IN MEMORIAM

Robert S. MacColl, Pomona College 1956, and Don J. Miller, his U.S.G.S. party chief, were drowned in Kiagna River, southeast Alaska, August 6, 1961. The river was very high and the men, who were working a loaded life raft down its margin, had almost reached its junction with the Chitina, where they were to be met by helicopter. The two men were similar in several ways. Both were exceptionally competent, quiet, effective field geologists, devoted to their work.

Last spring MacColl completed a superb thesis for Claremont Graduate School on the Rattlesnake pluton and its structure. The thesis was the culmination of many years of geologic work in the San Bernardino Mountains, where he lived. He planned to spend the next two years working with Donald McIntryre and Alex Baird on the composition of this same pluton, under the auspices of the National Science Foundation.

MacColl is greatly missed in Seaver Laboratory. He could do many things well, he was a widely read scholar, and he was a satisfying person just to have around. He leaves a father, mother, and sister. His death broke a close family circle and has brought his parents nearer to those in Claremont who feel Bob’s loss most severely.

Marriages:

Jerry Wire '58, to Marcia Van Vlissingen, 9/3/60  
Grant Robbins '54, to Jill McCutchan, 9/17/60  
Larry Hill '60, to Anne McKee Jessop, 6/17/61  
Art Sylvester '59, to Diane Stubblefield, 6/17/61  
George Clark '46, to Loredana Giordino, 12/15/61  
Bob Tilling '58, to Susan Greenfield, 1/6/62

Births:

a son to the Ivan Colburns  
a son to the Grant Meyers  
a son to the Jack Weldons  
a son to the Donald McIntyres  
a daughter to the John Christies  
a son to the Bill Quaides
Donald McIntyre and Alex Baird have been joined by Edward Welday (M.A. '60) in a study of the chemical composition of a quartz monzonite pluton on the north slope of the San Bernardino Mountains. The groundwork for the study was furnished by Robert MacColl's very detailed report on the structure and petrology of the 20 square mile body (M.A. thesis, 1962). The first objectives of the study are the relationships between chemical variations and the structures, mineralogical types, inclusions, and metamorphic phenomena in and near this pluton. Later work may provide evidence significant for the regional distribution of the associated batholithic rocks. The combination of superb equipment in the department and the generous support of the National Science Foundation has enabled considerable progress to be made since last summer.

Relatively new methods of X-ray fluorescence spectrography are being used to obtain complete quantitative analyses of major elements (Na, Mg, Al, Si, K, Ca, Ti and Fe) in over one hundred specimens collected to date from the pluton, primarily by diamond-bit coring. In addition to the development of specimen preparation techniques, calibration of standards to the U.S. Geological Survey's standard rocks (W-1 and G-1), and tests of analytical precision, the X-ray method has been extended to include Na through the application of a new aluminum target tube designed by B. L. Henke of the Pomona College physics department. The analytical results yield precisions of 0.5 to 2.0% of the amount of the element present and are obtained considerably faster and at less cost than by classical wet methods. The number of analyses completed in the last four months is equal to 10-15% of all published analyses on acid plutonic rocks. These analyses would have cost many thousands of dollars if they had been made by wet chemical methods.

All phases of this study, from calibration determinations and precision tests to field sampling plans and analyses of results, have emphasized the importance and value of proper data handling. Without the use of the geology department's Clary DE-60 computer, not only would much of the work be too laborious to consider doing but, also, many of the detailed problems which have arisen, such as drift corrections and slight curvatures to calibration curves, would never have been discovered. Problems too large for the department's computer have been programmed and run on the IBM 7090 at the Western Data Processing Center.

