

# GSA Mineralogy, Geochemistry, Petrology, and Volcanology (MGPV) Division Annual Report 2023

1 September 2022 – 31 August 2023

## **[0] Requested Actions and/or Recommendations for GSA Council approval/ratification; or just required notifications**

1. Approve J. Michael Rhodes, University of Massachusetts, Amherst, MA, as the MGPV Distinguished Career Awardee for 2024. Details in Item 23-1 below.
2. Approve Chris Yakymchuk, University of Waterloo, Waterloo, ON Canada as the MGPV Early Geologic Career Awardee for 2024. Details in Item 23-2 below.

## **[1] Division Mission:**

- to provide a mechanism whereby Geological Society of America members whose common interests are mineralogy, geochemistry, petrology, and volcanology can organize to partner with adhering Associated Societies with the same interests;
- to act as an organized group within the framework of the Geological Society of America to better promote awareness, teaching, study, and research of these and relevant areas;
- to stimulate and facilitate within the framework of the Geological Society of America the presentation and discussion of problems, ideas, knowledge, and results of work and research in these areas;
- to cooperate with other Divisions and Sections of the Geological Society of America and with other Associated Societies and scientific organizations in fostering, aiding, furthering, and promoting these areas;
- to advise and assist the officers, council, and committees of the Geological Society of America in matters pertaining to the relevant areas.

## **[2] Officers (between 1 September 2022 – 31 August 2023):**

Past Chair: Dennis L. Newell, Utah State University  
Chair: Amanda B. Clarke, Arizona State University  
1<sup>st</sup> Vice-Chair: Alan Whittington, University of Texas-San Antonio  
2<sup>nd</sup> Vice-Chair: Elisabeth Widom, Miami University (of Ohio)  
Secretary-Treasurer: J. Alexander Speer, Mineralogical Society of America

## **[3] Management Board (between 1 September 2022 – 31 August 2023):**

Management Board: comprises the elected officers, representatives from the Adhering Societies, and the student representatives:

Past Chair: Dennis L. Newell, Utah State University  
Chair: Amanda B. Clarke, Arizona State University

1<sup>st</sup> Vice-Chair: Alan Whittington, University of Texas-San Antonio  
2<sup>nd</sup> Vice-Chair: Elisabeth Widom, Miami University (of Ohio)  
Secretary-Treasurer: J. Alexander Speer, Mineralogical Society of America  
Geochemical Society (Frank C. Ramos, New Mexico State University)  
Mineralogical Association of Canada (David A. Fowle, University of Kansas)  
Clay Minerals Society (Warren D. Huff, University of Cincinnati)  
Mineralogical Society of America (Ann Benbow, MSA)  
Mineralogical Society of the United Kingdom and Ireland (Kevin Murphy)  
GSA student representative: Madeline Murchland, University of Idaho  
GSA student representative: Charles (Chuck) Lewis, Oregon State University  
GSA student representative: Emily Fischer, Brown University

**[4] Committees (between 1 September 2022 – 31 August 2023):**

(a) MGPV Distinguished Geologic Career Award (2024 award)

Alan Whittington (Chair), University of Texas at San Antonio  
Dawnika Blatter (2022-2024), US Geological Survey  
Peter LaFemina (2022-2024), Pennsylvania State University\*  
Cailey Condit (2021-2023), University of Washington\*  
Gregory Dumond (2021-2023), University of Arkansas  
Pamela Kempton (2023-2025), Kansas State University  
Frank Tepley (2023-2025), Oregon State University

\*Members Condit and LaFemina did not submit rankings nor did they attend the meeting.

(b) MGPV Early Geologic Career Award (2024 award)

Elisabeth Widom (Chair), Miami University (of Ohio)  
Karen Bemis (2021-2023), Rutgers State University  
Loÿc Vanderkluysen (2021-2023), Drexel University  
Munir Humayun (2023-2024), Florida State University  
Tyrone Rooney (2023-2024), Michigan State University  
Becky Lange (2023-2025), University of Michigan  
Paul Tomascak (2023-2025), State University of New York at Oswego

(c) Nomination for Officers (for 2023 election)

Dennis Newell (Chair), Utah State University  
Rosemary Capo, University of Pittsburgh, former MGPV Past Chair  
Rosemary Hickey-Vargas, Florida International University, former MGPV Past Chair

(d) Student Research Grants (for 2023)

Past Chair: Dennis L. Newell (Chair), Utah State University  
Chair: Amanda B. Clarke, Arizona State University  
1st Vice-Chair: Alan Whittington, University of Texas-San Antonio  
2nd Vice-Chair: Elisabeth Widom, Miami University (of Ohio)

(e) Travel Grants (for 2022 GSA Meeting)

Chair: J. Alexander Speer, Mineralogical Society of America  
Alan Whittington, University of Texas-San Antonio

Elisabeth Widom, Miami University (of Ohio)  
 Kevin Murphy, Mineralogical Society of the United Kingdom and Ireland

**[5] JTPC Representatives** (for the 2023 meeting):

Alan Whittington, University of Texas-San Antonio  
 Elisabeth Widom, Miami University (of Ohio)  
 J. Alexander Speer, Mineralogical Society of America

