From 1902-07, Professor Van Hise and his protege, C.K. Leith directed a mineral exploration program financed by the famous capitalist, Andrew Carnegie. In Northern Michigan during the initial summer of 1902, two student field assistants conceived the idea of a yearbook, which they named Outcrops. It began as a kind of newspaper with a social column and a miscellaneous column handwritten in a notebook, and illustrated with crude cartoons. It was concocted to relieve boredom of rainy, tent-bound days in the field. With the third volume of Outcrops in 1904, things got a little fancier with the addition of some photos; thereafter the title became simply Outcrop or The Outcrop of the Geology Club.

The founders of Outcrops, Thomas M. Priestly and William E. Smith, reminisced in 1924 that “No one can read The Outcrop with a full measure of enjoyment who has not lived the life which it reflects and has not tasted its joys and its hardships....Who can forget the no-seeums, the bull dogs, the deer flies, the sand flies, and all the rest of the insatiable horde that from May to September made life exciting? Who can forget his first cedar swamp or the velvety deceptive muskeg, the foaming white water and the hard portage that follows? The somber beauty of the silent places, the barren burnings and pestiferous slashings [from clear cut logging], the moose, the deer, the bear and the porkie who dined happily upon your boots...? (Priestley). [There was also the] “development of fundamental geological truths which have since become generally accepted. Among these might be mentioned the proposition that a portage is the longest distance between two points; that all rocks should be classified as either aqueous or sedentary, aqueous rocks being those submerged and sedentary those in place and above the water level,
also the relation between occurrences of iron formation and great swarms of black flies and mosquitoes, which was so carefully worked out and thoroughly demonstrated. [To say nothing of] the relation between blueberry patches and nickeliferous pyrrhotite....Both Mr. Priestley and myself became disheartened and turned to the law as our profession.” (Smith).

Volume four of The Outcrop appeared in 1907 with a new style, which became the model for all subsequent 39 volumes. The text was now typed, photos increased in number, and there was a variety of topics; artistic embellishments and cartoons. The Outcrop had become an ambitious yearbook, which recorded both the serious and the diverting activities of the department. It retained emphasis upon summer field work, however, Each one-of-a-kind volume was now a sizable tome of around 200 pages. Two student co-editors were elected by the Geology Club, and it was considered a prestigious responsibility to produce the annual. Comparison of successive volumes suggests that the editors often strove to outdo their predecessors. This is especially evident among the volumes for the 1920s with elaborate artistic embellishments as chapter-openings, some of which were even rendered with water color paintings. The resulting volumes are historic treasure troves of information about the department, much of which would never be found in any standard histories; The Outcrop has been an invaluable resource for my own post-retirement historical researches.

A more-or-less standard format evolved. The first section listed faculty members and students with a photo of each. The second section gave accounts of notable humorous and serious events during the academic year, such as visits by distinguished speakers and summaries of organized field trips. Another section presented generous coverage of summer activities, such as field parties working for the Van Hise-Leith mineral exploration ventures during the first years of the century and for the Wisconsin Geological Survey from about 1909 to World War II. Individual’s summer jobs at mines or elsewhere often got coverage as well. The volumes were always well laced with humor, cartoons, gossip, jokes, and even poems concerning faculty and student foibles. One of the most interesting sections carried letters and photos solicited from alumni telling of their current whereabouts and activities. Especially between the two wars, Wisconsin graduates were scattered all across a largely colonial world seeking ores and petroleum. Letters came from Manchuria, Rhodesia, Egypt, Venezuela...you name it! Many carried glowing praise for the training the writers had received at Madison, and reminiscences about their experiences here. To paraphrase that old Wisconsin Idea slogan, “The boundaries of the campus had expanded far beyond the boundaries of the state.”

The Outcrop has had a complex evolution. Besides the change from a simple note-

Frontispiece, 1922 Outcrop—a watercolor by R. Walker

Katherine Fowler-Billings (named a Distinguished Alumna by the Alumni Board in 1999) as graduate student, Katherine Fowler, in the 1926 Outcrop.
book of handwritten material in a newspaper-like format to the elaborate scrapbook format, a companion version appeared in 1924 called the *Printed Edition of the Outcrop* to distinguish it from the original “Graphic Outcrop.” The printed version was designed to provide a directory of former students and a brief listing of faculty and current students plus a few highlights of department activities, mostly serious. This did not supersede the traditional yearbook, of which only one copy was produced for each year. Rather, it filled a perceived need for something that could be mailed to all alumni every few years; eight volumes appeared between 1924 and 1968. Beginning in 1970, the annual *Alumni Newsletter* replaced both versions of *The Outcrop*. To complicate things, however, the name *Outcrop* did not disappear, but was retained for yet a third product, an alumni directory containing only addresses, which appeared in 1985 and 1990.

