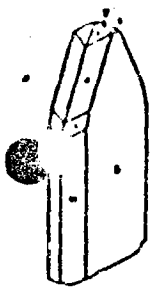
BROOKITE



Somerville, Mass.

MICROMOUNTERS OF NEW ENGLAND

NEWSLETTER #62 MARCH 18, 1981

The next regular meeting will be held on Sunday, April 5, 1981 at Boston University (see attached Map). We should take this opportunity to discuss the upcoming St. Hilaire collecting season. We have been informed that St. Hilaire will close for a few years while they relocate their crusher. This year's collecting dates, four in all, will be in April and May, as follows:

April 11 & 12	Boston Mineral Club
April 25 & 26	Not committed at this time possibly due to a conflict with the Rochester Symposium.
May 9 & 10	North Shore (Massachusetts) Mineral Club
May 23 & 24	New Haven Mineral Club

Marcelle Weber has informed us that a new mineral from Mont St. Hilaire has officially be named; PETARASITE, $Na_5 Zr_2Si_6 O_{18} (Cl,OH) 2H_2O$, reference Canadian Mineralogist, Vol. 18, Page 497-509. Moncclinic; cleavages perfect (110), very good (010), and distinct (001); hardness 5-5.5; fracture sub-concoidal. Named after Dr. Peter Tarasoff, an amateur mineralogist from Dollard des Ormeaux, Quebec; it was formerly UK42. Many collectors at St. Hilaire last Labor Day found PETARASITE.

We have also enclosed copies of the additions and corrections to the Glossary recently printed in the Mineralogical Record - now you don't have to tear the Record apart to splice the changes.

PRESIDENT

Cleaves Dodge
314 Cartier Street
Manchester, NH 03102

VICE PRESIDENT

Raymond Denicourt
38 Sea Breeze Lane
Bristol, RI 02809

SECRETARY

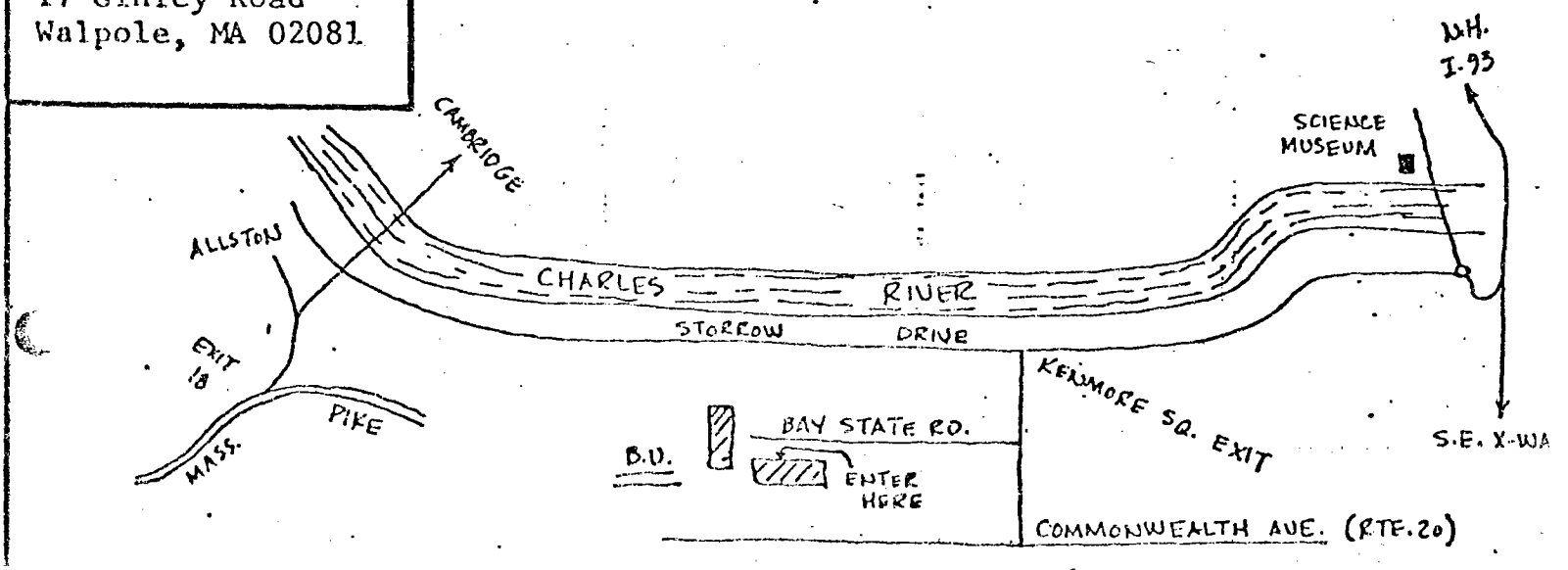
Ralph Carr, Jr.
Farnum Road
Warwick, RI 02888