**[6] Council Liaison:**

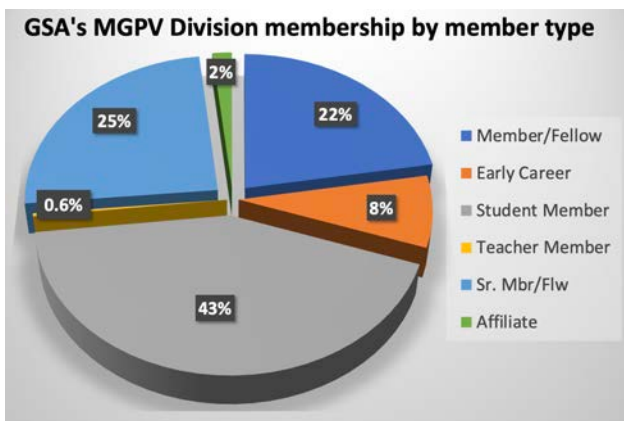
J. Wright Horton Jr., U.S. Geological Survey

**[7] Membership Information:**

547 2009 Division affiliates as of 31 December 2009  
 972 2010 Division affiliates as of 30 December 2010  
 1,437 2011 Division affiliates as of 30 December 2011  
 1,434 2012 Division affiliates as of 30 December 2012  
 1,385 2013 Division affiliates as of 30 December 2013  
 2,261 2014 Division affiliates as of 30 December 2014  
 2,249 2015 Division affiliates as of 30 December 2015  
 2,238 2016 Division affiliates as of 30 December 2016  
 1,976 2017 Division affiliates as of 30 December 2017  
 2,035 2018 Division affiliates as of 30 December 2018  
 1,849 2019 Division affiliates as of 31 December 2019  
 1,796 2020 Division affiliates as of 31 December 2020  
 1,716 2021 Division affiliates as of 31 August 2021  
 1,712 2022 Division affiliates as of 31 August 2022  
 1,549 2023 Division affiliates as of 31 August 2023



In 2014, GSA instituted a policy wherein students can join their first Division at no cost. This policy dramatically increased MGPV membership, increasing student membership from about 30% to 60%. But another result was a loss of income. After 2014, the ups and downs in MGPV membership numbers more or less track the changes in total GSA membership numbers.



GSA provided a variety of demographics about MGPV members shown in the accompanying tables. As of the end of August, 93.5% of MGPV members reside in North America. At 43%, students comprise the largest portion of MGPV member types. There is diversity in geographic Section membership though more MGPV members belong to the Cordilleran Section 34% of MGPV member have been GSA member for 3 years or less, but for any subsequent time-period the membership numbers are relatively even at 7-14%. There is a wide range of MGPV members' professional interests and employment.

## Mineralogy, Geochemistry, Petrology & Volcanology Division

Member Type	Total
Affiliate	27
Early Career Prof.	122
Graduate Student	330
Honorary Fellow	8
Professional	344
Sr. Mbr/Flw 65/25	114
Sr. Mbr/Flw 70/30	267
Student - No Data	116
Teacher Member	5
Undergraduate Student	216
Grand Total	1549

Country By Region	Total
Asia	24
Australia & Oceania	18
Central America & the Caribbean	4
Europe	29
Korea (the Republic of)	4
Middle East, North Africa, & Greater Arabia	7
North America	1448
South America	8
Sub-Saharan Africa	6
VIRGIN ISLANDS, US	1
Grand Total	1549

Ethnicity	Total
AIAN	5
AIAN,ASIAN,WHITE	1
AIAN,HISP,WHITE	2
AIAN,WHITE	7
ASIAN	73
ASIAN,BAA,HISP,NHPI,WHITE	1
ASIAN,HISP	3
ASIAN,MENA	1
ASIAN,NHPI	1
ASIAN,WHITE	13
BAA	27
BAA,HISP	2
BAA,HISP,WHITE	1
BAA,WHITE	1
HISP	63
HISP,WHITE	13
MENA	7
MENA,WHITE	2
NA	198
NA,WHITE	3
NHPI	1
WHITE	1124
Grand Total	1549

Employment	Total
Engineering	15
Environmental	21
Federal	75
Four-year University/College	325
Minerals	35
Oil/Gas	17
Other	43
Retired	237
Self-Employed/Consultant	58
State/Province	19
Student	647
No Data/Other	10
Two-year College	13
Unemployed	8
City/County	6
Energy (Other)	5
Secondary	5
Administration	1
Hydro	2
Museum/Science-Technology Center	7
Grand Total	1549

Professional Interest	Total
Archaeological Geology	26
Biogeosciences	17
Climatology/Meteorology	11
Economic Geology	201
Energy Geology	57
Engineering Geology	32
Environmental Science	94
Geography	12
Geoinformatics	17
Geology and Health	17
Geophysics/Tectonophysics	55
Geoscience Education	89
Geothermal	31
History/Philosophy of Geology	12
Hydrogeology/Hydrology	40
Karst	9
Limnogeology	5
Marine and Coastal Geosciences	30
Mineral/Geochem/Petrology/Volcanology	1151
No Data/Other	2
Other	22
Paleo Sciences	45
Planetary/Space Science	127
Policy/Regulatory	6
Quaternary Geology/Geomorphology	33
Seismology	4
Soil Science	5
Stratigraphy/Sedimentology	42
Structural Geology/Tectonics	276
Grand Total	2468

Fellow	Total
No	1301
Yes	248
Grand Total	1549

Section	Total
CORD	548
CORD2	1
NC	233
NC2	1
NE	303
None	123
RM	348
RM2	2
SC	143
SE	209
Grand Total	1911

Years Member	Total
0-3 years	527
10-19 years	209
20-29 years	115
30-39 years	172
40-49 years	133
4-5 years	157
50+ years	122
6-9 years	114
Grand Total	1549