A few examples may give a little more flavor of the old *Outcrop* and the wonderful imagination of generations of the high spirited students who created it. The 1919 edition carried clippings about the famous Apex mining trial for which C.K. Leith was an expert witness. A 1920 letter from Lewis Weeks in Mexico on his first job was accompanied by a gruesome photo of frontier justice—three men hanging by the neck from a tree. Another photo showed Chuck Carlson and an assistant shouldering a gigantic boa constrictor, which they had killed in the Venezuelan jungle (this one became famous later in several AAPG publications). Prohibition times were frequently reflected in *The Outcrop*. For example, in 1920 there was a fine cartoon of a drunk leaning against a light pole and captioned “Inclined Extinction.” The 1920, 1921, and 1922 volumes each carried long letters from various Chinese alumni about the geology of China and their field work with many interesting photos. In 1920, Canadian alumnus, T.L. Tanton, reported that a determined wealthy entrepreneur was confidently drilling for oil in the Precambrian shield near Thunder Bay, Ontario. In 1921, a report about a Wisconsin Survey summer field party included a photo of “What The Hell Hotel” somewhere in northern Wisconsin. An essay by C.K. Leith titled “Faith” appeared in 1922, as did a photo of W.J. Mead proudly wearing a Japanese kimono, which he had acquired during a consulting trip to Manchuria that year. There was also a clipping about an alumni’s encounter with head hunters in Venezuela and photos of another’s field vehicles in Tibet—a dromedary and a mule-drawn cart. The 1923 volume gave an account of summer cycling around Norway by Olaf Rove, who studied there during the following year. Also in that volume was a particularly eloquent letter from D.F. Higgins about his adventures in Korea, China, on the Trans-Siberian Railroad, supervising Chinese laborers, who dug trenches during World War I, and field work in Spitsbergen, Egypt, and Sinai, where he almost died of peritonitis. Higgins concluded that he “would rather live in China than in any other country.” Two samples of poetry from 1925 characterized Leith and Mead:

**Leith**

There’s Dr. Leith, Professor—
And able chief of the crew,
Geologist and author,
And a first rate golfer, too.

**Mead**

Take Warren Mead, for instance,
Cute moustache, large bald head,
If anything be said.
He plays with sand and wooden blocks
And toy balloons to boot,
And when his time hangs heavy
He takes a trip to Butte.

Occasionally songs were also created. For the 1926 spring banquet, Englishman Gilbert Wilson composed and performed the following clever song, which we revived for the May, 1999 Alumni Reunion:

**JOINTING**
(Tune: *Bonnie Dundee*, an early 1900s Scottish popular song)

1. To the Structural Class it was C.K.* who spoke:
   “There are some rocks that flow, while others get broke,
   This problem of jointing’s complex as can be
   So pay close attention and listen to me.”

Chorus
So here’s to the strain that is caused by the stress
And the little we know and the much that we guess;
And here’s to the whiskey, the gin and the tea
When we’ve finished our day’s work of geology.

2. “Faults, fissures and fractures are part of the strain
   A fact you must firmly fix fast in your brain;
   The stress is a force that we never quite see,
   While the strain shows in such things as schistosity.”

3. “Now when you have two joints and both caused
   by shear
   The problem is easy, solution is clear;
   Consider both angles, choose one that is less
   And the line that bisects is the maximum stress.”

4. “The ellipsoid of strain is the key to the door
   Of solutions of structures and problems galore;
   So carry it with you where e’re you may be,
   And if you get into trouble just call round for me.”

*C.K. Leith, structural geologist & dept. head

After World War II, *The Outcrop* resumed in lively, though somewhat less polished, style, and continued to appear until 1957. The spectrum of subjects was similar with an increase of cartoons and photos. Many pictures depicted the infamous annual (all male) stag party at which students often satirized the faculty with skits, and faculty sometimes returned the compliment; always many drinks and cigars were consumed. The more memorable photos included one of teetotaler Lowell Laudon surrounded by dozens of beer bottles, a smiling Gene Cameron playing poker and captioned “You guys are so easy!” (photos previous page) and George Woollard with a contraption for launching students off to Antarctica. Another priceless one of Laudon receiving the Oops Award (a common occurrence) was captioned “As empty as my grad assistant’s head.” I experienced a few of these parties after I came in 1958, and I was just as happy to see that raunchy, sexist event replaced by an open Holiday party.

Regrettably, the production of *The Outcrop* was becoming too much of an undertaking for ever-busier students, so in 1957 it was abandoned. After a 13 year drought, the annual *Alumni Newsletter* was begun in 1970 at the urging of then-chairman Sturges Bailey. While it has the great advantage of being published and mailed to all alumni, it is not quite the same as the old *Outcrop*.

All of the original graphic *Outcrop* volumes are now kept in the University archives in the Memorial Library. The few extra copies of the *Printed Outcrop*, the *Alumni Newsletter*, and the *Outcrop Directory* are kept in the department office in Weeks Hall. In May, 1999, for an Alumni Reunion and celebrations of the University’s Sesquicentennial, I made posters illustrating highlights gleaned from the old *Outcrop* to represent five decades of department history. These are kept in the department for display at future functions, such as the alumni receptions at annual professional meetings. It would be a shame to lose all memory of those colorful records of the rich history of our department, which reside in the campus archives, and I hope that the posters may serve to remind us of our heritage, which has given this department such an unusual energy and effusive spirit. May it continue thusly—On Wisconsin!