# CHARLES V. GUIDOTTI HONORED AT EVENTS IN SEPTEMBER AND OCTOBER 2006



Charles V. Guidotti (1935–2005) is best known for his petrologic studies of metamorphic rocks in the northern Appalachian Mountains of Maine and for his mineralogic studies of the mica group. He received a BSc cum laude at Yale University (1957) and a PhD at Harvard University (1963), and taught at the University of California, Davis (1962–1969), the

University of Wisconsin–Madison (1969–1981), and the University of Maine (1981–2005). He co-authored some 100 publications, largely in international journals. His greatest honor was a *Laurea Honoris Causa* from the University of Padova, Italy, awarded on December 14, 2001.

## NEIGC Field Trip - Rangeley, Maine

Charlie was first of all a consummate field geologist. He spent nearly every summer in the field and worked as a geologist for the Maine Geological Survey for ten summers (1959–1964; 1969–1972). In recognition of this fieldwork, the 98<sup>th</sup> annual New England Intercollegiate Geological Conference (NEIGC) was dedicated to the memory of Charlie. The conference was convened at Saddleback Mountain near Rangeley Lakes, Maine, and was organized by Dave Gibson, Julia Daly, and Douglas Reusch of the University of Maine at Farmington.

To honor Charlie and his corpus of pioneering work assembled over some four decades, one of the field trips reprised Charlie's 1996 NEIGC field trip B-3 (Guidotti et al. 1996) in the Rangeley Lakes region. By using Charlie's 1996 guidebook article, participants were able to look through Charlie's eyes, using his words to examine some of the most interesting and extraordinary, yet enigmatic, metamorphic rocks in the northern Appalachians. Jack Cheney (Amherst College) and Scott Johnson (University of Maine) acted as overall organizers of the trip. The trip leaders comprised Charlie's former colleagues, collaborators, friends, and students: John Brady (Smith College), Jack Cheney, Barb Dutrow (Louisiana State University), Dave Gibson (University of Maine at Farmington), Darrell Henry (Louisiana State University), Scott Johnson, Dan Lux (University of Maine), Frank Spear (Rensselaer Polytechnic Institute), Jenny Thomson (Eastern Washington State University), Dave West (Middlebury College), and Mark Van Baalen (Harvard University) who filled in at the last moment for Darby Dyar (Mount Holyoke College). Malissa Washburn (currently at the University of British Columbia) prepared a GIS-based set of maps and outcrop descriptions that was handed out to trip participants and will soon be available from the NEIGC website: http://kilburn.keene.edu/NEIGC/

The more than 75 field trip participants included 15 members of Charlie's family, led by wife Barbara and children Gretchen, Amy, and Vincent, and also Jim Thompson (Harvard University), Charlie's PhD advisor. At each stop, trip leaders shared personal remembrances, many most humorous, reviewed Charlie's description, and led a discussion focused upon outcrop observations, recent work, and new data or information. All enjoyed a most remarkable sunny fall day with the colors at their peak, revisiting the spectacular outcrops. And most of all, we enjoyed sharing memories of Charlie Guidotti, our friend, colleague, mentor—and a consummate teacher of field mineralogy and petrology.



NEIGC field trip, September 29, 2006. The Guidotti family from left to right: Ylva and Charlie's son Vincent Guidotti (with Hugo on shoulders), daughter Gretchen Guidotti, Morgan Carney, wife Barbara Guidotti, James Carney (behind Barbara), daughter Amy Rybicki, Sally Guidotti, Rachel Parness, Jack Cheney, brother Hugo Guidotti. Not pictured: Amy's husband David and daughter Chelsea. Photograph by Barb Dutrow



Participants examining sulfide–silicate interactions as recorded in Rangeley Formation minerals along the Swift River. Photograph by Barb Dutrow



Metamorphosed turbidites: staurolite porphyroblasts in folded graded beds, Perry Mountain Formation.
PHOTOGRAPH BY DARRELL HENRY