Gender	Total
Man	918
Non-binary	22
Prefer not to answer	70
Woman	539
Grand Total	1549

**[8] Newsletter and Publications:**



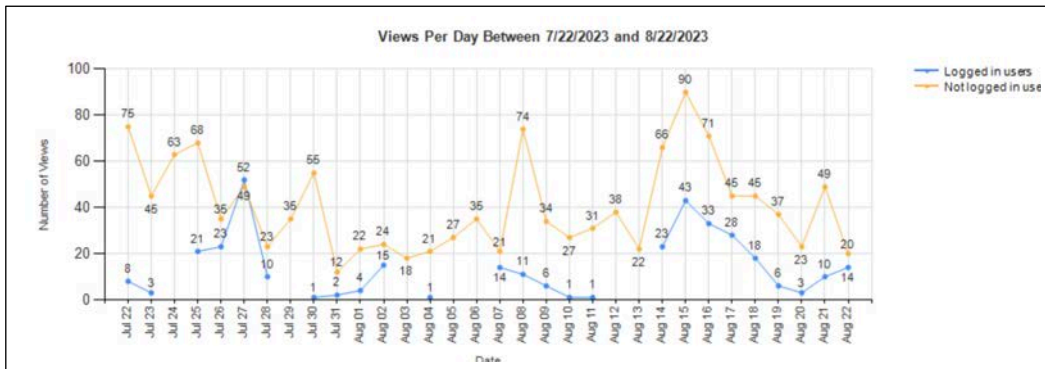
Newsletters, now twice yearly, are posted on [MGPV's Connected Community website](#). A message is sent to all MGPV members when they are posted.

Time sensitive announcements are made by bulk email or a "Latest Discussions" posting on [MGPV's Connected Community website](#).



**[9] Website & social media:**

[MGPV's Connected Community website](#) - is updated as needed by the MGPV Secretary-Treasurer. The MGPV website hosted by GSA is relatively active as is evident in a "Views per Day" graph.



[MGPV Twitter \(now X\)](#) with currently 201 followers is a free social networking site where users broadcast short posts known as tweets that can contain text, videos, photos or links. The MGPV Student Representatives update it and plan to be more active in the future retweeting (re-xing??) new papers and news related to MGPV. They also plan to highlight students.



[MGPV LinkedIn](#) – LinkedIn is a social networking site, but is designed specifically with business networking in mind, ideal for building professional relationships, as opposed to personal ones. It will be updated by the MGPV Student Representatives alongside "X".

MGPV [Slack](#) is a messaging app connecting people one-on-one or in groups across multiple devices and platforms in a Channel you set up for any project or topic. You're able to upload and share files and integrate other apps and services. Developed for business and professional and organizational communications, it has been adopted as a community platform. It is for GSA student members to network and share events and opportunities in the community.

**[10] Fundraising and Awareness:** Each year the Division contacts the research grant fund donors, thanks them, and gives the links to that year's [Lipman](#), [Carmichael](#), [Hollister](#), and [MGPV](#) student research grant awardees' write-ups written by the awardees themselves.

**[11] Financial Summary** (2022-2023, GSA's and the Division's fiscal year run July 1 through June 30):

As of 06/30/2023, MGPV had an unrestricted cash balance of \$32,455.69.

**Income**

Dues income was \$6,507.48. This is a significantly less than previous 12-month periods: \$7,128.13 (2021-2022), \$7,129.16 (2020-2021), \$7,336.30 (2019-20), \$7,626.86 (2018-2019), \$7,556.65 (2017-2018), and \$7,437.98 (2016-2017).

The Division received \$16,000 in transfers from the James B. Thompson, Jr. Fund of the GSA Foundation to support 3 student research grants, 10 student travel grants, and the awards and travel expenses for the 2023 Distinguished Geological Career and Early Career Awardees. For the 2023 student research grants, the Lipman Research Fund provided \$87,500, the Hollister Graduate Student Research Awards Fund \$2,260, the Ian S.E. Carmichael Research Award \$1,820, and the GSA Foundation \$1,170. The later was to make up the short fall in the Carmichael and Hollister Research Awards.

**Expenses**

Division expenses during this period were \$78.00 for AV services, meeting, postage, shipping, and freight. \$7,000.00 was dispersed from the Thompson Fund for the DGCA and EGCA awards, and student and awardee travel support. \$98,830 was dispersed for student research grants from the Lipman, Hollister, Carmichael, and Thompson Funds. There were no reception expenses for either the GSA 2022 Connects or the upcoming GSA 2023 Connects meetings.. This is a savings of about \$5,000 (this is 1/3 of the total remaining cost after ticket sales with that balance due shared among MGPV, GS, and MSA).

**Liabilities**

none

**[12] Awards:**



special session program | Dennis Newell & DGC Awardee Jane Selverstone | Dennis Newell & DGC Awardee Hannah R. Dietterich

The 2022 awards were presented during a special session (T79. GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division Awards Session) at which each awardee was introduced by their citationist, followed by the awardee's acceptance, and then a 30-40 minute technical talk by the awardee.

