurdak are from **Turkmenistan**. Four specimens of rhodonite assemblage from the Museyniy Sai near settlement Inylchek were received from **Kyrgyzstan**. Specimens of magnetite and sphalerite from the Dashkesan iron deposit originate from **Azerbaijan** and two specimens of sylvite were received from Soligorsk in **Belorussia**.

Other countries

As usual, most of the acquisitions from abroad are from the **United States** (88 specimens from 15 states; 55 mineral species). In addition to the aforementioned cristobalite and kurnakovite, very nice specimens of tunnelite, inderite, colemanite, and morphologically interesting ulexite from the Boron deposits, Kern County, and blödite and thenardite from Soda Lake, Obispo County are from **California**. The specimens of the rare mineral species markcooperite, timroseite, thorneite, fluorphosphohedyphane, hughesite, and bario-orthojoaquinite came from the same state. In total, twenty-six specimens were received from California in 2011–2012.

Utah (15) is the second state by number of acquisitions; in addition to the aforementioned specimens of cristobalite, holotypes of the new minerals manganblödite and cobaltoblödite discovered by A.V. Kasatkin (in collaboration with the museum staff) should be mentioned. An interesting specimen with grossular crystals to 2 cm in an aggregate of gehlenite from the Wah Wah Mts., Beaver County was donated by J. and C. Watson. Most of the specimens from **Alaska** (13) are from the Green Monster Mountain, Prince of Wales Island; in addition to the aforementioned epidote, there are magnetite and quartz. **Arizona** is represented by seven items, including specimens of the emblematic minerals of this state, wulfenite and vanadinite, from a few occurrences in the La Paz County, and rare claringbullite, cuprobismutite, and rongibbsite. A holotype of the new mineral whitecapsite, found by I.V. Pekov, is the

most interesting specimen from **Nevada** (6); a pseudomorph of sylvite after a crystal of langbeinite is of the most interest from **New Mexico** (Fig. 12). One to four specimens originate from Arkansas, Colorado, Massachusetts, New Jersey, Oregon, North Caroline, South Dakota, New York, and Maine.

Many acquisitions are from other North America countries. In addition to the aforementioned crystals of gypsum and anhydrite from the Naica mine and luminescent calcite, a few specimens of moganite from Madre, Chihuahua and native tellurium from the Bamballa mine, Moctezuma, Sonora should be mentioned as specimens from **Mexico** (24). Acquisitions from the alkaline complexes at Kipawa (vlasovite, agrellite, gittinsite) and at Mont Saint Hilaire (normandite, analcime, serandite) should be highlighted among the specimens from **Canada** (13). Stillwellite-(Ce) from the new locality of Desmont Mine, Haliburton Co., Ontario was donated by W. Pinch.

Most new acquisitions from South America are from **Brazil** (15), as usual, and are mainly from the Minas Gerais district. These are the previously discussed rhodonite cluster and flower carved from chalcedony, and also the new species for the museum, carlosbarbosaite and souzalite. In addition, a specimen from the Uruacu iron meteorite was catalogued. The same number of specimens was received from **Chile** (15). Basically, these are rare minerals which were absent in the museum collection: mejillonesite (holotype), santarosaite, anatacamite, and mendozavilite-NaCu. The new spherulitic crust of orpiment and crystals of realgar from the Palomo mine, Huancavelica Department is from **Peru** (9). Anorpiment, a recently discovered triclinic polymorph of orpiment, turned out to be in one of these specimens. The new for the museum mineral species uchucchacuaite and manganoquadratite were also received from Peru. A magnificent well-shaped crystal of andorite ca. 7 cm in size with inclusions of zinkenite from the San Jose mine, Oruro department, **Bolivia** and rare phosphate qingheite from the Santa Anna pegmatite, San Luis, **Argentina** should be mentioned. A basaltic amygdule completely filled by pastel-blue pectolite (so called larimar) was received from Sierra de Baoruco, **Dominican Republic** (Fig. 13).

The new acquisitions from Europe come from 22 countries. The acquisitions from **Germany** (27) primarily came from the Eifel volcanic district, Rheinland-Pfalz. They significantly added to the current collection of specimens from this famous district. Holotypes of 12 mineral species (schüllerite, perrierite-(La), hielscherite, kottenheimite, lileyite, günterblassite, hillesheimite, lahnsteinite, osumilite-(Mg), hydroxymanganopyrochlore, christofschäferite-(Ce), ternesite) were discovered by N.V. Chukanov with the coauthors (exceptional ternesite); museum staff members were among the group. These minerals were found in cavities within alkali basalts and carbonate xenoliths. The more common species ferrikaersutite, nosean, reunite, native nickel, chlormayenite, and scottyite were catalogued to show the entire characteristic of mineral assemblages found at Eifel. A. Ertl donated a specimen of fluorschorl from its type locality, Zschorlau, Saxony.