TREASURER

Janet Cares
18 Singletary Lane
Sudbury, MA 01776

BULLETIN EDITOR

John Anderson
17 Ginley Road
Walpole, MA 02081



#62

PARANATROLITE AND TETRANATROLITE: TWO NEW MINERALS FROM MT. ST. HILAIRE

	PARANATROLITE	TETRANATROLITE
Chemical Formula	$Na_2Al_2Si_3O_{10}\cdot 3H_2O$	$Na_2Al_2Si_3O_{10}\cdot 2H_2O$
Crystal System	Monoclinic or triclinic	Tetragonal
Optical Constants	(-) $2V<10^\circ$, ext. angle 21° RI not given, probably slightly higher than that of natrolite	Positive sign $\omega = 1.481$ $\epsilon = 1.496$
Hardness	$5 - 5\frac{1}{2}$	Not determined
Density	2.21 (meas,)	2.28 (meas.), 2.33 (obs.)
Cleavage	Not observed	Not observed
Fracture	Conchoidal	Not stated
Color	Clear, colorless	Translucent to opaque white
Solubility	Not stated	Sol. 1:1 HCl, slowly sol. 1:1 HNO_3 forming gel. Only slightly attacked by 1:1 H_2SO_4

Paranotrolite and tetranatrolite are discussed here together because of their close interrelationship. Both are zeolites, and chemically identical except for a difference of one molecule of water. Tetranatrolite is formed from paranatrolite when the latter loses this water on exposure to air. This occurs rapidly (within hours) and is apparently irreversible.

Paranatrolite is found at St. Hilaire as transparent overgrowths on natrolite, and is detectable only by the presence of dust-like particles and small crystals of natrolite at the interface between the two. Where tetranatrolite occurs on exposed rock, it indicates the former existence of paranatrolite, and the possibility of finding some by breaking into that rock. If a freshly exposed clear natrolite specimen is suspected of having a coating of paranatrolite, it should be put in water at once in order to preserve it. In the field, wrapping in wet paper or cloth would probably serve to prevent dehydration.

Tetranatrolite is a tetragonal dimorph of natrolite, relatively enriched in potassium and calcium with respect to the latter, and with a similar x-ray pattern. It was originally found in Greenland, though St. Hilaire is the principal type locality. At Mt. St. Hilaire it is widespread in pegmatite dikes and miarolitic cavities in the nepheline syenite. It occurs most commonly as a white, translucent to opaque friable crust or epitactic overgrowth on natrolite crystals, and as small euhedral crystals or silky fibrous sprays on larger crystals of natrolite, analcime, or microcline; less commonly as irregular earthy patches on massive natrolite and analcime. The tetranatrolite crust was noticed when apparently clear natrolite crystals changed after exposure to air. When the crust was removed, the transparent core material showed no further alteration after more than a year. (J. W. Cares)

Chen, T. T. and G. Chao, "Tetranatrolite from Mont St-Hilaire, Quebec", Can. Mineral. 18, 77-84, 1980.

Chao, G. Y., "Paranatrolite, a New Zeolite from Mont St-Hilaire, Quebec", Can. Mineral. 18, 85-88, 1980.

Additions and Corrections To The *Glossary of Mineral Species, 1980*

by Michael Fleischer
Mineral Sciences Department
Smithsonian Institution
Washington, DC 20560

Less than a year has passed since the 1980 Glossary went to press, but it has been a period of unparalleled activity in mineralogical research, including the publication of many new minerals (38 in this list) and of new data on established minerals. It therefore seemed desirable to publish this list of additions and corrections as soon as possible, and it is hoped that new lists can be published annually.