### 2022 MGPV Distinguished Geologic Career Awardee

- 2022: Jane Selverstone, University of New Mexico, Albuquerque, NM, USA
- [Citation](#) & [Acceptance](#)
- DGCA talk: *A Retrospective View of the P-T Path Revolution in Metamorphic Petrology*

### 2022 MGPV Early Geologic Career Awardee

- 2022: Hannah R. Dietterich, US Geological Survey Alaska Volcano Observatory, Anchorage, AK, USA
- [Citation](#) & [Acceptance](#)
- EGCA talk: *New Insights into Lava Flow Dynamics and Hazards from the 2018 Eruption of Kilauea, Hawai'i*
- 2022 Connects Session in her honor: *T85. Lava Flows and Their Hazards: A Session Inspired by Hannah Dietterich's Early Career Award from the Mineralogy, Geochemistry, Petrology, and Volcanology Division*

## [13] Grants:

A total of 103 MGPV-related student research proposals were submitted and considered by MGPV. Forty-six MGPV-related student research grants totaling \$100,000 were supported by the Lipman, MGPV, Carmichael, and Hollister Funds. Eleven other MGPV-related student research proposals were supported by Gould, Hatcher, Heroy, QGG Division, Ross, Sisson, and Snavelly specialized awards.

### 2023 MGPV Division Student Research Grant awardees are:

- **Alaina Helm**, Virginia Polytechnic Institute and State University, Blacksburg, VA, for her project: *Experimentally Constraining a New Trace Element Barometer in Garnet.*
- **Victoria Konieczka**, University of Wyoming, Laramie, WY, for her project: *CO<sub>2</sub> Water-Rock-Interactions and Metal Mobility from The Opeche Formation, Powder River Basin, WY, USA.*
- **Leah Shteynman**, Arizona State University, Tempe, AZ, for their project: *The U-Pb system and structure of natural reidite.*

### 2023 Lipman Research Fund Student Research Grant awardees are:

- **John Ajayi**, University of Connecticut, Storrs, CT, for his project: *Reconstructing Paleoelevation of Taiwan Orogenic belt using Isotope Geochemistry of Fluvially-exported Catchment-integrated Organic Molecular Biomarkers.*
- **Erin Alexander**, Arizona State University, Tempe, AZ, for her project: *Seeing Beneath the Surface: Using Geomorphology and Geochemistry to Map Hot Spring Regions.*
- **Brooke Benz**, University of Missouri-Kansas City, Kansas City, MO, for her project: *Defining the volcanic and magmatic history at Askja Volcano, Iceland.*
- **Emilie Bowman**, University of Arizona, Tucson, AZ, for her project: *Investigating the crustal thickness and topographic evolution of the southern Central Andes of Northern Chile and Argentina.*
- **Catriona Breasley**, University of British Columbia, Vancouver, BC, CANADA for her project: *The geochemistry, petrology and mineralogy of the Prof pegmatite, Revelstoke, BC.*
- **Haley Dietz**, Idaho State University, Pocatello, ID, for her project: *Quantifying pre-eruptive water content of eastern Snake River Plain basaltic melts using plagioclase hygrometry, Idaho, USA.*
- **Cameron Essex**, University of Wisconsin-Milwaukee, Milwaukee, WI, for their project: *Paleoenvironmental Reconstructions of the Pleistocene Ice Sheet Informed by Glacio-Volcanic Deposits in Northeast Iceland.*
- **Lydia Fairhurst**, Dalhousie University, Halifax, NS, CANADA for her project: *Emplacement conditions of class 1 kimberlites as recorded in natural and experimentally produced reaction products on mantle-derived chromite and ilmenite.*
- **Serena Formenti**, The University of British Columbia, Vancouver, BC, CANADA for her project: *Studying the composition of the Deep Mantle from the Surface of the Earth: Investigating Clues in the Northwest Hawaiian Ridge.*
- **Kailee Gokey**, Miami University, Oxford, OH, for her project: *Mineralogy and Geochemistry of Gold in Mine Waste in Tonopah, Nevada: Implications for Potential Recycling and Environmental Benefits for an Underserved Community.*

