

Meteoritical Society

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REPORT OF THE METEORITE NOMENCLATURE COMMITTEE



The Nomenclature Committee (NomCom) continues to receive submissions at an increasing rate each year, so we are happy to report that Earth's supply of meteorites continues to grow. During the past year, the discovery of new meteorites continued, although some meteorite-collecting efforts have been postponed or paused since the start of the COVID-19 pandemic (e.g., ANSMET).

The work of the NomCom would be impossible if not for the dedication of many individuals, including all the NomCom members, meteorite finders and classifiers, and repository curators. In addition, I want to acknowledge the efforts of research scientists who have endeavored to automate and otherwise streamline the process of finding meteorites and/or figuring out where to find meteorites. These individuals develop excellent ideas and altruistically share them with the public to make hunting for meteorites a global activity in which almost anyone can participate. I would like to thank everyone mentioned above for their assiduous efforts to make the global inventory of meteorites a growing resource available for scientific study. I also want to acknowledge the global community of meteorite collectors because their interest and resources help to drive the demand to find new meteorites, and the scientific community continues to reap benefits from those efforts. Finally, we wish to welcome three new members of NomCom in January: Camille Cartier (Université de Lorraine, France), Bidong Zhang (UCLA, USA), and Guy Consolmagno (MetSoc Vice President ex-officio member; Vatican Observatory). We are very happy to have them on the NomCom!

NomCom is currently composed of nine appointed members: Francis McCubbin (Chair; NASA JSC, USA), Camille Cartier (Université de Lorraine, France), Cyrena Goodrich (Lunar and Planetary Institute, USA), Ansgar Greshake (Museum für Naturkunde, Germany), Juliane Gross (Rutgers University, USA), Katherine Joy (The University of Manchester, UK), Bengkui Miao (Guilin University of Technology, China), Devin Schrader (Deputy Editor, Arizona State University, USA), and Bidong Zhang (UCLA, USA); and three ex-officio NomCom members: Jérôme Gattacceca (MetBull Editor; CEREGE, France), Jeff Grossman (Database Editor, NASA, USA) and Guy Consolmagno (MetSoc Vice President; Vatican Observatory).

NomCom is a committee of The Meteoritical Society. The purpose of NomCom is to approve new meteorite names and classifications, and to establish guidelines and make decisions regarding the naming and classification of meteorites. New meteorites, dense collection areas, type-specimen repository collections, and revisions are published through the Meteoritical Bulletin and the Meteoritical Bulletin Database (MBDB) (https://www.lpi.usra.edu/meteor/).

As of this writing, there are 71,633 approved meteorites in the Meteoritical Bulletin Database, including 14,611 with a classification description.

Meteorites and Dense Collection Areas: The 2021 entries of the MBDB, totaling 2802 meteorites, have been published in the Meteorite Bulletin, No. 110 by Gattacceca et al. (2022). The full write-ups of 1532 non-Antarctic meteorites and supplementary tables can be found online as Supporting Information and in the MBDB archive. The MB 110 includes 10 approved falls as well as 38 new DCAs. Meteoritical Bulletin No. 111, containing new meteorites, dense collection areas, and type-specimen repositories approved in 2022, is in preparation and will be submitted later this year to *Meteoritics & Planetary Science*.

Meteorite naming: Remember to send your write-ups for new and provisional names to NomCom at least four weeks before submitting your conference abstract or manuscript to journals to avoid potential issues with naming and classification, which can delay publication. The release of the write-up to the database may be held on request if there is an embargo from publishers.

Finally, please do not hesitate to contact us with questions or concerns about the NomCom, especially with suggestions for improvement (metbulleditor@gmail.com).