The first part of this work, aside from development of techniques, has yielded much information on the chemical variations within individual cores, between cores in an 800- by 800-foot area, and between such areas over a ten square mile region of the pluton. A remarkable degree of homogeneity of the quartz monzonite has been found on the first two scales, and preliminary results on the largest scale are showing a similar condition. This chemical homogeneity is present despite a very strong structural pattern of planes and lines throughout the body, and a complex relationship between country rocks, inclusions and quartz monzonite.
Bill Quaide is studying the causes of strength in natural sediments with an ultimate aim of evaluating the relationship between strengths of sediments and possible slumping mechanisms in order to better understand the conditions under which turbidity currents could form. Preliminary studies now under way are those involved in the simplest case, the fundamental causes of the strength of uncompacted sands. He is relating the strength of beach sands as measured by in situ vane tests to various measured parameters, principally water content and the number of contacts per grain as determined by point counting of plastic lithified sand samples.


Graduates in June 1961 were Herb Adams, Keith Anderson, and Norman Hyne. Keith won the James A. Lyman Prize and is now studying mineralogy at U. C. Berkeley, Herb is at U.C.L.A., and Norm has been at U.C.L.A. but at last report was transferring to the University of Washington to study oceanography. We understand that Herb Adams, Barry Raleigh, Neville Carter, and John Christie make up more than half the number in Ron Shreve's class on Tensor Analysis.

John Wickham, '60, went into the Coast Guard, successfully passed officer training at Norfolk, and emerged as a full-fledged ensign. He is reported to be in New York, living in an apartment in Greenwich Village, and doing merchant marine inspection work. He says "New York is great!"

Larry Hill, '60, is teaching in San Diego, and Walter Gulick, '60, is teaching in Turkey. We would like to hear from these boys.

Art Sylvester, '59, has gone to Norway on a Fulbright and is working on the Pre-Cambrian complex in the Telemark Province of southern Norway. He is applying Edgar Bailey's feldspar staining methods to the study of his Norwegian rocks. He will report the results to the International Conference on Feldspars that is to be held in Oslo in June, 1962.

Olaf Van West, '55, is in Japan (again) struggling with Immigration Bureau red tape trying to get a visa to come here and work with Alex Baird and Donald McIntyre on their NSF research project.

Tom Wright, '57, is now in Washington working for the U.S.G.S. He is working on a 2-year program for Data of Geochemistry. He spent last summer in the northern Cascades mapping west of Lake Chelan. His Ph.D. thesis was titled "The mineralogy and petrogenesis of the southern part of the Tatoosh Pluton, Mt. Rainier National Park, Washington."
Bob Tilling, '58, was awarded the S. F. Emmons Memorial Fellowship in Economic Geology. His paper, "Regressions of physical properties on the compositions of clinopyroxenes" appeared in the October 1960 American Journal of Science. Bob was married to Greenfield in Berkeley on January 6 and stopped by for a short visit on his way back to Yale where he will finish up his Ph.D. thesis. He hopes for his degree in June. Good Luck!

Bob Ward, '57, is teaching in Covina and completing his USC M.A. thesis.

Pat Muffler, '58, has finished his Ph.D. work at Princeton and is now with the U.S.G.S. at Menlo Park. He has been transferred to the Alaska Branch and is going to spend next summer on Baranoff Island (where Sitka is). He will be working by boat and helicopter.

Jeremy Wire, '58, is now in Vicksburg, Mississippi, serving some time in the Army with the Corps of Engineers. He is working with the Waterways Experiment Station as an engineering geologist.

Pete Newman, '57, has been with Tidewater Oil in Karachi, Pakistan, for the last two years and is signing up for another two years. His future work will depend on the showing of a well they are drilling in Makran.

Don Seely, '49, is teaching geology at Oklahoma City University. His Ph.D. at the University of Oklahoma was on the structure of the Ouachita Mountains. He was one of the teachers chosen to make the National Science Foundation trip to the British Isles in the summer of 1961.

We have just learned that Jack Schoellhamer, '42, is being transferred to Washington, D.C., as of July 1, 1962.

John Shelton, '35, is 1962 president of the Branner Club. Two very successful meetings have been held, with Kenneth Emery and Bill Rubey as speakers. The final meeting of the year, in connection with the Cordilleran Section gathering at U.S.C., will be an April 17 banquet addressed by Hoover Mackin.