- **Alexander Hammerstrom**, University of Massachusetts, Amherst, Northampton, MA, for their project: *Trapped: Using Cascadian olivine-hosted melt inclusions to decipher the petrogenesis of primary magmas in a continental arc setting.*
- **Sarah Hickernell**, Stanford University, Stanford, CA, for her project: *Coevolution of Intrusive and Extrusive Magmas: Mineral Records of the Searchlight Magmatic System, NV.*
- **Rachel Holsteen Bruyere**, Arizona State University, Scottsdale, AZ, for their project: *Highly Explosive Mafic Volcanoes: A New Model of Volatile Solubility.*
- **Samuel Hudziak**, University of Iowa, Iowa City, IA, for their project: *Constraining the age and stratigraphic correlation of the Saunders Ash, Mt. Taranaki, New Zealand.*
- **Kaitlyn Hulsey**, University of Georgia, Athens, GA, for his project: *Building up magma reservoirs in the Earth's crust: the case of Stone Mountain.*
- **Nathanael Kilburg**, University of Iowa, Iowa City, IA, for his project: *Characterizing the Matlock Keratophyre using high precision major and trace element geochemistry.*
- **Jisoo Kim**, Arizona State University, Tempe, AZ, for her project: *Magma reservoir and volatile content: Implications for future inter-caldera activity at Valles Caldera, New Mexico, USA.*
- **Laura Lapham**, University of Connecticut, Storrs, CT, for their project: *Post-Glacial fire and climate history of Southern New England.*
- **Mikkel Louis**, Oregon State University, Corvallis, OR, for her project: *Constraining eruption initiation mechanisms for cyclic explosive eruptions at Misti volcano, Peru.*
- **Pablo Moreno-Yaeger**, University of Wisconsin-Madison, Madison, WI, for his project: *Volatiles and rhyolite genesis within a predominantly basaltic to andesitic arc.*
- **Hans Naake**, University of Cincinnati, Cincinnati, OH, for his project: *Isotope Fractionation of a Paleoclimate Evaporation Proxy Produced by Two Diatom Communities.*
- **Jackson Oakey**, University of Georgia, Athens, GA, for his project: *Flow or blow? Understanding magma flow in conduits during vesiculation.*
- **Trent Olson**, University of Iowa, Iowa City, IA, for his project: *Constraining the crystallization conditions of the Mt. Taranaki, NZ MASH zone.*
- **Michael Powell**, Dalhousie University, Halifax, NS, CANADA for his project: *High field strength element behaviour in late stage felsic systems.*
- **Anna Ruefer**, Stanford University, Palo Alto, CA, for their project: *Big vs little: the generation, storage, and eruption of explosive rhyolitic eruptions.*
- **Erik Schoonover**, Pennsylvania State University, University Park, PA, for his project: *Connecting plutons and volcanoes through zircon depth profiles.*
- **Elizabeth Shade**, University of Cincinnati, Cincinnati, OH, for their project: *Fluorescence as a Tool in Diamond Origin Tracing.*
- **Isabella Ulate**, Colorado State University, Fort Collins, CO, for her project: *Weathering in Rocky Mountain Alluvial Valleys.*
- **Brooke Vander Pas**, Indiana University Purdue University at Indianapolis, Indianapolis, IN, for her project: *Isotopic and Geochemical Evidence for Potential Terrestrial-Oceanic Anoxia Ties from Near-Polar Early to Middle Devonian Coastal Sequences.*
- **Ethan Wagner**, Missouri State University, Springfield, MO, for their project: *Geochronology of the rhyolites and andesites of the Bursum caldera, Mogollon-Datil volcanic field, New Mexico.*
- **Zachary Walton**, University of Kentucky, Lexington, KY, for their project: *Carbonate Content as a Control on REE Distribution in the Illinois-Kentucky Fluorspar District.*
- **Jiawei Wang**, Cornell University, Ithaca, NY, for his project: *Weathering Kinetics of Granitic Iron-bearing Minerals.*
- **Thomas Williams**, Brown University, Providence, RI, for his project: *Across-Arc Variability of Major, Trace, and Volatile Elements in the Andean Southern Volcanic Zone.*
- **Frank Wroblewski**, University of Idaho, Moscow, ID, for his project: *Validating the Visible and Near-Infrared Reflectance of Glass with Electron Microscopy.*
- **Hanlin Zhang**, Missouri State University, Springfield, MO, for his project: *Trace element and Hf-Isotope analysis of zircons from Sanit Francois Terrane.*

#### **2023 Ian S.E. Carmichael Fund Student Research Grant awardee is:**

- **Caitlin Bates**, California State University, Fullerton, Ontario, CA, for her project: *Can low-volume magmatism generate large-scale eruptions? Petrologic investigations of the Jurassic Standard and King Creek plutons, CA, to test the hypothesis that they underwent melt loss to eruptions.*

#### **2023 Lincoln S. and Sarah W. Hollister Graduate Student Research Grant awardees are:**

- **Michael Barnard**, Louisiana State University, Baton Rouge, LA, for his project *Elucidating Environments of Tourmalinization for Paleoproterozoic Tourmalinites from the Tusas Mountains, New Mexico.*



All student awardees will be acknowledged during the MGPV Division Awards session. In addition, the Lipman and Carmichael awards have been presented at the Penrose Circle Dinner and Student Awards Ceremony, hosted by the GSA Foundation.

#### **2022 Travel Grant awardees:**

Ten student travel grants, totaling US\$5,000, were awarded from 61 proposals submitted. These were decided after submission of the 2022 MGPV Division Annual report.

- **Brodie Barth**, University of Notre Dame, *High Temperature Calorimetry Study of Synthetic Uranium Oxalate Phases*
- **Clara Jean Brennan**, Central Michigan University, *Insights into Spodumene Crystallization and Growth from Trace Element Concentrations and Intracrystalline Zoning*
- **Marie Gibson**, New Mexico State University, *Watermelon Tourmaline: Multivariate Analysis of Laser-Induced Breakdown Spectroscopy and Electron Microprobe Analyses*
- **Justine G. Grabiec**, University of Southern California, *Halogen distribution in continental arc plumbing systems: Sierra Nevada, California*
- **James Gutoski**, University of Colorado-Boulder, *Guttulatic Microfabrics Within the Beck Spring Dolomite*
- **Susannah Herz**, Allegheny College, *Refined South China early Cambrian small shelly fossil first appearances based on dynamic time warping of  $\delta^{13}\text{C}_{\text{carb}}$  sequences*
- **Peter Lindquist**, University of Washington, *Fluid Release and Silica Metasomatism Near the Plate Interface Beneath Guerrero, Mexico: Predicting Talc Production at The Conditions of Episodic Tremor and Slow Slip*
- **Disha Okhai**, Purdue University, *Magma Emplacement and Differentiation in the Oligocene IXL Pluton, Nevada*
- **Alexander Theodore Taylor**, University of Maryland, *New constraints on the thermal structure of the Catalina Schist*
- **Jannitta Yao**, Dartmouth College, *"Barrovian" Metamorphism in the Nashoba Terrane: Evidence from Combined Phase Equilibria Modeling, Geothermobarometry, and Petrographic Analysis*

#### **2023 Travel Grant awardees:**

- 2023 awardees will not be known until after submission of this annual report.

