its indices of refraction are $\alpha = 1.59-1.60$ and $\gamma = 1.62-1.63$, the double refraction being around 0.03, and the extinction is straight with the direction of elongation optically + ; it therefore agrees optically with pectolite, except that the indices are rather low." The low indices are due to the high water content.

The inference that the material represents a pseudomorph of pectolite after quartz seemed worth establishing still further, so a chemical investigation of it was undertaken. It proved to give the usual reactions of pectolite, fusing quietly at 3 with a yellow flame and dissolving in HCl with imperfect gelatinization. Quantitative analysis yielded the results presented in the first column of Table 1 below.

TABLE 1.

	1	2	3
H_2O	3.77	4.09	2.70
Na_2O	7.45	8.57	9.31
CaO	32.63	32.21	33.68
MgO	2.35	1.43	....
$Al_2O_3+Fe_2O_3$	0.52	0.58	....
SiO_2	53.42	53.94	54.31
	100.14	100.82	100.00

1. Analysis of pectolite pseudomorphous after quartz from West Paterson, N. J., by the writer.

2. Analysis of massive pectolite from Point Barrow, Alaska[1], introduced for comparison; these two specimens are certainly very similar in composition.

3. Theoretical composition of pectolite, $HNaCa_2(SiO_3)_3$.

These results show that pectolite is indeed represented.

DURDENITE FROM CALIFORNIA[2]

ESPER S. LARSEN
U. S. Geological Survey

THE rare hydrous ferric tellurite, durdenite, has been described only from the original locality, Honduras. However, in examining specimens of tellurium ores in the collections of the University of California for tellurite, the author found a specimen,

[1] F. W. Clarke, *Am. J. Sci.* [3], **28**, 20, 1884.

[2] Published with permission of the Director of the U. S. Geological Survey.

labeled "Calaveras County, Cal.," which contained along the fracture surfaces pale greenish yellow spherulites, which an optical examination proved to be durdenite. The following table gives the optical properties of durdenite from the original locality (also in University of California Museum) and from California and shows their identity.

TABLE 1. THE OPTICAL PROPERTIES OF THE TWO DURDENITES

	Honduras	Calaveras County, Cal.
Optical character	Negative	Negative
$2E_{na}$	$44° \pm 3°$	$48° \pm 3°$
$2V_{na}$	$22° \pm 2°$	$24° \pm 2°$
Dispersion	$\rho > v$ very strong	$\rho > v$ very strong
Optical orientation	X ⊥ perfect cleavage. Cleavages are rhombic in outline with 72° angle; Z bisects obtuse angles	X ⊥ oleavage
α	1.702 ± 0.005	1.710 ± 0.005
β	1.955 ± 0.005	1.94 ± 0.01
γ	1.965 ± 0.005	1.95 ± 0.01
Pleochroism	X Nearly colorless Y Pale greenish yellow Z Rather pale sulfur yellow	Faintly pleochroic

AZURITE FROM TSUMEB, AMBO-LAND, SOUTH-WEST AFRICA

ELLIS THOMSON
University of Toronto

AZURITE crystals from this locality have already been described[1] but, as two new forms were discovered on the crystals measured by the author, it was thought that a brief description of the same might be of some interest.

The crystals used were obtained from the Heidelberger Mineralien Comptoir (Fr. Rodrian), Heidelberg, Germany. They are for the most part small and tabular in habit, the largest faces in

[1] Z. *Kryst. Min.*, **52**, 225, 1913.