PLANETARY GEOLOGY

DIVISION NEWSLETTER

VOLUME 15, NUMBER 1 **AUGUST, 1997**

Message From the Division Chair

Jim Zimbelman, Smithsonian Institution

What an amazing and busy year this has been in the space sciences! Data from Jupiter, Hubble Space Telescope, asteroid 253 Mathilde, and most recently the surface of Mars joined with Earth-based observations and laboratory studies of meteorites to produce a "banner" year for both new information and new ideas. The Planetary Geology Division of GSA is making every effort to capitalise on the heightened public and specialist interest in space topics resulting from the new information. It is my hope that each of us can help spread the word to colleagues and to the general public that the wonder and excitement of space science is alive and well.

The increased intensity of interest began with the well publicised announcement last August that possible evidence of primitive life had been found within carbonate deposits in the ALH 84001 meteorite from Mars. Even though the hypothesis remains controversial, and is currently undergoing intense scrutiny by many researchers, the announcement of the first potential evidence of life off the Earth grabbed the world's attention in a way that few subjects have in recent years. The American public has become somewhat jaded to the political and military features that have dominated recent news coverage, and the Martian meteorite announcement seemed to resonate with the basic curiosity that dwells inside all of us, something that too often is dormant until an appropriate discovery comes along. I attended the 1996 GSA technical program committee meeting just a few days after the announcement, and I was amazed at how many of the other committee members almost pleaded for our Division to arrange a special session about the meteorite at the Denver meeting. Several of the other divisions offered to do whatever they could to facilitate the special session. Through the diligent efforts of many people, a special session on the ALH 84001 meteorite took place immediately prior to our annual Division meeting, with an impressive turnout that represented a sizeable fraction of the entire conference attendance! This kind of intense interest does not happen every year (or even every decade!), and this year Cass Coombs has organised the 1997 Division Symposium around the theme of RE-exploring life in the solar system to continue this momentum.

The limited data rate from the Galileo spacecraft has not diminished the stunning quality of the images and other data returned regularly by this mission to Jupiter and its satellites. An excellent theme session on the Galileo results was held in Denver last October, and this year Bob Pappalardo and Rob Sullivan have organised what looks to be an equally exciting theme session devoted to the Galilean satellites. Regular updates to the Galileo Web site (http://www.jpl.nasa.gov/galileo) have made the new information readily available not only to scientists, but to the whole world. The decision by NASA to support an extended Galileo mission devoted primarily to studies of Europa means that new information about the Jovian system should continue coming down on a regular basis through 1999. It is no coincidence that this interest in Europa is fueled in part by the possibility of a liquid ocean beneath Europa's frozen crust, with the associated implications for potential exobiology.

I would guess that most of us have in one form or another had personal experience with the almost frenzied interest generated by the July 4th landing of Mars Pathfinder and the subsequent movements of the Sojourner rover across the martian surface. The intensity of both the public and media interest in anything related to Mars caught many of us off guard. The National Air and Space

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Museum was immediately swamped with media requests and public interest in our Pathfinder exhibit, and I have heard similar stories from other organisations around the country. The 100 million hits per day on the Pathfinder Web site has been observed by some to represent a new defining moment in how we perceive news and where we will go to get it in the future. While I am personally excited about the rock chemistry data Pathfinder is obtaining, many of the questions I have been asked about the significance of Pathfinder eventually end up involving looking for evidence of past life. Do you see a recurring theme running through all of this? Many in the scientific community remain skeptical about the current evidence for possible ancient life on Mars, but we are doing ourselves (and our Division) a disservice if we ignore the obvious interest among people in general in the prospects for life off the Earth.

Other recent information has generated less publicity , but represents equally important advances. The NEAR spacecraft provided us with close-up views and other data about the Main Belt asteroid 253 Mathilde from its flyby on June 27, 1997. This is now the third asteroid we have detailed surface views of, something that has to benefit our understanding of the origin and evolution of these small bodies, and hopefully their relationship to the extensive meteorite collections here on Earth. Similarly, on-going Hubble Space Telescope views of objects in the solar system should represent an opportunity for the astronomical community to interact more with the geo-scientists that comprise the current majority of the Division. I would encourage all of us to think about ways that we can expand the breadth and scope of the participants in Division activities.

QUICK SCHEDULE: GSA- SALT LAKE CITY

Saturday and Sunday

Workshops:

Exploring the Solar System in the Classroom: A Hands-On Approach. 8 am - 5 pm.