Frank Spear telling his Charlie story. PHOTOGRAPH BY BARB DUTROW

## Special Session at GSA 2006 - Philadelphia

Charlie championed the study of minerals in their petrologic context through interaction and collaboration among mineralogists and petrologists. Guidotti and Sassi (2002) first articulated this "petrologic mineralogy" approach, which was succinctly summarized by Henry et al. (2005, p. 326) as one "in which natural solid-solution minerals, constrained by phase-rule variance considerations and equilibration, are used to provide mineralogic and petrologic insights not generally available via typical experimental or crystallography studies." To honor Charlie's espousal of this approach, Darby Dyar, Darrell Henry, and Ed Grew organized Topical Session 101, "Petrologic Mineralogy - the study of minerals in context: A session in honor of Charles V. Guidotti," at the annual Geological Society of America meeting in Philadelphia, Pennsylvania. The session featured 54 contributions (abstracts available at http://gsa.confex.com/gsa/2006AM/finalprogram/), including 29 oral presentations on Sunday, October 22, and 25 poster presentations the following day. Charlie had collaborated with Francesco Sassi and other Italian mineralogists for 35 years, a collaboration honored by five scientists who came from Italy to present papers: Annibale Mottana (Università di Roma Tre), Maria Franca Brigatti (Università di Modena e Reggio Emilia), Claudia Mazzoli (Università di Padova), Bernardo Cesare (Università di Padova), and Emanuela Schingaro (Università di Bari). Charlie's international reputation also drew contributors from Canada, France, Germany, and Russia.

Session participants covered topics that spanned Charlie's own intellectual breadth, including his core interests in the crystal chemistry of layered silicates, the evolution of textures and assemblages in metapelitic rocks, sulfide–silicate relationships in metamorphosed black shales, and the regional metamorphism and tectonism of the New England Appalachians. Charlie was also intrigued by metamorphic rocks unusually rich in Fe and Mn and the behavior of the accessory minerals apatite and tourmaline, which were the subjects of several talks.

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#### 2007

January 21–26 Advanced Ceramics & Composites, Daytona Beach, FL, USA. Details: Dongming Zhu, NASA-Glenn Research Center; e-mail: dongming.zhu@grc.nasa.gov; web page: www.ceramics.org/meetings/cocoabeach2007/home.asp

January 28-February 2 State of the Arc 2007, Termas Puyehue, Chile. Details: Michael Dungan; tel.: +41 22 379 6630; fax: +41 22 379 3210; e-mail: Michael.Dungan@terre.unige.ch; website: www.iavcei-arcs.org.uk

February 10 28<sup>th</sup> Annual Friends of Mineralogy Symposium, Gems and Minerals from Down Under, Tucson, AZ, USA. Details: Julian C. Gray, Weinman Mineral Museum, P.O. Box 3663, Cartersville, Georgia 30120; tel.: 770-386-0576; fax 770-386-0600; e-mail: juliang@weinmanmuseum.org

February 24–28 2<sup>nd</sup> International Conference and Exhibition on Geo-Resources in the Middle East and North Africa (GRMENA-2), Cairo University, Egypt. Details: Prof. Dr. Ali Sadek; tel.: 00202-3446411; fax: 00202-3448573; e-mail: alisadek@mailer.eun.eg; website: www.grmena.com.eg

February 25-March 1 2007 TMS Annual Meeting & Exhibition, Orlando, FL, USA. Details: TMS Meetings Services, 184 Thorn Hill Road, Warrendale, PA 15086. Tel.: 724-776-9000, ext. 243; e-mail: mtgserv@tms.org; web page: www.tms.org/Meetings/Annual-07/ AnnMtq07Home.html

March 12–16 38<sup>th</sup> Lunar and Planetary Science Conference, League City, TX, USA. Web page: www.lpi.usra.edu/ meetings/upcomingmeetings.shtml

March 20–25 El Chichón Volcano: 25 Years Later, San Cristobal de las Casas, Chiapas, México. Details: José Luis Macías; tel.: 52-55-56224124 ext. 19, 16, and 13; e-mail: macias@geofisica.unam.mx; web page: www.geofisica.unam.mx/ vulcanologia/chichon