#### **[14] Associated Societies and Partnerships:**

- The Clay Minerals Society
- The Geochemical Society
- The Mineralogical Association of Canada
- The Mineralogical Society of America
- The Mineralogical Society of the United Kingdom and Ireland
  
- **Less formally - The Friends of Mineralogy - Virginia**

#### **[15] GSA 2023 Connects (Annual Meeting) Activities:**

##### **74 Topical and 5 Disciplinary half-day Sessions as well as 2 Pardee Keynote Symposia endorsed and co-endorsed by MGPV Division and its Adhering Societies (27 are poster sessions)**

- T005. Carbon and Hydrogen Storage in Geologic Systems (Posters).
- T005. Carbon and Hydrogen Storage in Geologic Systems.
- T007. Linking Critical Minerals and the Geologic Framework of North America I: The USGS Earth Mapping Resources Initiative (Earth MRI) and Related Activities.
- T007. Linking Critical Minerals and the Geologic Framework of North America II: The USGS Earth Mapping Resources Initiative (Earth MRI) and Related Activities.
- T007. Linking Critical Minerals and the Geologic Framework of North America: The USGS Earth Mapping Resources Initiative (Earth MRI) and Related Activities (Posters) .
- T008. Critical Research on Critical Minerals in Western North America (Posters).

- T008. Critical Research on Critical Minerals in Western North America I.
- T008. Critical Research on Critical Minerals in Western North America II.
- T009. Regional Characterization of Critical Mineral Potential (Posters).
- T009. Regional Characterization of Critical Mineral Potential.
- T010. Characterization of Critical Metals in Unconventional Ores to Inform Recovery Potential (Posters).
- T010. Characterization of Critical Metals in Unconventional Ores to Inform Recovery Potential (Posters).
- T010. Characterization of Critical Metals in Unconventional Ores to Inform Recovery Potential.
- T010. Characterization of Critical Metals in Unconventional Ores to Inform Recovery Potential.
- T017. Environmental Geochemistry and Health (Posters).
- T017. Environmental Geochemistry and Health I.
- T017. Environmental Geochemistry and Health II.
- T034. Early Involvement in Geoscience Research Among K9–16 Students Can Ensure Sustained Growth of the Discipline (Posters).
- T042. Records of Quaternary Climate, Hydrology and Landscape Evolution in the Great Basin, USA.
- T086. Subduction Zone Processes in the Evolution of Ophiolites, Continental Crust, and Orogenic Belts (Posters).
- T086. Subduction Zone Processes in the Evolution of Ophiolites, Continental Crust, and Orogenic Belts I.
- T086. Subduction Zone Processes in the Evolution of Ophiolites, Continental Crust, and Orogenic Belts II.
- T087. Unravelling Timescales of Magmatism, Metamorphism, and Crustal Evolution (Posters).
- T087. Unravelling Timescales of Magmatism, Metamorphism, and Crustal Evolution I.
- T087. Unravelling Timescales of Magmatism, Metamorphism, and Crustal Evolution II.
- T088. Urban Geochemistry (Posters).
- T088. Urban Geochemistry.
- T091. Advances in Non-Traditional Stable Isotope Measurements and Utility as Proxies in Modern and Paleo-Settings (Posters).
- T091. Advances in Non-Traditional Stable Isotope Measurements and Utility as Proxies in Modern and Paleo-Settings I.
- T091. Advances in Non-Traditional Stable Isotope Measurements and Utility as Proxies in Modern and Paleo-Settings II.
- T094. GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division Awards Session.
- T106. Sedimentary Geology Division/SEPM Student Research Poster Competition: Dynamics of Stratigraphy and Sedimentation (Posters).
- T109. Advances in Detrital Heavy Minerals: Applications and Methods (Posters).
- T109. Advances in Detrital Heavy Minerals: Applications and Methods.
- T110. Creative Contributions in Volcanology and Petrology I: In Honor of Katharine V. Cashman, Recipient of the 2023 Distinguished Geological Career Award from the Mineralogy, Geochemistry, Petrology and Volcanology Division.
- T110. Creative Contributions in Volcanology and Petrology II: In Honor of Katharine V. Cashman, Recipient of the 2023 Distinguished Geological Career Award from the Mineralogy, Geochemistry, Petrology and Volcanology Division.
- T110. Creative Contributions in Volcanology and Petrology III: In Honor of Katharine V. Cashman, Recipient of the 2023 Distinguished Geological Career Award from the Mineralogy, Geochemistry, Petrology and Volcanology Division.
- T110. Creative Contributions in Volcanology and Petrology: In Honor of Katharine V. Cashman, Recipient of the 2023 Distinguished Geological Career Award from the Mineralogy, Geochemistry, Petrology and Volcanology Division (Posters).
- T114. Impact Cratering Across the Solar System.
- T122. Planetary Exploration and Education: How We Learn about Our Solar System and Beyond.
- T124. Venus: Earth's Hotter Twin.
- T127. Karst Sedimentary, Paleoclimate, and Historical Records (Posters).
- T139. Assembling a Craton: Recent Insights into Precambrian Assembly and Growth of Laurentia and Its Cratonic Components.
- T140. Hydrothermal Systems and Their Geologic Records.
- T141. Arsenic, Fluoride, and Other Geogenic Contaminants in Groundwater: Advances in Application of Data Science, Machine Learning for Risk Assessment and Monitoring for Sustainable Mitigation of Associated Health Hazards (Posters).
- T141. Arsenic, Fluoride, and Other Geogenic Contaminants in Groundwater: Advances in Application of Data Science, Machine Learning for Risk Assessment and Monitoring for Sustainable Mitigation of Associated Health Hazards.
- T145. Advances in Managed Aquifer Recharge.
- T149. Geologic Carbon Storage (Posters).
- T149. Geologic Carbon Storage.
- T153. Mineral Informatics and the Evolution of Earth, Planets, and Life: In Honor of MSA Awardee, Shaunna M. Morrison (Posters).
- T153. Mineral Informatics and the Evolution of Earth, Planets, and Life: In Honor of MSA Awardee, Shaunna M. Morrison (Posters).
- T153. Mineral Informatics and the Evolution of Earth, Planets, and Life: In Honor of MSA Awardee, Shaunna M. Morrison.
- T153. Mineral Informatics and the Evolution of Earth, Planets, and Life: In Honor of MSA Awardee, Shaunna M. Morrison.
- T154. A Session in Honor of Georges Calas, Professor Emeritus, Sorbonne Université, Paris, France, and 2023 Roebling Medalist of the Mineralogical Society of America I.
- T154. A Session in Honor of Georges Calas, Professor Emeritus, Sorbonne Université, Paris, France, and 2023 Roebling Medalist of the Mineralogical Society of America I.
- T154. A Session in Honor of Georges Calas, Professor Emeritus, Sorbonne Université, Paris, France, and 2023 Roebling Medalist of the Mineralogical Society of America II.
- T154. A Session in Honor of Georges Calas, Professor Emeritus, Sorbonne Université, Paris, France, and 2023 Roebling Medalist of the Mineralogical Society of America II.
- T156. Transforming the Mineral Sciences with Raman Spectroscopy.
- T156. Transforming the Mineral Sciences with Raman Spectroscopy.
- T157. Early Career Investigators in Mineralogy and Crystallography.
- T157. Early Career Investigators in Mineralogy and Crystallography.
- T160. Convergent Margin Systems (Posters).