Again many friends have been kind enough to make valuable suggestions and to call my attention to errors. I am deeply grateful to all who have written to me and thank them all, especially Robert Cobban, Jim Ferraiolo, Peter Modreski, Mary E. Mrose, Andrew L. Palmer, and G. W. Shokal.

Introduction, 5th par.—change "now" to "not"
Elements—The symbol for Argon should be Ar

Page

1 Abelsonite prophyrin is misspelled
1 Admontite add "dimorph. with Mcallisterite"
3 Albrittonite add "compare Bischofite, Nickelbischofite"
4 Alstonite change to "trimorph. with Barytocalcite and Paralstonite"
4 Althausite add "65, 488 (1980)"
5 Amicite add "65, 808 (1980)"
6 Anduoite add "65, 808 (1980)"
8 Apuanite change formula to $Fe^{+2}Fe_4^{+3}Sb_4^{+3}O_{12}S$
8 Aramayoite formula should read Ag, not Ab
8 Ardennite change formula to $Mn_4(Al,Mg)_6(SiO_4)_2Si_3O_{10}[(As,V)O_4(OH)_4]$
9 Arrimite add "orth."
☐ 10 add "Ashanite, $(Nb,Ta,U,Fe,Mn)_4O_8$, orth., compare Ixiolite"
13 Barytocalcite change to "trimorph. with Alstonite and Paralstonite"
15 Beraunite change formula to $Fe^{+2}Fe_5^{+3}(PO_4)_4(OH)_5 \cdot 4H_2O$
17 Bischofite add "compare Albrittonite"
☐ 19 add "Bogdanovite, $Au_5(Cu,Fe)_3(Te,Pb)_2$, orth. (?), ps. cub., rose-brown to bronze"
19 Borickite add "perhaps = Delvauxite, 65, 813 (1980)"
☐ 20 add "Brabantite, $CaTh(PO_4)_2$, mon., compare Cheralite, Monazite"
20 Braggite add "dimorph. with Cooperite"
21 Briartite reference should be 1966
23 Bukovite formula should be $Tl(Cu,Fe)_2Se_2$
23 add "Cadmium, Cd, hex."
26 Carnelian should not be in bold face
27 Caryopilite delete "Kaolinite-Serpentine group," add "related to Friedelite, 65, 335–339 (1980)"
27 add "Castaingite, $CuMo_2S_3$ (?), hex., 50, 264 (1965)"
27 add "Cathophorite, $CaTh(PO_4)_2$ (= Brabantite (?))"
29 Chalcomenite add "dimorph. with Clinochalcomenite"
29 Chalcophyllite should be in bold face
29 Chalcosine should not be in bold face
29 Chalcothallite change "tet." to "orth., ps. tet."
30 Cheralite add "compare Brabantite"
30 Chervetite reference should be 1963
30 Childrenite formula should have $(OH)_2$
☐ 31 add Chlormanasseite, $(Mg,Fe^{+2})_3Al_3(OH)_{14}[(Cl,OH,(CO_3)/2]_3 \cdot 3H_2O$, hex., Min. Abs. 31, p. 226 (1980)
32 Chudobaite The formula should have $(AsO_4)_4$
32 Clinobisvanite reference should be 39
☐ 32 add "Clinochalcomenite, $CuSeO_3 \cdot 2H_2O$, mon., blue-green, dimorph. with Chalcomenite"
☐ 33 add "Clinotyrolite, $Ca_2Cu_9[(As,S)O_4]_4(O,OH)_{10} \cdot 10H_2O$, mon., emerald-green, compare Tyrolite"
34 Cl-tyretskite should be in bold face
34 Coalingite formula should have $(CO_3)_3$ not $(Co)_3$