March 25–29 American Chemical Society 233<sup>rd</sup> National Meeting,

Chicago, IL, USA. Details: ACS Meetings, 1155-16<sup>th</sup> St NW, Washington, DC 20036-489. Tel.: 202-872-4396; fax: 202-872-612; e-mail: natlmtgs@acs.org; web page: www.chemistry.org/portal/a/c/s/1/acsdisplay.html?DOC=meetings %5cfuture.html

March 27–30 EarthScope 2007 National Meeting, Portola Plaza, Monterey, CA, USA. Details: EarthScope, 1200 New York Ave, NW, Suite 700; tel.: 202-682-0633; fax: 202-464-1161; e-mail: earthscope-info@earthscope.org; website: www.earthscope.org

April 1–4 American Association of Petroleum Geologists and Society for Sedimentary Geology (SEPM) Joint Annual Meeting, Long Beach, California, USA. Details: AAPG Conventions Department, PO Box 979, 1444 S. Boulder Ave., Tulsa, OK 74101-0979, USA. Tel.: 918-560-2679; fax: 918-560-2684; e-mail: convene@aapg.org; web page: www.aapg.org/longbeach/

**April 9–13** Materials Research Society Spring Meeting, San Francisco CA, USA. Details: Timothy J. Bunning, e-mail: timothy.bunning@wpafb.af.mil; Web page: www.mrs.org/s\_mrs/sec.asp?CID=4750&DID=164575

April 22–27 International Conference on Evolution, Transfer, and Release of Magmas and Volcanic Gases, Academia Sinica, Taipei, Taiwan. E-mail: mag2007@ earth.sinica.edu.tw; web page: www.earth.sinica.edu.tw/~mag2007

April 29-May 2 CIM Conference and Exhibition, Montréal, Canada. Details: Jean-Marc Demers; tel. 514-939-2710; e-mail: jmdemers@cim.org; website: www.cim.org

May 1–4 Hyperspectral Imaging (for Microscopy and Microanalysis), a Microbeam Analysis Society–NIST workshop, Gaithersburg, MD, USA. Details: Ed Vicenzi, vicenzi@volcano.si.edu

May 6–10 10<sup>th</sup> European Workshop on Modern Developments and Applications in Microbeam Analysis (EMAS 2007), Antwerp, Belgium. Details: EMAS Secretariat, c/o University of Antwerp, Dept. of Chemistry, Campus Drie Eiken, Universiteitsplein 1, BE-2610 Antwerp-Wilrijk, Belgium. Tel.: 32 3 820 23 43; fax: 32 3 820 23 43; e-mail: Luc.Vantdack@ua.ac.be

May 6–12 Granitic Pegmatites: The State of the Art International Symposium, Porto, Portugal. E-mail: Peg2007@fc.up.pt; web page: www.fc.up.pt/peg2007

May 8–12 7<sup>th</sup> High Pressure Mineral Physics Seminar (HPMPS-7), Matsushima, Japan. E-mail: hpmps@ganko.tohoku.ac.jp; web page: www.ganko.tohoku.ac.jp/hpmps/

May 21–25 AGU Joint Assembly, Acapulco, Mexico. Details: AGU Meetings Department, 2000 Florida Avenue NW, Washington, DC, 20009 USA. Tel.: 800-966-2481, ext. 333 or 202-777-7330; fax: +1-202-328-0566; E-mail: ja-help@agu.org; web page: www.agu.org/meetings/ja07/

May 23–25 Geological Association of Canada and Mineralogical Association of Canada Joint Meeting (GAC–MAC): Yellowknife 2007 – For a Change in Climate, Yellowknife, Canada. Web page: www.nwtgeoscience.ca/ Yellowknife2007

May 27–31 IMWA Symposium: Water in Mining Environments, Cagliari, Sardinia, Italy. Details: Rosa Cidu, University of Cagliari, Department of Earth Sciences, via Trentino 51, I-09127 Cagliari, Italy. Tel. +39 070 6757724: fax +39 070 282236; e-mail: cidur@unica.it

June 2-7 44<sup>th</sup> Annual Meeting of the Clay Minerals Society, Santa Fe, New Mexico, USA. Details: Randall Cygan, Sandia National Laboratories; e-mail: rtcygan@sandia.gov; Tel.: 505-844-7216 web page: www. sandia.gov/clay

