

remains an uncorrected labradorite angle of $-29^{\circ} 55'$. I apply to these proportional corrections, namely, for albite $+1^{\circ}$, giving the true albite angle $= +19^{\circ}$; and for labradorite a correction of $-1^{\circ} 30'$, giving true angle $= -31^{\circ} 25'$; which corresponds to a labradorite formula of albite 1, anorthite 4. A mean of the extinctions on opposite sides of a twinning plane in a typical labradorite crystal gave $-31^{\circ} 18'$, which agrees with the previous determination of Ab_1An_4 . The crystals, 1 or 2 mm. wide, and 5 to 10 mm. long, form a pretty closely parallel ophitic structure. A few crystals show Carlsbad twinning.

The ground-mass between the parallel feldspars is made up of a micro-crystalline mesh of the same material with very fine crystals (0.01 mm.) of a dark green pleochroic mineral, which appears to be biotite, and with equally minute crystals of magnetite, together with some titanite. The crushed mineral is almost entirely decolorized by boiling hydrochloric acid. Irregular larger masses of ilmenite with titanite borders, and masses of green biotite (1 to 2 mm. in diameter) in fine crystals, pleochroic with green and brown colors, complete the inclusions within the ground-mass. Dr. G. F. Loughlin, who helped me identify some of the minerals, is of the opinion that the rock has been "contact-metamorphosed, presumably by granitic intrusion, which set free heated water with potash and fluorine. These changed the original ferromagnesian minerals into biotite, and a little of the ilmenite and feldspar into titanite, garnet, sericite and secondary albite." The material is completely crystalline and has a decidedly fresh look, the fracture sparkling with minute crystalline facets.

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THE NORWOOD METEORITE (?)

As Professor Very, in *SCIENCE* of January 28, 1910, has seen fit to place on record the discovery of a stone claimed to be a meteorite, but unlike any meteorite hitherto known, a petrographic description of the stone may be of interest. The writer has discussed the

matter with Professor Very, and at his suggestion, viewed the stone (on exhibition in Austin & Stone's Dime Museum), visited the spot where it was discovered and examined a thin-section which Professor Very furnished.

The stone may be called, megascopically, a basalt-porphry. Its color on fresh fracture is nearly black, its luster rather dull. The ground mass is extremely fine-grained to felsitic. It is sprinkled with tabular phenocrysts of labradorite (about 30 per cent. of the rock) and with a few small grains of ilmenite. The natural surface is gray. There are no noticeable oxidation effects, but the ground mass has suffered marked corrosion, such as is produced by swamp waters, leaving the plagioclase phenocrysts in pronounced relief. The latter are greenish-gray, tabular with rounded corners and measure up to 12 or 15 mm. in length. They show in general a parallel arrangement, or flow structure.

The slight salty odor of the stone mentioned by Professor Very was not noted, but may well have been lost in the characteristic atmosphere of the dime museum.

The minerals noted in thin section are labradorite and ilmenite, both as phenocrysts and in the ground mass, biotite, titanite, garnet and sericite, with a little albite (?), epidote and kaolin. The ground mass consists chiefly of plagioclase and biotite. The labradorite phenocrysts show excellent Carlsbad and albite twinning. Both the phenocrysts and the feldspars of the ground mass are but slightly kaolinized, but are partially replaced by garnet, titanite and sericite. The garnet forms irregular grains fingering into the feldspar or the ground mass. The titanite forms rings around ilmenite grains, in some instances fingering into feldspar crystals. The sericite is sprinkled through the feldspar phenocrysts and the ground mass in typical minute flakes, single or in aggregates. The biotite is finely disseminated throughout the ground mass and in a few places is bunched into fine-grained aggregates, strongly suggesting replacement of some femic phenocryst. No trace, however, of any other femic mineral was noted. Only two small grains of

epidote, clearly of secondary origin, were found. The albite (?) could not be positively identified, but was clearly secondary.

The minerals and their associations just described indicate that the rock has suffered hydrothermal alteration, presumably near the contact of some plutonic intrusive. It therefore remains for the meteorite specialists to decide whether or not a newly fallen meteorite may be similar in mineral characters to hydrothermally altered terrestrial rocks. Professor Very's argument is that absence of pronounced kaolinization and ferruginous staining are good evidence that the stone is not a glacial boulder; but opposed to this argument is the fact of the corroded surface. The stone was discovered near the top of a gentle slope and certainly could not have become so corroded at that point. There is a swampy tract at the base of the slope. Could the stone have been corroded there and later been removed to the point of "discovery"?

Professor Very's argument that the stone is a meteorite is based, in short, partly on absence of kaolinization and ferruginous staining, but chiefly upon the verbal testimony cited in his article; the writer's argument to the contrary rests on the altered character evidenced by mineral relations, and the swamp-corroded surface, which coupled with the point of discovery, are at least suggestive of fraud.

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QUOTATIONS

ANOTHER ROSS CASE

TEN years ago Professor E. A. Ross was dismissed from Leland Stanford University because Mrs. Stanford was offended by the active part he took in the campaign for free silver and by his extreme language in opposition to Japanese immigration. Last week he was publicly rebuked by the regents of the University of Wisconsin for exposing his students to the influence of dangerous agitators. The text of the resolution is as follows:

"Whereas, It has come to the knowledge of the Board of Regents that Professor E. A. Ross, of the department of sociology in our university, has invited to lecture in the university and under its auspices, persons whose record and expressed views are subversive of good morals, therefore be it

"Resolved, By the Board of Regents that we strongly disapprove of such action, and that the president of the university is requested to inform Professor Ross of the censure of the board and their unanimous disapproval of his indiscretions."

The disturbance originated in the visit of Emma Goldman to Madison, where she gave a lecture in a downtown hall in no wise connected with the university. She visited the university and was shown through it, but her request to be allowed to address classes was refused. Later, however, she was invited by a socialist club of students to speak at their meeting in the Y. M. C. A. building. Professor Ross, referring in his classes to the fact that a woman was tearing down the cards announcing the lecture, took occasion to express himself in favor of free speech and mentioned the Goldman lecture downtown that evening, at the same time stating his disapproval of such anarchistic teachings.

This, however, was made the basis of a sensational attack by certain newspapers of Wisconsin upon the university for using the facilities provided at the expense of the taxpayers for the promulgating of anarchistic and immoral doctrines. The Board of Visitors appointed a committee to examine instructors, students, lecture notes and textbooks in the department of political economy and came to the following conclusion:

"This investigation disclosed nothing that would warrant the charge that anarchistic, socialistic, or other dangerous doctrines are being taught in the university. On the contrary, investigation disclosed striking instances of foreigners who have come to the university as students believing in anarchism and violence, who have been led to discard such beliefs through the instruction given at the university.