34 Cobalt-zippeite formula should have $16H_2O$
34 Cochromite add "65, 811 (1980)"
34 Coconinoite reference should be 51
35 Cooperite add "dimorph with Braggite"
36 Corkite formula should have $PbFe_3^{+3}$
40 Davidite change to "Davidite, $(La,Ce)(Y,U,Fe^{+3})(Ti,Fe^{+3})_{20}(O,OH)_{38}$, trig., Crichtonite group, 41, 700–718 (1956), 64, 1010–1017 (1979)"
☐ 40 add "Defernite, $Ca_3(CO_3)(OH,Cl)_4 \cdot H_2O$, orth."
40 Delafossite add "compare Mcconnellite"
41 Delvauxite change to "$CaFe_3^{+3}(PO_4,SO_4)_2(OH)_8 \cdot 4\text{–}6H_2O$ (?), 65, 813 (1980)"
43 Djerfisherite change formula to $K_6(Cu,Fe,Ni)_{25}S_{26}Cl$, add "compare Thalfenisite"
☐ 43 add "Dorfmanite, $Na_2HPO_4 \cdot 2H_2O$, orth."
43 Drugmanite add "65, 809 (1980)"
45 Ecdemite change formula to $Pb_6As_2O_7Cl_4$
☐ 45 add "Eifelite, $K_2Na_4Mg_5Si_{12}O_{30}$, hex., Osumilite group"
☐ 47 add "Erdite, $NaFeS_2 \cdot 2H_2O$, mon., copper-red, 65, 509–521 (1980)"
47 Eskimoite formula should have Ag_7
49 Fairbankite add "65, 809 (1980)"
49 Fayalite formula should be $Fe_2^{+2}SiO_4$
49 add "Femolite (= ferrian Molybdenite (?), 50, 261 (1965)"
50 Fengluanite add "= Isomertieite (?), 65, 408 (1980)"
☐ 51 add "Ferripyrophyllite, $Fe_2^{+3}Si_4O_{10}(OH)_2$, mon., compare Pyrophyllite"
52 Ferrohexahydrite is misspelled
53 Ferropumpellyite add "56, 2158 (1971)"
53 Ferrowyllieite add 65, 810–811 (1980)"
☐ 54 add "Fichtelite, $C_{19}H_{34}$ (dimethyl-isopropyl-perhydrophenanthrene), orth."
55 Fraipontite reference should be 62
55 Francoanellite is misspelled
56 Furongite reference should be 425
☐ 57 add "Gaitite, $H_2Ca_2Zn(AsO_4)_2(OH)_2$, tric., compare Talmessite, Can. Min. 18, 197–200 (1980)"
57 Galena Altaite should be in bold face
58 Geocronite change to "$Pb_{14}(Sb,As)_6S_{23}$, mon., forms a series with Jordanite, 61, 963–970 (1976)"
59 Girdite add "65, 809 (1980)"
☐ 59 add "Gittinsite, $CaZrSi_2O_7$, mon., Can. Min. 18, 201–203 (1980)"
60 Glaukosphaerite add "compare Kolwezite"
62 Grimaldiite add "compare Heterogenite"
63 Guanglinite add "= Isomertieite (?), 65, 408 (1980)"
63 Guettardite add "dimorph. with Twinnite"
64 Hardystonite delete "dimorph. with Junitoite"
64 Harkerite reference should be 37, 359 (1952)
65 Hatchite add "compare Wallisite"
67 Heterogenite add "compare Grimaldiite"
67 Hexastibiopanickelite, change to Hexatestibiopanickelite
68 Hibonite formula should have O_{19}, not O_{18}
69 Holtedahlite add "65, 809-810 (1980)"
69 Hongshiite add "= platinian Copper (?), 65, 408 (1980)"
71 Hydrodelhayelite add "orth."
72 Hydrophilite should not be in bold face, add