Field Trips:

Structure and Kinematics of a Complex Crater, Upheaval Dome, Canyonlands National Park, Utah. Saturday and Sunday, October 18-19.

Monday

Symposia:

S6. *Exploring Life in the Solar System.* Morning.

Hot Topics at Noon:

"Dubiofossils" in Martian Meteorites: Is (or Was) There Life on Other Planets?

Tuesday

Symposia:

S15. *Recent Advances in Studying Earth from Space: What Students Should Know.* Afternoon.

Special Evening Session:

Mars Pathfinder Lander and Rover Mission First Results: Field Geology on Mars ***(AND Gene Shoemaker Memorial)***

Business Meeting and Gilbert Award Ceremony:

Immediately following the Pathfinder session

Theme Sessions (date and time not yet announced):

T35. *Volcanic Eruptions: From the Deep Oceans to Deep Space.*

T36. *The Galilean Satellites: Exploring Their Connections.*

T37. *Volatiles in Planetary Mantles and Basalts.*

Let me close with just a few comments about on-going Division functions that continue to serve our community. The annual G.K. Gilbert Award from our division remains one of the prestigious honors available to professionals in the planetary geoscience community. At the other end of the scale, the Division has sponsored various teacher workshops in association with the annual GSA meeting, to empower teachers to more effectively present the excitement of space science in their classrooms. The Stephen E. Dwornik Awards for the best student research presentations at the annual Lunar and Planetary Science Conference has elevated the quality of student involvement in the meeting to the point that most student presentations are now routinely better than the ones by those of us so-called professionals! Perhaps we need to institute some kind of award to get the rest of us to put the same level of effort into our conference presentations that these students do year after year. Steve's original endowment got the award process going, but there remains a continuing need for donations (at all levels, but particularly anyone motivated to give a substantial amount) to maintain the health of the award endowment. Please seriously consider donating to this very important cause.

It has been a long time since the prospects for exciting new data from the solar system are as bright as they are right now. Take advantage of the times, and join in the fun of presenting the results to both scientific and public audiences through our Division activities. Any of the officers would be glad to discuss any ideas you might have for making the Division more effective, and more fun!

Division activity at recent meetings

Geological Society of America Meeting, Denver (Oct. 1996)

The Planetary Division of the Geological Society of America continues to exert a strong presence at our parent organization's national meeting. At the 1996 meeting, this activity included.....

• On Tuesday night, the Planetary Division sponsored a Special Lecture on Possible Early Life on Mars. Based on the recent studies of the Antarctic martian meteorite ALH84001, presentations were given by Dr. Everett Gibson of NASA's Johnson Space Center and by Dr. Harry Y. McSween Jr. of the University of Tennessee, Knoxville. Attendance was well in excess of 1000, pointing out the enormous public and professional interest in this topic.

• Our division sponsored one symposium and 3 theme sessions at the Denver meeting. These included the symposium "Planets as Complex Systems" (convened by Jim Zimbelman), with talks ranging from "Geological evolution of the terrestrial planets" by Jim Head of Brown to "In search of other planetary systems".
by David Black of LPI ; the theme poster session "Mapping Other Worlds" (organized by Jim Zimbelman) which focused on how maps represent our primary source for documenting the spatial relationship between terrains, whether on Earth or other planets; the theme session "Galileo at Jupiter" (organized by Jim Head and Larry Crumpler) which provided early glimpses of the data returned by the Galileo probe as it investigates Jupiter and its fascinating moons; and the theme session "Mineralogy of Planetary Surfaces Using In-situ Analysis and Remote Sensing" (jointly sponsored by the Planetary Geology Division and the Mineralogical Society of America, and organized by Brad Jolliff) included a wide variety of presentations, ranging from studies of meteorites to materials a bit closer to home.

• The Planetary Geology Division organized two workshops at the Denver meeting. The first, "Exploring the Solar System in the Classroom: A Hands-on Approach (For K-12 Teachers)" was organized by Cassandra Coombs. The second, entitled "Geological exploration of the solar system: Methods and current status", was organized by Ron Greeley, Cass Coombs and Kelly Bender. Both were well attended.