Most acquisitions from **Hungary** (18), **Romania** (15) and **Slovakia** (3) were obtained in an exchange with a Hungarian collector. This series of rare minerals includes mikasaite, iltisite, capgaronite, belendorffite, ammoniomagnesiovoltaite, and brandholzite from various localities. In addition, hyalite from Monok, Zempleni Mts. in Hungary with bright green fluorescence in UV light should be mentioned.

Among other European countries, many acquisitions were from **Italy** (12), **Bulgaria** (11), and **Sweden** (11). The Italian specimens are mineral species which are new for the

Fig. 13. Pectolite (larimar). Fine-fibrous concentric-zoned aggregate of pectolite completely filling amygdule cavity within volcanic rock. Sierra de Baoruco, Dominican Republic. Size of specimen 9 cm. Donation of D.I. Belakovskiy. Systematic collection. FMM no. 93766. Photo: M.M. Moiseev.

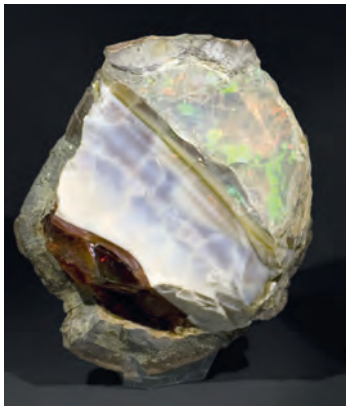


Fig. 14. Precious opal fills amygdule cavity in rhyolite. Eyhiopia. Size of specimen 9 cm. Donation of A. Volkonsky. Systematic collection. FMM no. 93882. Photo: M.M. Moiseev.
Fig. 15. Stilbite. Split sheaf-like crystal on druse of apophyllite. Poona, India. Donation of D.I. Belakovskiy. Size of specimen 10 cm. Systematic collection. FMM no. 93761. Photo: M.M. Moiseev.
Fig. 16. Ilvaite. Cluster of weakly-split crystals. Huanggang Mine, Chifeng Prefecture, Inner Mongolia, China. Donation of D.I. Belakovskiy. Size of specimen 10 cm. Systematic collection. FMM no. 93759. Photo: M.M. Moiseev.

museum, most from the volcanic condensations of the craters of La Fossa Island and Vulcano volcano (demicheleite-Cl and demicheleite-Ba, thermessaite, steropesite). A holotype of a new mineral species, umbrianite, found by Russian researchers (V.V. Sharygin *et al.*) is from Pian di Celle, Umbria. The minerals from the famous Langban deposit are predominant among Swedish specimens. An individual specimen, weighing 345 grams, of the Muonionalusta iron meteorite (collected and donated by D.A. Sadilenko) should be highlighted. Bulgarian acquisitions collected by the museum staff characterize the mineralogy of porphyry copper and base-metal skarn deposits from various districts. Among the specimens from **Austria** (6), oxy-rossmanite and olenite, minerals of the tourmaline supergroup, and eskimoite and heyrovskyite from the Hohe Tauern Mounts near Salzburg donated by A. Ertl are of the most interest. From **Norway** (6), a holotype of a new mineral sveinbergite was given by A.P. Khomyakov and some novel for the museum specimens were exchanged. Among the five specimens from **Spain**, a relatively new finding of colorless, transparent crystals of glauberite from the Consuelo mine near Madrid should be mentioned. Among the acquisitions from the other European countries particular attention should be paid to the new minerals štěpite, švenekite and krasnoite from **Czech Republic** (3), impactite Paasselkä from **Finland** (4) and holotypes examined by Russian researchers, piemontite-Pb from Nezhilovo in **Macedonia**, agardite-(Nd) from the Hilarion mine, Laurion in **Greece** and carlgieseckeite from Ilimaussaq in **Greenland**, **Dania**. We suggested that volcanic ash from the Eyjafjallajökull in **Iceland**, whose eruption disrupted air travel in Europe for a long period in spring, 2010, is of enough interest to be included in the collection.

The acquisitions from Africa are from nine countries, including **Madagascar** (16). Hoper crystals of schorl and iridescent labradorite are discussed above. The other specimens from this island are picture jaspers, crystal of betafite from Betafo, and the new for the museum species flour-potassic-pargasite.