- T160. Convergent Margin Systems.
- T162. The Andes from Top to Bottom (Posters).
- T162. The Andes from Top to Bottom.
- T164. Geological and Geophysical Constraints on Orogenic Architecture as Windows to Tectonic Style Through Time (Posters).
- T164. Geological and Geophysical Constraints on Orogenic Architecture as Windows to Tectonic Style Through Time.
- T167. New Insights into Controls on the Behavior of Orogenic Systems and their Associated Basins (Posters).
- T167. New Insights into Controls on the Behavior of Orogenic Systems and their Associated Basins.
- T170. Exploring Strain Partitioning and Kinematic Evolution of the Lithosphere: In Honor of Micah Jessup (Posters).
- T170. Exploring Strain Partitioning and Kinematic Evolution of the Lithosphere I: In Honor of Micah Jessup.
- T170. Exploring Strain Partitioning and Kinematic Evolution of the Lithosphere II: In Honor of Micah Jessup.
- T173. Maximum Depositional Ages (MDAs) from Detrital Mineral Geochronology: Recent Advances in Sampling, Experimental Designs, Interpretive Tacts, and Chronostratigraphic Applications.
- T175. Mineralogy, Geochemistry, Petrology, and Volcanology Division: Session for Graduate and Undergraduate Students (Posters).

### **Disciplinary Sessions (co-)endorsed by MGPV Division**

- D14. Recent Advances in Mineralogy and Petrology
- D15. Recent Advances in Mineralogy and Petrology (Posters)
- D21. Recent Advances in Volcanology (Posters)
- D32. Relevant Topics in Geochemistry
- D33. Relevant Topics in Geochemistry (Posters)

### **Pardee Keynote Symposia (co-)endorsed by MGPV Division**

- P2. Spotlight on Positive and Diverse Female Role Models.
- P3. Addressing Society's Urgent Need for Critical Minerals; From Policy to Practice.

### **Reception**

There was no reception in 2022, and there will not be one in 2023.

### **Lectures or Special Events**

T94. GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division Awards Session, Wednesday, 18 October 2023; 8:00 AM - 12:00 PM, PCC 317/318L

- Introductory Remarks
- Recognition of 2023 Student Research Grant Awardees
- Intro, Citation, and Acceptance to 2023 EGCA Award to Carolina Munoz-Saez, Nevada Bureau of Mine and Geology and University of Nevada Reno
- MGPV Early Geologic Career Award Lecture: *Sinter Deposits Recording the Evolution of Hydrothermal Systems*. C. Munoz-Saez, L. Sankovitch, M. Manga, And S. Hurwitz
- Discussion
- Intro, Citation, and Acceptance to 2023 DGCA Award to Katharine V. Cashman, University of Bristol/University of Oregon
- MGPV Distinguished Geologic Career Award Lecture: *Following the Three: A Volcanic Career Woven in Twists and Turns*. K. Cashman
- Discussion

## Exhibits

MGPV exhibited at the 2022 GSA Connects (Denver, CO):



MGPV will exhibit at 2023 GSA Connects in a booth adjacent to the GS and MSA booths, as well as having a table in the "Division Display Space" (DDS).

### [16] GSA Section Activities:

#### endorsed sessions

- MGPV endorsed sessions at the 2023 GSA Cordilleran Section Meeting in Reno, NV and the 2023 Joint SE-NE Section GSA Meeting in Reston, VA.