"perhaps = Antarcticite or Sinjarite, Min. Mag. 43, 682 (1980)"
73 Hypercinnabar reference should be 63, not 68
74 Illite delete the asterisk in the formula
74 Imandrite add "65, 810 (1980)"
75 Irhtemite formula should be $Ca_4MgH_2(AsO_4)_4 \cdot 4H_2O$
76 Iwakiite add "65, 406 (1980)"
76 Ixiolite add "compare Ashanite"
77 Jefferisite is misspelled
78 Jordanite change to "$Pb_{14}(As,Sb)_6S_{23}$, mon., forms a series with Geocronite"
78 Junitoite change formula to $CaZn_2Si_2O_7 \cdot H_2O$, delete "dimorph. with Hardystonite"
79 add "Kamiokite, $Fe_2Mo_3O_8$, hex"
80 Kanonaite is misspelled
80 Kassite reference should be 52
81 Keckite formula should have $(OH)_3$, not $(OH)_2$
81 Keldyshite formula should be $Na_{2-x}H_xZrSi_2O_7 \cdot nH_2O$
83 add "Kivuite, $(Th,Ca,Pb)H_2(UO_2)_4(PO_4)_2(OH)_4 \cdot 7H_2O$ (?), orth. (?), compare Phosphuranylite, 44, 1326 (1959)"
83 Klebelsbergite add "65, 499-505 (1980)"
84 Koktaite reference should be 34
☐ 84 add "Kolwezite, $(Cu,Co)_2(CO_3)(OH)_2$, tric., black to beige, compare Glaukosphaerite, Rosasite, Zincrosasite"
☐ 84 add "Kolymite, Cu_7Hg_6, cub."
☐ 84 add "Kovdorskite, $Mg_2(PO_4)_2(CO_3)(OH)_2 \cdot 4H_2O$, mon."
85 Krutovite reference should be to 62
85 Ktenasite reference should be 381
☐ 85 add "Kulkeite, $Mg_6Al(AlSi_7)O_{20}(OH)_{16}$, mon. (interlayered Talc - Chlorite)"
85 Kulanite formula should have $(Fe^{+2},Mn,Mg)_2$
86 Kurchatovite change "orth." to "orth. and mon."; formula should be "$Ca(Mg,Mn,Fe^{+2})BO_3$"
86 Kurnakovite formula should be $MgB_3O_3(OH)_5 \cdot 5H_2O$
86 Kurumsakite reference should be 583
86 Kusuite formula should have Ce^{+3}, not Ce^{+4}
87 Landesite reference should be 49, 1122-1125 (1964)
88 Laueite add "compare Paravauxite"
88 Lazurite formula should be $(Na,Ca)_{7-8}(Al,Si)_{12}(O,S)_{24}[(SO_4,Cl_2,(OH)_2]$
90 Leucophoenicite reference should be 1146-1166
91 Liottite formula should be $(Ca,Na,K)_8(Si,Al)_{12}O_{24}(SO_4,CO_3,Cl,OH)_4 \cdot H_2O$
91 Liujinyinite add "65, 810 (1980)"
93 Lusungite formula should have Fe_3^{+3}
93 Luzonite reference should be 766-779
93 MacFallite add "65, 406 (1980)"
☐ 94 add "Maghagendorfite, $NaMn(Mg,Fe^{+2},Fe^{+3})_2(PO_4)_2$, mon., 65, 810-811 (1980)"
94 Magnesiocarpholite add "65, 406 (1980)"
96 Magnesium astrophyllite formula should be $(Na,K)_4Mg_2(Fe^{+2},Mn,Fe^{+3})_5Ti_2Si_8O_{24}(O,OH,F)_7$
96 Magnesium-zippeite formula should have 16 H_2O
97 Manandonite is misspelled
97 Mandarinoite formula should be $Fe_2^{+3}Se_3O_9 \cdot 4H_2O$
97 Manganbelyankinite formula should have $(Ti,Nb)_5$
97 Manganese-shadlunite formula should have (Mn,Pb,Cd)
98 Margarosanite formula should be $Pb(Ca,Mn)_2Si_3O_9$
99 Mariposite Phengite should not be in bold face
99 Maslovite add "65, 406-407 (1980)"
100 Mcallisterite add "dimorph. with Admontite"
100 Meconnellite reference should be 593, add "compare Delafossite"
100 Mckelveyite reference should be 64, 659 (1979)