• The 1996 Division Business Meeting was held following the Special Lecture on Tuesday night. The following officers were announced and welcomed into the fold:

Chair- Jim Zimbelman
1st Vice-Chair- Cassandra Coombs
2nd Vice-Chair- Dan Britt
Secretary Treasurer- Ralph Harvey

The business meeting is also the time when our division presents the prestigious G.K. Gilbert Award. This award was established by our Division in 1983 to recognize outstanding contributions to the solution of a fundamental problem of planetary geology in its broadest sense, including planetary geology, geochemistry, mineralogy, petrology and geophysics, and the field of meteoritics. In recognition of his outstanding contributions to planetary studies, the 1996 G.K. Gilbert Award was presented to Dr. Robert P. Sharp. Hugh Kieffer was the citationist; his statement and the acceptance by Dr. Sharp can be found in GSA Today, v.7, no. 3 (March 1997), p. 13-16.

In Memoriam

In late July of this year, we lost the winner of the very first Gilbert award when Gene Shoemaker was tragically taken from us by a traffic accident. Please plan to attend a memorial tribute to Gene at the National GSA meeting, to be held just prior to the special Mars Pathfinder session Tuesday evening.

Announcing the 1997 G. K. Gilbert Award Winner

Ronald. T. Greeley, Arizona State University

Previous Gilbert Awardees: E. Shoemaker (1983); G. Wetherill (1984); W. Alvarez (1985); R. Baldwin (1986); D. Gault (1987); D. Wilhelms (1988); H. Schmitt (1989); H. Masursky (1990); J. Guest (1991); J. Wood (1992); M. Carr (1993); S. R. Taylor (1994); B. Lucchitta, 1995); R. Sharp (1996)

Presenting the 1997 Dwornik Prize Winners:

Student, Affiliation : Title
Dante Lauretta, Washington University : *The Origin of Ni-bearing Sulfides in CI Carbonaceous Chondrites (oral presentation).*

Jannette Akridge, University of Arkansas :*Fusion Crust and the Measurement of Surface Ages of Antarctic Ordinary Chondrites (poster presentation).*

Honorable Mentions:

Student , Affiliation
Kevin Williams, Arizona State University
Steven Hauck, Washington University
Michelle Minitti, Brown University
Nancy Chabot, University of Arizona
Rachel Mastrapa, Univ. of Southern Cal.
Scott Mest, University of Pittsburgh

28th Lunar & Planetary Science Conf., Houston (March, 1997)

The Planetary Division has an extremely visible role at Lunar and Planetary Science Conferences as sponsors of the competitive Stephen E. Dwornik Planetary Geoscience Student Award, which goes to the best research presentations (both oral and poster) by students who are U.S. citizens. This award continues to solicit high visibility for the division, since many previous awardees have gone on to outstanding careers in our field. As at previous meetings, a reception was hosted by the Division to honor the winners from the previous year. A particular focus of this reception was to draw attention to the Division's G.K. Gilbert award.

Division activity at upcoming meetings

Geological Society of America, Salt Lake City (Oct. 1997)

Join in the activity at the National meeting, one of the busiest ever for the Planetary Division. Some of the activities sponsored by the Division are as follows:

Symposia

S6. Exploring Life in the Solar System. Monday, October 20, morning.
Planetary Geology Division. Cassandra Coombs, College of Charleston; Loren Babcock, Ohio State University. Potential early life forms resembling fossils deep within terrestrial basaltic rocks have been discovered in martian meteorites. How did these originate? What are the implications for the origin and evolution of life on the terrestrial planets? This symposium will explore the early formation of the solar system and the geologic/biologic/chemical conditions that support life. The speakers and their titles as of early July include:
Dr. Harry Y. McSween- *Life's Recipe: Extraterrestrial Sources for the Biogenic Elements and Compounds*
Dr. Loren Babcock- *Early Life on Earth: Major Bioevents and Preservational Circumstances*
Drs. S. Jacobson & J. Moldowan- *Biomarker Chemistry Detects Primitive Organisms Where Anatomy is Vague*
Dr. Dave DesMarais- *Biogeochemistry: The Archean Carbon Record*
Dr. Andy Knoll- *Life's Bridge Between Earth and Mars*
Dr. Jack Farmer- Where would life be on Mars? The paleontologic view
Dr. Dave McKay- ALH84001 - *Early Martian Life forms?*
Dr. Chris Chyba- *Potential Life on Europa*

S15. Recent Advances in Studying Earth from Space: What Students Should Know. Tuesday, October 21, afternoon.
National Association of Geoscience Teachers. John R. Wagner, Clemson University; Cassandra Coombs, College of Charleston.