Clarence Chittenden, '53, is vice president of the Mineralogical Society of southern California. Talks have been given by Donald McIntyre, Bill Quaide, and John Shelton.

Norman Larsen has completed his M.A. thesis on the "Geology of the Lamb Canyon area near Beaumont, California." He found that the Middle Pliocene conglomerates just northeast of the San Jacinto fault appear to be derived from high land to the south beyond the fault. Upper Pliocene sediments appear to be missing. The Pleistocene sediments were derived from the north, northwest, and northeast. He has adapted a method for staining feldspar in sands which takes less than 5 minutes. The sands are treated with hydrofluoric acid and sodium cobaltinitrite. The plagioclase becomes dead white and the potash feldspar yellow; quartz, unetched, remains gray. Norm is now on a Scripps cruise: Miami-Panama-San Diego. When the cruise ends in July, he will report for work as a geologist with Humble Oil and Refining Company in Texas.
Homer Simmons, '49, is still with Shell and is now at Corpus Christi, at least according to our last information. He has previously been in Shell offices at Wichita Falls, Tulsa, New Orleans, Baton Rouge, and Lafayette.

Joe Ernst, '49, transferred to the Texaco geology office in Sacramento.

Cliff Gray gave a paper at the 1961 AIME S.W. Mineral Industry Conference and Industrial Minerals Division, Las Vegas, April 1961, titled "Limestone resources of southern California."

Ralph Merrill, Pomona 1940, gave the department 15 very fine mineral specimens. He is of Minerals, Unlimited, 1724 University Avenue, Berkeley.

John Levorsen, '53, is now with Richfield at Bakersfield.

A. O. Woodford, '13, is president of the National Association of Geology Teachers. The Far Western Section of the Association will meet at Pomona College, April 14. An attractive program has been prepared by Section Vice-President Stanton Hill, '34. The after-dinner talk will be given by George Burnham.

Roger Revelle, '29, has been appointed state-wide University of California Dean for Research. He is now on leave as scientific adviser to the U. S. Secretary of the Interior.

Barry Raleigh, '56, obtained a Geological Society of America grant for the "Study of the mode of deformation of a peridotite on Cypress Island, northwestern Washington" and a Sigma Xi grant for the study of "The relationship between the fabric of experimentally deformed and naturally occurring dunites and its bearing on the mode of emplacement of the dunites in Whatcom, Skagit, and Snohomish Counties, Washington." Barry is still at U.C.L.A.

The following were among those attending the Cincinnati GSA meetings in November 1961: C. A. Anderson, Wayne Burnham, Don Eberlein, Mason Hill, Richard Lounsbury, Thane McCulloh, Manley Natland, Dana Russell, Don Seely, Pat Muffler, and A. O. Woodford. Wayne Burnham gave a paper on the experimental work at Penn State on the formation of pegmatites, and Richard Lounsbury gave a paper on landslides in England.

Jim and Grace Richmond have just returned from Europe. Their month in Greece was especially rewarding. Jim is spending the remainder of his sabbatical in Claremont working with the McIntyre-Baird-Welday team. His paper "Geology of the San Bernardino Mountains north of Big Bear Lake, California" was published by the California Division of Mines as Special Report 65; it included a tabulated list of mines and mineral deposits by Cliff Gray.

Frank Olmsted, '42, spent a few months at Idaho Falls, Idaho; we hear he is now at Yuma, Arizona. Last June he received his Ph.D. from Bryn Mawr College. His thesis was on Pilot Hill and Rocklin Quadrangles, California.
Thane McCulloh, '49, spent a year in Italy comparing the computed gravity picture for the Po Basin with the observed gravity picture. In getting the material for his computations he determined the density of 1343 samples from 66 wells.

Tom Moran is now in Colombia, South America, working on the Calima Dam. He expects to be there three to four years.

George Hilton, '48, is now a Ph.D. candidate at U.C., Berkeley.