102 Mcrticite-I add "58, 1-10 (1973)"
102 Mcrticite-II change reference to 61, 1249-1254 (1976)
102 Meta-autunite formula should have $(UO_2)_2$
104 Meta-uranospinite formula should have $(UO_2)_2$
105 Minguzzite formula should have K_2
☐ 105 Minium should be in bold face
105 Minnesotaite formula should have $(Fe^{+2},Mg)_3$
106 Monazite add "compare Brabantite"
107 Montdorite reference should be page 1331
☐ 108 add "Morozevicite, Pb_3GeS_4, cub., forms a series with Polkovicite"
108 Mossite should not be in bold face
109 Muscovite formula should be $KAl_2(Si_3Al)O_{10}(OH)_2$
☐ 109 add "Nacaphite, $Na_2Ca(PO_4)F$, orth."
110 Na-komarovite formula should be $(Na,Ca,H)_2Nb_2Si_2O_{10}(OH,F)_2 \cdot H_2O$
110 Nasturan Pitchblende should not be in bold face
110 Natrofairchildite add "orth."
110 Natrojarosite formula should have Fe_3^{+3}
☐ 111 add "Nealite, $Pb_4Fe^{+2}(AsO_4)_2Cl_4$, tric., orange, Min. Record 11, 299-301 (1980)"
111 Nenadkevite add "a mixt. of Uraninite + Boltwoodite, 62, 1261-1262 (1977)"
112 Nichromite add "65, 811 (1980)"
112 Nickelbischofite add "compare Albrittonite"
112 Nickel-iron add "see also Tetrataenite"
112 Nickel-zippeite formula should have 16 H_2O
113 Niobo-zirconolite Zn in formula should be Zr
114 Nolanite add "52, 734-743 (1967)"
☐ 114 add "Nordströmite, $Pb_3CuBi_7S_{10}Se_4$, mon., 65, 789-796 (1980)"
114 Nukundamite add "65, 407 (1980)"
☐ 114 add "O'Danielite, $Na(Zn,Mg)_3H_2(AsO_4)_3$, mon."
☐ 114 add "Olgite, $Na(Sr,Ba)PO_4$, hex., blue to bluish-green"
116 Orthochrysotile delete Orthoantigorite
116 Orthoferrosilite Enstatite should be in bold face
☐ 119 add "Paralstonite, $(Ba,Sr)Ca(CO_3)_2$, trig., trimorph. with Alstonite and Barytocalcite"
120 Paravauxite change formula to $Fe^{+2}Al_2(PO_4)_2(OH)_2 \cdot 8H_2O$ and add "compare Laueite"
122 Permingeatite formula should be Cu_3SbSe_4
123 Petscheckite is misspelled
124 Phosphuranylite add "compare Kivuite"
124 add "Pianlinite, $Al_2Si_2O_6(OH)_2$"
☐ 126 add "Polkovicite, $(Fe,Pb)_3(Ge,Fe)S_4$, cub., forms a series with Morozevicite"
127 Priorite Aeschynite-(Y) is misspelled
128 Pumpellyite add "61, 176-177 (1976)"
☐ 128 add "Putoranite, $Cu_{1.1-1.5}(Fe,Ni)_{1.1-1.5}S_2$, cub."
129 Pyroaurite is misspelled
129 Pyrophyllite add "compare Ferripyrophyllite"
130 Queitite add "65, 407 (1980)"
130 Rancieite, reference should be 54, 1741-1742 (1969).
131 Ranunculite add "65, 407 (1980)"
☐ 134 add "Rokuhnite, $Fe^{+2}Cl_2 \cdot 2H_2O$, mon."
134 Rosasite add "compare Kolwezite"
134 Roscoelite formula should have $(OH)_8$
135 Rosemaryite add "65, 811 (1980)"
135 Roweite formula should have Mn,
135 Rustenburgite reference should be 61, 340 (1976)
136 Sabinaite formula should have Na_4Zr_4
137 Sahlite should not be in bold face
139 Scarbroite formula perhaps $Al_5(OH)_{13}(CO_3) \cdot 5H_2O$, Min. Mag. 43, 615-618 (1980)
☐ 140 add "Schieffelinite, $Pb(Te,S)O_4 \cdot H_2O$, orth., Min. Mag. 43, 771-773 (1980)"