Recent technological advances in remote sensing have enabled geoscientists to study our planet from a variety of perspectives never before possible. Unfortunately, a lag time exists before such information is incorporated into textbooks and other references. Experts will bridge this gap by outlining important new discoveries in non-technical terms. Recent technological advances in remote sensing have enabled geoscientists to study our planet from a variety of perspectives never before possible. Unfortunately, a lag time exists before such information is incorporated into textbooks and other references. Experts will bridge this gap by outlining important new discoveries in non-technical terms.

Theme Sessions

T36. The Galilean Satellites: Exploring Their Connections.
Planetary Geology Division. Robert Pappalardo, Brown University; Robert Sullivan, Arizona State University.

Galileo data are revealing astounding differences among the geologies of Jupiter's Galilean satellites. This session explores common links among these diverse moons, which might include composition, internal evolution, volcanism, tectonics, cratering, or other characteristics. Through examination of their commonalities, the striking differences among these worlds can be better understood. ORAL.

T35. Volcanic Eruptions: From the Deep Oceans to Deep Space.
James Zimbelman, Smithsonian Institution; Tracy Gregg, Woods Hole Oceanographic Institution.

Volcanism is a fundamental process that has modified all solid surfaces in the solar system. Unique environments, ranging from the seafloor on Earth to a vacuum on the Moon, and different eruptive materials influence the emplacement and morphology of volcanic landforms. This session explores volcanic eruptions in these diverse environments. ORAL.

T37. Volatiles in Planetary Mantles and Basalts.
Mineralogical Society of America and Planetary Geology Division. Charles K. Shearer, University of New Mexico; Clive R. Neal, University of Notre Dame.

Volatiles influence every aspect of magmatism. What roles do volatiles play in magmatic systems in different planetary environments? This session focuses upon: abundance and behavior of volatiles in basalts from the Earth, Moon, Mars, and asteroids, the influence volatiles have on planetary processes, and the volatile content of planetary mantles. ORAL.

Field Trips

Structure and Kinematics of a Complex Crater, Upheaval Dome, Canyonlands National Park, Utah.
Saturday, October 18 and Sunday, October 19. Ken Herkenhoff, Jet Propulsion Laboratory, MS 183-501, California Institute of Technology, 4800 Oak Grove Drive, Pasadena, CA 91109-8099; (818) 354-3539; fax 818-354-0966, ken.e.herkenhoff@ jpl.nasa.gov; Bryan Kriens, Eugene Shoemaker. Maximum: 43. Cost: $150.

Hot Topics at Noon

"Dubiofossils" in Martian Meteorites: Is (or Was) There Life on Other Planets?
Monday, October 20, 12:15 to 1:15 Salt Palace Convention Center. Jeffrey L. Bada, Scripps Institution of Oceanography; Jack D. Farmer, NASA Ames Research Center: Christopher Romanek, Savannah River Ecology Lab, University of Georgia.

Special Evening Session:

Mars Pathfinder Lander and Rover Mission First Results: Field Geology on Mars
Tuesday, October 21, evening session. Larry Crumpler, New Mexico Museum of Natural History and Science; Matthew Golombek, Mars Pathfinder Mission Scientist, Jet Propulsion Laboratory

Field geologic studies of Mars will be conducted for the first time this summer by the Mars Pathfinder lander and rover. Mars Pathfinder, launched last December, will land at the mouth of Ares Vallis, an ancient river channel that once drained the highlands of Mars. Imaging
and in situ chemical analysis of rocks and soils during the traverse will reveal a new world. This session will present some of the first publicly-discussed results from the perspective of mission scientists.

Workshops

Exploring the Solar System in the Classroom: A Hands-On Approach.
Saturday, October 18, 8:00 a.m. to 5:00 p.m., The Wyndham Hotel. Cassandra Coombs, College of Charleston.

This workshop will be an interactive, hands-on experience for K-12 teachers. Topics related to the geologic exploration of our solar system will be presented in a modular format, permitting maximum discussion and experimentation among participants.
Limit: 40. Cost: $5. Preregistration required.

Meetings

The 1997 Annual Planetary Geology Division Business Meeting.
Tuesday evening, immediately following the Pathfinder Special Evening Session. The meeting will include reports on elections, current financial standing, and presentation of the G.K. Gilbert Award. Be there!

