

Crystal Data: Monoclinic. *Point Group:* 2/m. Stout prismatic crystals, dominant {001}, {110}, smaller {010}, {201}, to 2.5 cm; as spheres with a radial fibrous structure.

Physical Properties: *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 6
D(meas.) = 2.877(5) D(calc.) = [2.90]

Optical Properties: Transparent to translucent. *Color:* Colorless to greenish white.
Streak: White. *Luster:* Vitreous to greasy.
Optical Class: Biaxial (-). *Orientation:* X = b; Y = c; Z = a. *Dispersion:* r > v, weak.
α = 1.595(3) β = 1.601(3) γ = 1.604(3) 2V(meas.) = 70° 2V(calc.) = 70°18'

Cell Data: *Space Group:* P2₁/a. a = 8.299(1) b = 8.782(2) c = 7.798(3) β = 90.5°
Z = 4

X-ray Powder Pattern: G.E. Smith mine, New Hampshire, USA.
3.67 (10), 3.03 (9), 2.78 (9), 2.21 (9), 3.50 (7), 2.50 (7), 3.28 (6)

| Chemistry: | (1) | (2) |
|-------------------------------|--------|--------|
| P ₂ O ₅ | 56.19 | 57.22 |
| BeO | 21.30 | 20.17 |
| CaO | 21.84 | 22.61 |
| insol. | 0.76 | |
| Total | 100.09 | 100.00 |

(1) G.E. Smith mine, New Hampshire, USA; corresponds to Ca_{0.98}Be_{2.13}(PO₄)_{1.98}.

(2) CaBe₂(PO₄)₂.

Occurrence: A late-stage mineral in complex granite pegmatites; observed as an alteration product of beryl.

Association: Triphylite, siderite, muscovite, albite, quartz (G.E. Smith mine, New Hampshire, USA); montebasite, beryllonite, lithiophilite (Viitaniemi pegmatite, Finland); tiptopite, englishite, montgomeryite (Tip Top mine, South Dakota, USA).

Distribution: In the USA, large crystals from the G.E. Smith mine, Newport, Sullivan Co., and at the Beaugard pegmatite, Gilsum, Cheshire Co., New Hampshire; in the Black Mountain quarry, Rumford, Oxford Co., Maine; at the Tip Top mine, 8.5 km southwest of Custer, Custer Co., South Dakota. In the Viitaniemi pegmatite, near Eräjärvi, Finland. At the Norrö pegmatite, on Rånö Island, and from near Kapelludden, Utö Island, Sweden. From Otov, near Ronsperk, Czech Republic. At the Grand Slam, Kondo, and Lion Hill mines, Urungwe, and on the Jaffie tin claims, Wankie, Zimbabwe. Several other localities are reported.

Name: To honor Prof. Cornelius Searle Hurlbut, Jr. (1906–), American mineralogist, Harvard University, Cambridge, Massachusetts, USA.

Type Material: Harvard University, Cambridge, Massachusetts, USA, 103923, 104958, 104602, 134548.

References: (1) Mrose, M.E. (1952) Hurlbutite, CaBe₂(PO₄)₂, a new mineral. *Amer. Mineral.*, 37, 931–940. (2) Lindbloom, J.T., G.V. Gibbs, and P.H. Ribbe (1974) The crystal structure of hurlbutite: a comparison with danburite and anorthite. *Amer. Mineral.*, 59, 1267–1271.