George Bellemin, '36, and his wife Julia are on a sabbatical trip in Japan and elsewhere in the Far East. They will return via Australia and French Oceania.

Wallace Wilson, '40, has been named a vice president of Continental Illinois National Bank & Trust Company of Chicago.

Mase Hill, '26, has now become the 45th president of the A.A.P.G. His talk at San Francisco at the convention this month will be on California oil. Among others who worked on convention projects was Jack Schoellhamer, chairman of the field trip committee.

Ivan Colburn, '51, got his Ph.D. at Stanford in 1961. His thesis was on "The Tectonic History of Mount Diablo, California." His stratigraphic and structural correlations between the northeast and southwest sides of the mountain are important contributions to Coast Range geology.


Willis Burnham, '51, has completed a five or six year study of the subsurface Pleistocene inland from San Pedro, California. The Los Angeles County Flood Control District drilled scores of test holes for him. He studied the sediments, forams, ground water salinity, and ground water movements. He was then able to work out stratigraphy and structure. Now the district is drilling a series of injection wells designed to hold back salt water that entered the aquifers from the ocean or from oil well discharges.

Cortez W. Hoskins, '53, of Jersey Production Research Company, Tulsa, is giving a paper March 28 at the San Francisco A.A.P.G. meeting on "Molluscan biofacies in the calcareous sediments of Batabano Gulf, Cuba." His company has discontinued operations in the area.

Kenneth Segerstrom is one of the authors of a paper in the Bulletin of the Geological Society of America, 72:1551-1560 (1961), on the pre-Jurassic, Jurassic, and Cretaceous radioactive ages of three batholithic rocks in Chile. Other papers on these and associated rocks will follow.

Donald McIntyre talked at U.C.L.A. on Hutton, and at the American Geophysical Union meeting at Christmas, 1961. He also gave a paper at the Symposium of the Association of Computing Machines at Santa Monica.
Among those present at the San Diego meetings of the Cordilleran Section of the GSA, March 1961, were Mason Hill, A. O. Woodford, Stanton Hill, Donald McIntyre, Edgar Bailey, Jim Richmond, George Bellemin, Alex Baird, and Neville Carter. Baird gave a paper on analysis of major elements in granitic rocks by X-ray fluorescence, and Carter described the Venas, Norway, granite. McIntyre gave the banquet address to a capacity crowd, on "James Hutton and the philosophy of geology."

Recently published papers include the following:


"Preliminary geologic map of the coastal part of the Malibu Beach quadrangle, Los Angeles County, California" by J. E. Schoellhamer and R. F. Yerkes, September 1961.


Geologic map of the Central Persian Gulf Quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp and L. F. Ramirez.

A U. S. Geological Survey report on a "Hydrogeologic reconnaissance of San Nicolas Island, California" by Wayne Burnham and Fred Kunkel, is a description of the ground water conditions beneath the island's surface.

The program for the 42nd Annual Meeting, American Geophysical Union, Washington, D.C., April 1961, includes a paper by N. L. Carter, J. M. Christie, and D. T. Griggs on "Experimentally produced deformation lamellae and other structures in quartz sand."

In USGS Professional Paper 424, Geological Survey Research 1961:

Article 229 - Kenneth Segerstrom, "Facies change in Neocomian rocks of the Teresita-Chula area, Atacama Province, Chile."


Article 368 - Kenneth Segerstrom, joint author, "Pachuca mining district, Hidalgo, Mexico."

Article 370 - Kenneth Segerstrom, "Deceleration of erosion at Paricutin, Mexico." Considerable decrease since end of eruptions in 1952.

We are going to try to get out another newsletter in the fall. PLEASE SEND US YOUR NEWS!

NOTE: Donald McIntyre is on sabbatical leave this semester.

The above has been compiled by A. O. Woodford.

Woody is usually found in his office in Seaver Lab where he has been undertaking a series of major research projects in connection with his historical textbook. We believe publication is scheduled for 1963.