29th Lunar & Planetary Science Conf., Houston (March, 1998)

The 1998 Lunar and Planetary Science conference should be a showpiece for the Planetary Geology division of GSA! In addition to the usual Dwornik judging and reception, we anticipate holding a reprint auction during the conference (see page 8).

WE WON'T CALL YOU AT HOME, OR SEND YOU A CATALOG EVERY MONTH-BUT....

WE NEED YOUR HELP WITH THE DWORNIK AWARD!

Since first awarded in 1991, the Dwornik prize has established itself as the premier method of recognizing

outstanding American graduate students in the Planetary Sciences. Establishing a career in planetary science can be discouraging in today's world; by rewarding excellence, the Dwornik prize encourages the best young scientists, recognizing their individual excellence. Here's how some past awardees see the importance of the prize:

Robert Sullivan, 1991 awardee: "My original Ph.D. advisor switched careers part way through my graduate work, and left my university for industry. The Department Chair helped me out tremendously, but the Dwornik Prize also helped to fill the partial vacuum created by my original advisor's departure. The Dwornik Prize gave me some assurance that I was on the right track, that the work I was doing meant something to somebody. Steve took us on a little Congressional tour of Washington D.C., and that was an eye-opener I'll never forget. The professionalism and earnestness of the staffers, and the similarities between their crowded and hectic offices and my own back in Arizona helped me understand how government really worked, and where science sometimes can fit into the governmental process."

L. Leshin, 1993 awardee: "Winning the Dwornik Award was an important step in establishing my scientific independence. It gave me confidence in my science, but perhaps more importantly, allowed me the opportunity to interact with many people at NASA Headquarters that I would not have otherwise met until much later in my career. The award gave my research visibility, and this has led to many opportunities for interactions with other scientists that may not have existed had they not been introduced to my work through the Dwornik Award. In addition, I believe the award has increased the quality of scientific presentations of graduate student scientists in our community, and increased the awareness of more senior scientists, many of whom have participated as judges, in the breadth of high-quality graduate student research going on in planetary science. Graduate students typically do not receive many rewards for outstanding, hard work. I believe the Dwornik Award is an excellent example of the ways in which we should be encouraging our most outstanding students to continue their careers as researchers."

Patrick McGovern, 1993 awardee: "I am extremely grateful to Steve Dwornik and GSA for sponsoring the Dwornik Award for student presentations at the Lunar and Planetary Science Conference. Planetary geoscience can be an exhilarating yet frustrating field to be in. Those of us who practice it know that nothing compares to the feeling of being among the first people ever to set eyes upon some spectacular feature or to unravel a unifying principle of planetary geology. Unfortunately, planetary science is an endeavor almost entirely dependent on government funding. For the foreseeable future, planetary science faces an environment of declining or at best stagnant budgets, accompanied by the resulting moribund job market. It's very easy even for eager, up-and-coming grad students to get discouraged. With such apparently dismal prospects, the day-to-day grind of grad school may not seem worth it. Prizes like the Dwornik award (bestowed annually upon the best oral and poster presentations at the Lunar and Planetary Science Conference) are effective means to combat low grad student morale. "

L. Browning, 1994 awardee: "Almost every student dreams of winning the Dwornik Award because it represents a tangible sign of encouragement from a diverse committee of senior scientists and the scientific community as a whole. Needless to say, it was a highly motivational experience for me to have been honored with the Dwornik Award at the 25th Annual Lunar and Planetary Science Conference. Winning this award has since opened doors of opportunity for me and continues to be a source of fond memories. It gives me great pleasure to see new students being awarded this prize each year."

Tracy Gregg, 1994 awardee: "While in graduate school, I received an honorable mention and, later, a first place award in the Dwornik student paper competitions at the annual Lunar and Planetary Science Conferences. It was tremendously encouraging to have my efforts, and those of my advisors, formally recognized. In a professional climate frequently filled with fierce competition, the Dwornik awards create a valuable environment in which young investigators are fostered and praised by the planetary science community. Most importantly, the Dwornik competition promotes and rewards excellence among the students: those who are now just beginning but will be tomorrow's world-renowned experts. Every year I overhear eager conversations between students speculating on their chances, saying that they'd be thrilled just to receive an honorable mention, and conferring about the amount of effort that they put into their abstracts and presentations. I strongly believe that the Dwornik competition cultivates independent thought and effective student presentations at LPSC. Based on discussions I've had with graduate students, it is clear to me that without the Dwornik competition, there would be fewer student-authored abstracts, and the associated student presentations would be less competent. The Dwornik competition not only bolsters excellence among students, it also encourages their advisors to become actively involved in their students' presentations. Thus, the student, advisor, and the community benefit from carefully presented, thought-provoking science because of the Dwornik awards."