Nearly all acquisitions from **Egypt** (14) were discussed in the previous section of this review except a specimen of the meteorite Gebel Kamil found in the Uweinat desert. **Namibia** (8), next in the number of acquisitions, is represented by the aforementioned picture pietersite and holotypes of two species new to the museum: yangite from the Combat mine and windhoekite from Aris. The latter was discovered in collaboration with the museum staff and named in honor of the capital of this country. In addition to rare minerals from the Bou Azzer deposit (wendwilsonite, smolianinovite, irhtemite), a small individual specimen of meteorite (plessite octahedrite) Taza (NWA-859) is from **Morocco** (7). A large hand specimen of heterogenite from Lubumbashi, donated by N.N. Kamzolkin, is from the Democratic Republic of the **Congo** (4). **Ethiopia** (4) is represented by fine specimens of precious opal donated by A. Volkonsky, from **France** (Fig. 14). The fragment of a new mineral species, lavinskyite, containing new minerals scottyite and wes-

selsite from the Wessels mine, Kalahari in **South Africa** (4) was donated by W. Pinch. The cluster of colorless to dark blue crystals of euclase is from Mwami, **Zimbabwe** (2). Niger turned out to be a new country for the museum. The fragment of trunk replaced with chalcedony from Toulouk in the South Sahara was donated by T.K. Berkeliev.

In addition to those from Russia and other republics of the Former Soviet Union, Asian acquisitions are from eight countries. Most of the specimens are from **India**, **China** (by 8), **Pakistan**, and **Japan** (by 7). We mention among them the aesthetic specimen of bow-tie stilbite on a druse of crystals of apophyllite from the Poona district, India (Fig. 15), well-shaped large crystals and clusters of crystals of ilvaite (Fig. 16) recently found at the Huanggang mine, Inner Mongolia in China, and druse of small crystals of pääkkönenite from the Damingshan Mount, Guangxi province in China. The new crystals of epidote were aforementioned. A series of rare minerals from Japan were exchanged. Transparent crystals of petalite up to 3.5 cm in size from the Palelni mine (donation of I. Szegeni and O.A. Lopatkina) were brought from **Myanmar** (5). Green sodalite as clusters of rhombododecahedral crystals up to 2 cm in size from Lajuar Medam, Sar-e-Sang in Badakhshan (Fig. 17) is of particular interest among the specimens from **Afghanistan** (3). A new mineral species, daliranite, from the Zarshuran deposit in **Iran** (2) was exchanged with the British Museum in London. Tektites (indochinites) were collected in **Thailand** (3). N.S. Lukinykh donated a specimen of native sulfur from the Ijen crater in the eastern Java, **Indonesia**.

Australia is represented by thirteen specimens, of which clusters of acicular crystals of scholzite on limonite from Reaphook Hill in South Australia are noteworthy. One of the best specimens of this species (Fig. 18) were donated by I.S. Lykova. A specimen of the new mineral gelosatite donated by P.A. Williams should be mentioned.

Concluding the geographical review, variously shaped Fe-Mn concretions from the Pacific floor, which are older material brought by P.F. Andryushchenko, and a beryllium silicate surinamite, received in exchange, from the Christmas point, Enderby Land in Antarctica should be mentioned.

New acquisitions classified by type and source

Five hundred and forty-one items were donated by private persons and organizations. In addition, one hundred and four mineral specimens, which are type material of 85 new mineral species, are also attributed to donations. Thus, total donations are 645 items or ca. 74% of total acquisitions. Eighty-five mineral specimens (ca. 10%) collected by the museum staff were catalogued into the main inventory of the museum. One hundred and twelve specimens (13%) were exchanged (including earlier exchanged items, which were examined or processed). The exchange was carried out with 11 domestic and foreign col-

Fig. 17. Sodalite. Cluster of green (!) rhomododecahedral crystals up to 2 cm in size on calciphyre. Ladjuar Medam, Sar-e-Sang, Kokcha Valley, Badakhshan, Afghanistan Size of specimen 8 cm. Donation of D.I. Belakovskiy Systematic collection. FMM no. 93767. Photo: M.M. Moiseev.

Fig. 18. Scholzite. Druses of long-acicular crystals within cavities in limonite. Reaphook Hill, South Australia. Size of specimen 12 cm. Donation of I.S. Lykova. Systematic collection. FMM no. 93330. Photo: M.M. Moiseev.

lectors; 4 mineralogical companies; and Natural History Museums in London, Great Britain; Bern, Switzerland; and Uppsala, Sweden. Thirty-two mineralogical specimens (ca. 4%) were catalogued into the main inventory out of the old working materials of researchers from various organizations, which were taken when the storage was closed or after the death of the researchers. It should be noted that these acquisitions were catalogued as donations if the names of the collectors are known. Three specimens were purchased.

Donated items are from 151 private persons and 3 organizations. Most specimens were donated by 122 Russian citizens. In addition, many specimens were donated by 29 foreign citizens from 12 countries: Australia, Austria, Bulgaria, Czech Republic, France, Germany, Hungary, Japan, Kazakhstan, Netherlands, Ukraine, and United States.