140 Schmeiderite name should be Schmiederite, Min. Mag. 43, 824 (1980)
141 Schuetteite is misspelled
142 Sengierite change orth. to mon., formula changed to $Cu_2(UO_2)_2(VO_4)_2(OH)_2 \cdot 6H_2O$
143 add "Sergeevite, $Ca_2Mg_{11}(CO_3)_{13-x}(HCO_3)_x(OH)_x \cdot (10-x)H_2O$ (?), trig. (perhaps = Huntite (?))"
143 add "Shubnikovite, $Cu_4Ca_2(AsO_4)_4Cl(OH) \cdot 7H_2O$ (?), orth. (?), light blue, 40, 552 (1955)"
144 Sigloite formula should have $(O,OH)_2$
144 Silver change to "Silver (Silver-3C), Ag, cub."
☐ 144 add "Silver-2H, Silver-4H, Ag, hex."
148 Staringite add "x <1, compare Tapiolite"
152 Sulvanite Arsenosulvanite is misspelled
☐ 152 add "Sundiusite, $Pb_{10}(SO_4)Cl_2O_8$, mon., 65, 506–508 (1980)"
154 Talmessite add "compare Gaitite"
☐ 154 add "Tancoite, $HNa_2LiAl(PO_4)_2(OH)$, orth., Can. Min. 18, 185–190 (1980)"
154 Tapiolite add "compare Staringite"
154 Taramellite change to "$Ba_2(Fe^{+3},Ti,Fe^{+2},Mg,V)_4B_2Si_8O_{22}Cl$, orth., 44, 469 (1959), 65, 123–128 (1980)"
154 Tarnowitzite add "syn. Tarnowskite"
155 Telargpalite formula should be $(Pd,Ag)_{4-x}Te$
☐ 156 add "Tetrataenite, FeNi, tet., 65, 624–630 (1980)"
156 Thalcusite formula should be $Tl(Cu,Fe)_2S_2$
☐ 156 add "Thalfenisite, $Tl_6(Fe,Ni,Cu)_{25}S_{26}Cl$, cub., compare Djerfisherite"
158 Tirodite formula should have Mn_2^{+2}
☐ 158 add "Tisinalite, $Na_2H_3(Mn,Ca,Fe)TiSi_4(O,OH)_{18} \cdot 2H_2O$, trig., yellow-orange, Lovozerite group"
159 Tombarthite reference should be 1969
159 Tomichite add "65, 811 (1980)"
159 Tranquillityite change to "$Fe_8^{+2}(Zr,Y)_2Ti_3Si_3O_{24}$, hex., 58, 140 (1973)"
162 Twinnite add "dimorph. with Guettardite"
162 Tyrolite add "compare Clinotyrolite"
163 Umohoite change "mon." to "mon. and orth."
163 Uralborite add "dimorph. with Vimsite"
163 Uralite Amphibole is misspelled
164 Uranopilite reference should be 950-959
165 Vanuranylite formula should be $(H_3O,Ba,Ca,K)_{1-x}$
167 Vigezzite add "65, 811–812 (1980)"
☐ 167 add "Viitaniemiite, $Na(Ca,Mn^{+2})Al(PO_4)(F,OH)_2$, mon."
167 Vimsite add "dimorph. with Uralborite"
167 add "Violan, a violet var. of Pyroxene, 65, 813 (1980)"
168 Vitusite add "65, 812 (1980)"
169 Wallisite add "compare Hatchite"
169 Walpurgite formula should be $(BiO)_4(UO_2)(AsO_4)_2 \cdot 3H_2O$
169 Warikahnite add "65, 408 (1980)"
172 Winstanleyite add "65, 809 (1980)"
173 Wyartite formula should have Ca_3
173 Wyllieite add "65, 810–811 (1980)"
174 Yeatmanite formula should have Mn_7Zn_4; add "65, 196–199 (1980)"
174 Yedlinite formula should have $(O,OH)_6$
174 add "Yixunite, PtIn (?) (= indian Platinum (?)), cub., 61, 185–186 (1976), 65, 408 (1980)"
☐ 174 add "Yttrobetafite, $(Y,U,Ce)_2(Ti,Nb,Ta)_2O_6(OH)$, cub., Pyrochlore group, 49, 440 (1964), 62, 403–410 (1977)"
175 Zemannite formula should have $(Te^{+4}O_3)_3$
176 Zincrosasite add "compare Kolwezite"
176 Zinc-zippeite formula should have 16 H_2O
178 Amphibole group add Magnesio-ferri-katophorite
180 Bjarebyite group should read "triclinic and monoclinic phosphates"
182 Crichtonite group add Davidite
184 Kaolinite-Serpentine group delete Caryopilite
185 Linnaeite group second line should be "X = S, Se"
185 Lovozerite group add Tisinalite
186 Mica group add Bityite
187 Osumilite group add Eifelite