Here's the point. As the preceding testimonials show, the Dwornik prize is clearly an important factor in encouraging the best young researchers to stay in planetary science. But without your help, the Dwornik prize may dwindle away. At today's rates, the initial endowment has not returned enough interest to cover even the modest costs

of the award ($500 for each of two winners, and associated plaques), and is shrinking as we are forced to use it to continue providing the award. To our shame, the division has even been forced to go back to the original benefactor for more funds. The Planetary Geology Division sees a healthy Dwornik prize as one of its key contributions to geology and planetary science, and would love to make the award self-sustaining. Help us increase the endowment to the point where annual awards can be easily made from interest alone. 

Finances and membership

The financial standing of our division is not great, but not threatening, either. Proceeds from workshops at the National Meeting are an important part of our income that we hope to increase. We have successfully eliminated one of our major yearly expenses that routinely costs $250-$300 (the reception for Dwornik Awardees at the Lunar and Planetary Science Conference is now supported by the Lunar and Planetary Institute and the Johnson Space Center). Our largest single yearly cost is the Division's annual business meeting at National GSA, and we will continue to search for ways to reduce this expense, which for 1996 took nearly 33% of our income. Costs associated with the Division Newsletter and elections are another major expense, but a necessary one we will have difficulty reducing. The financial activity of our Division over the past 16 months are summarized below:

Income		
Division Balance 12 /31/95	$	464.69
Contribution - James	$	50.00
1996 Division Dues Income	$	1176.00
1996 Workshop Income	$	355.00
Total Division Resources	*$*	*2045.69*

Expenses		
Annual Meeting	$	776.71
Gilbert Award Certificate	$	6.50
GSA Production Costs	$	58.39
Lunar & Planetary Institute	$	306.25
Newsletter & Ballot	$	576.64
Total Division Expenses	*$*	*1724.49*
Division Fund Balance 4/2/97	**$**	**+321.20**

Notes: Division dues and workshop income are deposited after this newsletter goes to press; most expenses now occur in late October (national meeting). Currently the Dwornik fund has a balance of $16,203.00.

Membership numbers (as of April 2, 1997)

Student	30
Teacher Associate	8
Member	150
Grad Member	36
Senior Member (no div. dues)	6
Senior Member (half dues)	9
Fellow	32
Senior Fellow (no div. dues)	18
Senior Fellow (half dues)	13
Sr. Fellow Medalist (no div. dues)	2
Senior Fellow Life (no div. dues)	1
Honorary Fellow (no div. dues)	3
Total as of December 31, 1996	320
Total as of February 28, 1997	289
Total as of April 2, 1997	**308**

The Great Planetary Auction

Here's a great way to contribute to the Dwornik fund! The Planetary division will be holding a **rare reprint and book auction** to benefit the Dwornik Prize fund at next spring's Lunar and Planetary Science conference. Highlight of the auction will be the offering of a signed, first edition reprint of G.K. Gilbert's landmark 1893 paper "*The Moon's Face: A study of the origin of its features*". We are now actively seeking other rare books and reprints to offer at the Auction (see below).

Rules for the auction, and a scanned copy of available manuscripts will be available at the Division Website*(http:// www.planetary.brown.edu/~crumpler/Planetary_Division.html)* starting later this fall. Bids will be accepted at that website starting January 1, 1998 and running until 2 days before the live auction to be held at the 1998 LPSC. See the website for more details.

There are two ways you can contribute to this auction: by donating books or reprints, and by actively pursuing those items you want to add to your collection! YOU MUST CLEAR ALL DONATIONS with the auction committee before sending them in. We are only interested in reprints and books of high value (key papers and books more than 50 years old, signed, and in exemplary condition). Donations sent without the committees prior approval will be returned or discarded! Call, write, or email the division secretary for more details (R. Harvey; 216-368-0198; rph@po.cwru.edu).