#### exhibits

- MGPV exhibited at the 2023 Joint Southeastern-Northeastern Section (Reston, VA) meeting, sharing adjacent space with the Mineralogical Society of America and the Friends of Mineralogy.



### [17] Report from the MGPV Student Representatives:

In our first half year as student representatives, we have worked to engage the student community of MGPV. We recently established a [Slack channel](#) for MGPV students to network and share events and opportunities in the community. There are currently 25 members in the channel and we will work to continue to grow membership. We also run the Twitter account and are [accepting open submissions](#) for students to be featured on the page. The goal is to highlight the work of the MGPV student members, as well as to spread awareness about different opportunities for engagement within the division.

We have also implemented a quarterly webinar with topics solicited by survey response to the MGPV community. The first webinar was a career panel where our invited panelists discussed their careers in industry, government, and academia. Our panelists were Katie Ardill from Texas Tech University, Zach Grimac from Piedmont Lithium, and Matt Loewen from the Alaska Volcano Observatory. We advertised on the Slack channel, Twitter, MGPV and GSA student community discussion boards, and through list-servs. Around 15 students attended.

**MGPV Virtual Careers Panel**

Join us for a casual discussion about careers in industry, academia, and government. Our three panelists will share their experience and advice for working in the fields of mineralogy, petrology, geochemistry, and/or volcanology.

Panelists:

- Katie Ardill, Ph.D.**  
Assistant Professor  
Texas Tech University
- Zach Grimac, B.S.**  
Senior Project Geologist  
Piedmont Lithium
- Matt Loewen, Ph.D.**  
Research Geologist  
Alaska Volcano Observatory

Tuesday, June 13  
2:00 - 3:00 pm EST  
11:00 am - 12:00 pm PST  
Online - Zoom  
tinyurl.com/MGPVpanel

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Our next webinar topic will cover what students can expect at the GSA meeting. Because this is a general topic, and not specifically related to MGPV, we are collaborating with the GSA Headquarters. We are also organizing an additional online session where students presenting posters or orally at the conference will have an opportunity to practice their presentation and receive feedback from other students.

Finally, the three student representatives are co-advocates for session T175. *Mineralogy, Geochemistry, Petrology, and Volcanology Division: Session for Graduate and Undergraduate Students (Posters)* at the GSA meeting in Pittsburgh. We are excited to start this first MGPV session dedicated to students. 45 students have submitted abstracts.

#### [18] Activities with other GSA Divisions:

- none beyond joint sponsorships of the sessions listed above.

#### [19] Board & Business Meetings:

MGPV operational meetings will be virtual via Zoom, and will NOT require registering for GSA Connects 2022 to attend:

- Management Board Meeting: 2-4 pm, Tuesday, September 26, 2023
- Annual Business Meeting: 2-4 pm, Tuesday, October 10, 2023

Details will be sent to MGPV members closer to the date.

#### [20] Other Meetings: none

#### [21] In-coming Officers and Board Members (between the 2022 and 2023 GSA Annual Meetings):

Past Chair: Dennis Newell, Utah State University  
Chair: Dennis Amanda Clarke, Arizona State University

1<sup>st</sup> Vice-Chair: Alan Whittington, University of Texas-San Antonio  
2<sup>nd</sup> Vice-Chair: Elisabeth Widom, Miami University (of Ohio)  
Secretary-Treasurer: J. Alexander Speer, Mineralogical Society of America  
Geochemical Society (Frank C. Ramos, New Mexico State University)  
Mineralogical Association of Canada (David A. Fowle, University of Kansas)  
Clay Minerals Society (Katerina Dontsova, University of Arizona)  
Mineralogical Society of America (Ann Benbow)  
Mineralogical Society of United Kingdom and Ireland (Kevin Murphy)  
GSA student representative: Madeline Murchland, University of Idaho  
GSA student representative: Charles (Chuck) Lewis, Oregon State University  
GSA student representative: Emily Fischer, Brown University

## **[22] Emerging Needs & Future Activities:**

The Division's goals for the upcoming year are:

1. retaining current members and increasing membership
2. encouraging session proposals for the GSA 2024 Annual meeting
3. selection of the 2025 MGPV Distinguished Geologic Career and Early Career Awardees
4. selection of 2024 MGPV Division, Lipman, Carmichael, and Hollister Student Research Awards
5. encouraging MGPV technical sessions at Sectional Meetings
6. decide on offering MGPV-related merchandise
7. contest for a new Division logo

## **[23] Requested Actions and/or Recommendations for GSA Council approval/ratification**

(Changes/additions in Bylaws, Awards, Travel Grants, etc. for GSA Council final approval):

1. Approval of Dr. J. Michael Rhodes, University of Massachusetts, Amherst, MA, as the MGPV Distinguished Geological Career Awardee for 2024. The MGPV Distinguished Geological Career Award Committee Report and Dr. Rhodes's nomination package is **Appendix A**.
2. Dr. Chris Yakymchuk, University of Waterloo, Waterloo, ON Canada as the MGPV Early Geologic Career Awardee for 2024. The MGPV Distinguished Geological Career Award Committee Report and Dr Yakymchuk's nomination package is **Appendix B**.

Annual Report Submitted By: J. Alex Speer, MGPV Secretary-Treasurer

Reporting Period: 1 September 2022 - 31 August 2023

Date Report Submitted: 5 September 2023