moter, A. C. Burrage of Boston, Massachusetts. It was willed conditionally to Harvard University in 1916 and eventually came into their possession in 1948.

In the Bouglise sale catalogue, p. 60, the specimen in question appears as 477: '40×50×25 [mm.] Or natif, linarite et calédonite. Echantillon d'associations et de localités intéressantes. *Leadhills, Ecosse.*' The change in locality has given rise to some doubt and research but there seems no valid reason why Bouglise should have decided it came from Leadhills rather than Cumberland.

In an attempt to settle this query I have examined material from both localities in the Royal Scottish Museum and the Museum of the Geological Survey as well as in our own collection. Although gold in matrix is known from Leadhills, it is found only in quartz and is more usually alluvial. On the other hand, gold from Cumberland is very rare. Red Gill in the Caldbeck Fells, Cumberland, and Leadhills, Lanarkshire, both produce linarite, caledonite, and hemimorphite but the specimen resembles the material from Red Gill more nearly than that from Leadhills. Also, as we have seen, gold in small quantities was widespread in Cumberland at one time and in fact Calvert records finding gold 'disseminated in small specks' on 'one of the lead ores at Caldbeck Fells'.[2]

The mineral dealers and collectors of Philadelphia and other towns in Pennsylvania had very close connexions with Bryce M. Wright who was himself a dealer and hailed from the north of England. As the original label bears the locality 'Cumberland, England' I think it more than likely that the occurrence was somewhere in the Caldbeck Fells.

Through the generosity of Professor Clifford Frondel, who has also supplied much of the relevant information, the Department of Mineralogy of this Museum has now received the specimen (B.M. 1958, 732) as a gift from Harvard University.

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[1] John Calvert, The Gold Rocks of Great Britain and Ireland . . ., 1853, p. 103.
[2] Loc. cit., p. 106.

## *Glottalite is chabazite.*

IN 1836 T. Thomson[1] described a new species, naming it *glottalite* from a name of the river Clyde, because the dealer he obtained his one specimen from 'found it, I have reason to believe, in the hills behind Port Glasgow'.

He gives its density as 2·18, states that 'when heated in a glass tube it gives out 21¼ per cent. of pure water', and gives an analysis: $SiO_2$ 37·01, $Al_2O_3$ 16·31, $Fe_2O_3$ 0·50, CaO 23·93 (misquoted in Dana, 6th edn, as 13·93), $H_2O$ 21·25, sum 99·00%.

It has been generally assumed that the mineral, of which no further specimen has been reported, was a zeolite, although the $CaO:Al_2O_3$ ratio is impossibly high, even if we suppose the percentages of CaO and $Al_2O_3$ to have been accidentally interchanged. M. F. Heddle[2] thought it was probably a mixture of edingtonite and harmotome, BaO having been mistaken for CaO (as had happened with Turner's analysis of edingtonite), and noted in support of this idea that the $SiO_2$ percentages of glottalite and edingtonite are the same: but the water content, which is probably quite reliable, is far too high for edingtonite or harmotome. R. P. Greg[3] re-examined Thomson's specimen and concluded that 'the crystals . . . are without doubt chabasie. Another proof . . . *glottalite* is described by Thomson as containing 21¼ per cent. of water, which is exactly the proper proportion for chabasie.' Greg's conclusion is supported by the densities: glottalite 2·18, chabazite 2·08–2·16, edingtonite 2·69–2·78.

Thomson's specimen is now in the British Museum collection (B.M. 33946); in July 1939 Dr. F. A. Bannister took an X-ray powder photograph, but this has only recently been examined: it shows clearly that Greg was right, for the powder photograph exactly matches that of chabazite from Česka Lípa [ = Bohmisch-Leipa], Czechoslovakia (B.M. 44735). The analysis, apart from the water content, is evidently in error.

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[1] T. Thomson, Outlines Min., Geol., Mineral Analysis, London, 1836, vol. 1, p. 328.

[2] M. F. Heddle, Phil. Mag., 1855, ser. 4, vol. 9, p. 181.

[3] R. P. Greg, Phil. Mag. 1855, ser. 4, vol. 10, p. 118; R. P. Greg and W. G. Lettsom, Min. Gt. Britain & Ireland, London, 1858, p. 171.