General information

GSA Planetary Geology Division Officers

Chair: Dr. Jim Zimbelman
CEPS/NASM, MRC 315, Smithsonian Institution, Washington, DC 20560. (202) 357-1424 ph (202) 786-2566 fx; jrz@ceps.nasm.edu
First Vice-Chair: Dr. Cassandra Coombs
Department of Geology, College of Charleston, 58 Coming Street, Charleston, SC 29424, (803) 953-8279 ph. (803) 953-5446 fx, cass@jove.cofc.edu
Second Vice-Chair: Dr. Daniel Britt
Lunar and Planetary Laboratory, Univ. of Arizona, Tucson, AZ 85721-0092, (520) 621-1336 ph. (520) 621-2994 fx., britt@lpl.arizona.edu
Secretary/Treasurer: Dr. Ralph P. Harvey
Department of Geological Sciences, Case Western Reserve University, Cleveland, OH 44106-7216, (216) 368-0198 ph (216) 368-3691 fx; rph@po.cwru.edu

Planetary Geology Division Website

Throughout the year, The Planetary Geology Division Home Page provides interested parties with up-to-date information regarding division activities and interests. The page is maintained by Larry Crumpler and is linked to the GSA Home Page.

http://www.planetary.brown.edu/~crumpler/Planetary_Division.html

PLATE V.

Amalia Farm, Near Gibeon, German Southwest Africa. (Probably the same as Mukerop.) Finest Octahedrite. Mass weighing 392 Kilos from which listed Slices were cut. x 0.18 Diameters. See Pages 16 and 44.

Plate V from *Meteorites,* the 1912 catalog of the Foote Mineral Company.

Give to the Great Planetary Auction! (see page 7 for details).

Biographies of nominated officers

Coombs, Cassandra R. b Elmira, NY, Jan. 19,1960; Planetary Geology, Geomorphology, and Volcanology. Education: SUNY Fredonia BS (Geol.) 82; Southern Illinois Univ. MS (Geol.) 84; Univ. Hawaii Ph.D (Geol. & Geophys.) 88. Professional Experience: National Research Council Post-Doctoral Fellowship-NASA Johnson Space Center, 89-91; Program Manager and Senior Scientist - POD Associates, Inc., 91-93; Co-Founder and Coordinator - New Mexico Environmental Assessment and Remediation Consortium (Near-C), Research Scientist, Univ. Hawaii 93-95, Asst. Prof. - Coll. of Charleston, 95-pres. Member: GSA, AGU, AWG, AAPG. Service: NASA Lunar Exploration Science Working Group (Secr'y) 92-95; NASA LDEF Meteoroid and Debris Special Invest. Group (M&D SIG), 90-present; GSA Planet. Geol. Div. First Vice-Chair, 96-97; Sec'y-Treas., 93-96; Honors & Awards: Harold T. Stearns Fellowship, 88; Mary Manhoff Memorial Science Fund Scholarship, 87; Research: Lunar and terrestrial geology and volcanology, remote sensing, geomorphology, environmental geology, mapping, space environmental effects. Address: Dept. of Geology, College of Charleston, 58 Coming Street, Charleston, S.C. 29424, (803) 953-8279 ph. (803) 953-5446 fx. cass@jove.cofc.edu

Britt, Daniel T. b. Ann Arbor, MI, December 1, 1950. Planetary Geology, Petrology, and Surface Processes. Education: Univ of Washington ,BA (Economics) 72; Univ of Washington, MA (Econ) 76; Univ of Washington, BS (Geol) 85; Brown, MS (Geol) 87; Brown, PhD (Geol) 91. Professional Experience: NASA Planetary Astronomy Postdoctoral Fellow Univ. of Arizona 90-93; Project Manager Imager for Mars Pathfinder (IMP) Instrument 93-Present; Project Manager of the Surface Stereo Imager (SSI) and Robotic Arm Camera (RAC) Instruments for Mars Surveyor Lander 95-Present. Member: GSA, AGU, DPS, Meteoritical Soc., Sigma Xi, Service: Imager for Mars Pathfinder Co-Investigator 93-Present. Honors and Awards: SGC Scholarship 83, Univ. of Washington Undergraduate Fellow 1984, Smithsonian Institution Graduate Student Fellow 86, NASA Graduate Student Fellow 89-91. Research: Mineralogy of small bodies, surface processes, geomorphology, remote sensing. Address: Lunar and Planetary Laboratory, Univ. of Arizona, Tucson, AZ 85721-0092. (520) 621-1336 ph. (520) 621-2994 fx. britt@lpl.arizona.edu

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AFFIX FIRST-CLASS POSTAGE

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Biographies of nominated officers (continued):