June 10-15 Gordon Research Conference: Interior of the Earth, Mount Holyoke College, South Hadley, MA, USA. Web page: www.grc.org/ 07sched.htm

June 17–20 10<sup>th</sup> International Conference and Exhibition of the European Ceramic Society, Berlin, Germany. Details: Deutsche Keramische Gesellschaft e.V., Am Grott 7, D-51147 Köln Tel.: +49-2203-96648-0; fax: +49-2203-69301; e-mail: ecers2007@dkg.de; website: www.ecers2007berlin.de

June 26–28 Combined Societies'
Meeting: MinSoc, MSA and MAC:
Frontiers in Mineral Sciences 2007,
Cambridge UK. Details: M.A. Carpenter,
e-mail: mc43@esc.cam.ac.uk; web page:
www.minersoc.org/pages/meetings/
frontiers/index.html

July 2–6 Sixth Hutton Symposium on the Origin of Granites and Related Rocks, Stellenbosch University, South Africa. E-mail: Hutton@sun.ac.za; web page: http://academic.sun.ac.za/ geology/hutton/hutton2007.htm.

July 2–13 International Union of Geodesy and Geophysics (IUGG) 2007 General Assembly, Perugia, Italy. E-mail: secretary@IUGG2007perugia.it; website: www.iugq2007perugia.it

July 8–13 Gordon Research Conference: Catchment Science: Interactions of Hydrology, Biology & Geochemistry, Colby-Sawyer College, New London, NH, USA. Details: Elizabeth W Boyer & Helen A. De Wit. Web page: www.grc.org/programs/2007/catch.htm

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Charlie's influence extended well beyond the fields he himself had worked in: other presentations concerned the effect of fluids in different environments and pegmatite minerals. Charlie's enthusiasm was contagious, not only to his former students, but also to colleagues. The most spectacular example was Ross Angel's account of measuring all 21 independent components of the elastic constant tensor in plagioclase, the first such study of a triclinic mineral and one that has critical implications for seismic wave anisotropy in the crust, as a result of an inquiry Charlie posted in July 2002, on the MSA-Talk list. In subsequent correspondence, Charlie convinced Ross to undertake the demanding experiments to obtain the complete set of elastic constants by contending that they could be useful to geologic science.

Priscilla and Ed Grew hosted a reception for "Friends of Charlie" at the headquarters hotel Sunday evening following the oral session. This provided an informal setting to meet members of the Guidotti family, four of whom were on hand: Barbara, his sister Louise, son Vincent, and daughter Gretchen. About 75 guests attended the reception.



"Friends of Charlie" reception at GSA meeting, October 22, hosted by Priscilla and Ed Grew. Photograph by Barb Dutrow

The editors of *American Mineralogist* have approved a special issue, "Petrologic Mineralogy (in honor of Charles V. Guidotti)," which is scheduled for publication in January or February, 2008.

**Edward Grew** (University of Maine) and **Jack Cheney** (Amherst College)

#### **REFERENCES**

Guidotti CV, Sassi FP (2002) Constraints on studies on metamorphic K-Na white micas. In: Mottana A, Sassi FP, Thompson JB Jr, Guggenheim S (eds) Micas: Crystal Chemistry and Metamorphic Petrology. Mineralogical Society of America Reviews in Mineralogy and Geochemistry 46: 413–448

Guidotti CV, Cheney JT, Foster CT, Hames WE, Henry DJ, Kinner DA, Lux DL (1996) Polymetamorphism in western Maine: Mineralogic, petrologic, and textural manifestations and regional geologic implications. In: Van Baalen MV (ed) Guidebook to Field Trips in northern New Hampshire and adjacent regions of Maine and Vermont, New England Intercollegiate Geological Conference, 88th annual meeting, pp 171-202 (reprinted in the Guidebook for Field Trips in Western Maine, NEIGC 98th annual meeting, with a preface, p. 109-141)

Henry DJ, Guidotti CV, Thomson JA (2005). The Ti-saturation surface for low-to-medium pressure metapelitic biotites: Implications for geothemometry and Ti-substitution mechanisms. American Mineralogist 90: 316-328

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