More than 10 mineral specimens were donated by A.A. Antonov (47), A.I. Brusnitsyn (24), D.I. Belakovskiy (180), G.O. Vertyankin (11), E.V. and I.O. Galuskin (12), A.V. Kasatkin (19), A.A. Konev (14), V.M. Moiseev (18), I.V. Pekov (101), A.G. Turchkova (47), A.P. Khomyakov (16), N.V. Chukanov (27) and John and Claudia Watson (13). Five to ten mineralogical specimens came from M.Yu. Anosov (6), M. Bitman (5), V.I. Vasiliev (7), A.V. Voloshin (6), V.G. Grishin (5), S.G. Epanchintsev (5), B.Z. Kantor (6), K.I. Klopotov (6), V.V. Levitsky (8), A.B. Loskutov (9), A.B. Nikiforov (8), I.A. Novikov (6), L.A. Pautov (10), I.N. Savin (5), D.A. Sadilenko (7), E.M. Spiridonov (7), B.V. Chesnokov (6), A. Ertl (10), T. Hanna (9), W. Pinch (5) and S. Schuchman (5). One to four specimens were donated by A.A. Agakhanov, M. Andreev, I.P. Andreeva, P.F. Andryushchenko, E.A. Ankinovich, A.V. Antonov, L.A. Artemenko, S.V. Afanasiev, A.B. Babansky, K. Baburov, A.G. Bazhenov, A.Yu. Barkov, V.D. Begizov, S.I. Belykh, K.S. Berdysheva, N.R. Berkeliev, E.A. Borisova, G.I. Bocharova, A.V. Bulatov, B.I. Vaintrub, N.V. Vladykin, A. Volkonsky, A.L. Galkin, G.N. Gamyanin, M.E. Generalov, V.Yu. Gerasimov, O.I. Gritsenko, E.M. Degtyareva, P.Ya. Detkov, A.V. Donskov, D.N. Dubkov, Yu.V. Erokhin, S.V. Efimova, E.N. Zavyalov, A.E. Zadov, K.A. Zakharov, M.E. Zelensky, F.Sh. Iskanderov, V.N. Kalachev, N.N. Kamzolkin, V.Yu. Karpenko, P.M. Kartashev, I.K. Klochkov, A.L. Kovalev, S.V. Kolisnichenko, O.V. Kononov, L.V. Kravchuk, D.I. Krinov, O.A. Lopatkin, N.S. Lukinykh, I.S. Lykova, E.A. Lyashenko, P.A. Martynov, I.A. Mikhailov, S.V. Mudruk, I.A. Nelkin, E.A. Novgorodova, M.I. Novgorodova, V.M. Okrugin, L.V. Olysych, T.V. Pashko, N.A. Pekova, N.N. Pertsev, P. Petrov, N.M. Podgornykh, V.V. Ponomarenko, A.F. Popov, V.A. Popov, M.P. Popov, S.V. Popov, I.E. Proshenkin, L.V. Razin, L.Z. Reznitsky, V.V. Rudnev, N.I. Rymskaya, G.L. Ryabinin, L.A. Samoylov, A.B. Sandomirskiy, E.I. Semenov, A. Serafimovich, E.V. Sereda, I. Szegeni, V.L. Skvortsova, A.M. Skrigitil, M.A. Smirnova, E.V. Sokol, E.V. Sokolova, E.L. Sokolova, A.V. Stepanov, S.F. Struzhkov, T. Tatyanchenko, D.E. Tonkacheev, V.A. Tuzlukov, V.G. Tyulkin, V.V. Khiller, Yu.A. Chulzhanov, L.I. Shabynin, V.V. Sharygin, D. Allum, J. Fuller, E.S. Grew, F. Hofmann, J. Holfert, L. Holm, T. Holm, A.L. Kidwell, P. Megaw, O'Neil Cristofer, D. Toland, Gy.Varhedy, F. Wafi, S. Wall, K. Watanabe, D. Weyhersmuller and P.A. Williams.

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In 2011–2012, eighty-five specimens were catalogued as collected by the museum staff; most specimens (72) were collected in trips under the recent initiative. The earlier collected specimens were catalogued after identification and processing of filed materials. Ten museum researchers collected the specimens. The most specimens were collected by D.I. Belakovskiy (65), I.S. Lykova(47), O.L. Sveshnikova (9), M.M. Moiseev (4), A.A. Agakhanov, V.Yu. Averin, M.D. Dorfman, A.V. Kovalev, V.M. Chalisov, and B.B. Shkursky. The researchers of other organizations actively participated in the collections for the museum.

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