Kring, David A., b. Indianapolis, IN, 1961; Igneous Petrology, Geochemistry, and Planetary Geology. Education: Indiana University, BS (Geology and Astrophysics) 1984; Harvard University, Ph.D. (Geology) 1989. Professional Experience: Research Associate, University of Arizona, 88-93; Senior Research Associate, University of Arizona, 93-present. Member: GSA, AGU, Geochemical Soc., Meteoritical Soc., Sigma Xi, Arizona Geological Soc. Service: International Chicxulub Consortium, 1991-1992; Author of a public service document about "Meteorites and Their Properties," 1992; Univ. Arizona contact with public for meteorite identification, 1989-present. Honors and Awards: Westinghouse Science Honors, 1980; Research Award in Natural and Mathematical Sciences, Indiana University, 1984; NASA Graduate Student Award, 1986-1988; AGU Editors' Citation for Excellence in Refereeing JGR-Planets, 1993. Research: Cretaceous-Tertiary boundary stratigraphy and mineralogy; Impact cratering processes; Petrology and geochemistry of chondrites to infer the origin and evolution of the solar nebula; Petrology and geochemistry of achondrites, including lunar and martian meteorites, to infer the evolution of planetary bodies. Address: Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ 85721. (520) 621-2024 ph. (520) 621-6783 fx. kring@lpl.arizona.edu

Harvey, Ralph P., b Portsmouth, RI, 1960; Igneous Petrology and geochemistry. Education: Beloit College, BS (Geol.) 1982; Univ. Pittsburgh, Ph.D. (Geol. and Plan. Sci.) 90. Professional Experience: Staff Geologist, Huntley & Huntley, Inc., 84-85; Post-doctoral Research Associate, Univ. Tennessee, 90-92; Research Associate Professor, Univ. Tennessee, 92-95; Adjunct Research Assistant Professor, Univ. Pittsburgh, 92-95; Senior Research Associate, Case Western Reserve Univ., 95-present; Summer Faculty Fellow, NASA /JSC, 96. Member: GSA, AGU, Meteoritical Society. Service: Meteorite Working Group (V.Chair) 93-present; Judge, Int. Sci. Eng. Fair,94, Dwornik Prize, 91-93, 96; Sec./Treas., Planetary Division GSA, 1996-present. Honors and awards: Tallman scholarship, 78-82. Research: igneous meteorites; micrometeorites; equilibrated ordinary chondrites;terrestrial igneous Archean rocks; general igneous petrology; Antarctic field research. Address: Dept. of Geological Sciences, Case Western Reserve University, Cleveland, OH 44106-7216. (216) 368-0198 ph. (216) 368-3691 fx. rph@po.cwru.edu

Dear Fellows and Members of the Division:

The 1997 slate of officers of the Division, presented by the Nominating Committee and approved by the Management Board, is presented below. Biographical data for these candidates are available on the previous page. Please vote by checking the appropriate box or by writing in the name of your nominee in the space provided.

Your ballot must be returned no later than October 1, 1997, and must be signed in the space provided in order to be valid. You may use an envelope or simply fold the ballot sheet. In either case, make sure the ballot is addressed to GSA headquarters, signed, and **affix first class letter postage**.

The election results will be announced on Tuesday, October 21 at the annual business meeting of the Planetary Geology Division, held during the Geological Society of America Annual meeting.

Chair:	**Cass Coombs**	( )
	(or write in _____)	( )

First Vice-Chair:	**Dan Britt**	( )
	(or write in _____)	( )

Second Vice-Chair:	**Dave Kring**	( )
	(or write in _____)	( )

Secretary-Treasurer:	**Ralph Harvey**	( )
	(or write in _____)	( )

PLEASE RETURN THIS BALLOT RIGHT AWAY (Or by October 1, 1997 at the latest) to:

GSA Headquarters, 3300 Penrose Place, P.O. Box 9140, Boulder, CO 80301

Signature _____ Date _____

THIS BALLOT IS NOT VALID WITHOUT YOUR SIGNATURE

If you are inclined, this would be a great time to make a contribution to the Dwornik fund! Unlike many other charitable donations, your donation to the Dwornik fund produces positive results that you can see for yourself as you encourage and support new members of the planetary sciences community, your future colleagues.

Please include a check or money order with your ballot, made payable to *Planetary Geology Division, Geological Society of America*. Any amount would be appreciated.