Francis McCubbin

Chair of the Nomenclature Committee NASA Johnson Space Center

REFERENCE

Gattacceca J and 11 coauthors (2022) The Meteoritical Bulletin, No. 110. Meteoritics & Planetary Science 57, 2102-2105, doi: 10.1111/maps.13918

PAUL PELLAS / GRAHAM RYDER AWARD WINNER

The Pellas-Ryder Award for the best student paper in planetary sciences is jointly sponsored by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America. It is awarded to an undergraduate or graduate student who is first author of the best planetary science paper published in a peer-reviewed scientific journal during the year prior to the award. The award has been given since 2001 and honors the memories of meteoriticist Paul Pellas and lunar scientist Graham Ryder.



Hui Ching Jupiter Cheng, who obtained a PhD in 2023 from the University of Georgia, Athens, GA, USA, is a co-winner of the 2023 Pellas-Ryder Award for the paper entitled "Structural relationships in and around the Rheasilvia basin on Vesta," published in the Journal of Structural Geology in 2022. Jupiter performed a thorough, detailed structural analysis of the basin, and found, contrary to previous interpretations, that the Divalia Fossae cross-cut the basin and are not

concentric around the basin center, therefore forming after it and are not directly related to the impact that formed the basin. This work is likely to inspire follow-up studies, leading to re-examination of the formation of the Rheasilvia basin and improvement of our understanding of Vesta.



C. Adeene Denton, who obtained a PhD in 2022 from Purdue University, West Lafayette, IN, USA, is a co-winner of the 2023 Pellas-Ryder Award for the paper entitled "Tracking the evolution of an ocean within Mimas using the Herschel impact basin," published in Geophysical Research Letters in 2022. Adeene modeled impacts into an icy moon with an ice shell and underlying ocean of varying thicknesses to understand the formation of the Herschel basin on the Saturnian moon

Mimas. The results place constraints on the thickness of the ice shell at the time of impact and have implications for the evolution of Mimas' shell and its ocean post-impact, and for our understanding of icy moons in general.

Congratulations to the 2023 co-winners for this highly deserved honor and for leading these impressive studies! We also thank everyone who submitted nomination packages and the Pellas-Ryder Award Committee for their work to make this award possible.

SOCIETY NEWS

IN MEMORIAM: DIETER STÖFFLER (1939–2023)

It is with profound sadness that we report that our dear friend, mentor, and colleague, Dieter Stöffler, passed away on 5 April 2023. Dieter's name is synonymous with "Ries impact crater, shock metamorphism, lunar science, meteoritics, and litho-panspermia." During his successful career, Dieter was Professor of Petrography and Economic Geology at the Westfälische Wilhelms-Universität in Münster, Germany (1974–1987), then the founding Director of the Institute of Planetology and Professor of Cosmic Mineralogy. In 1993, he transferred to the Museum für Naturkunde in Berlin as Professor of Mineralogy and Petrography at Humboldt Universität zu Berlin (HUB). He was Director of the Museum until 1999, and of the HUB Institute of Mineralogy until 2004, when he retired and became Professor Emeritus



(though he remained active until 2018). He supervised more than 20 diploma/MSc and 30 doctoral projects, published extensively, and provided funding for a host of prestigious research projects.

Dieter's legacy was built on the application of four lines of research: crater geological, petrographic, shock experimental, and numerical modeling studies. Foremost is his seminal work on shock metamorphism. He and Wolf von Engelhardt established the concept of progressive shock metamorphism at the Ries crater, followed by many petrographic and shock studies on terrestrial impactites, lunar breccias, and meteorites. His shock classifications for major rock-forming minerals are still being put to use. His petrographic findings were calibrated by shock recovery experiments, and numerical modeling was widely employed by his group in cratering and shock studies.

Over five decades, Dieter, with numerous students, postdocs, and colleagues, completed numerous projects. These included crater studies of Sudbury, Haughton, West Clearwater, and a suite of Scandinavian craters. Dieter was the PI of the ICDP's Yaxcopoil-1 Drilling Consortium at Chicxulub. He was involved with pilot studies regarding asteroid and comet sampling missions with ESA and NASA

GIFTS AND GRANTS GUIDELINES

The stated mission of the Meteoritical Society is "to promote research and education in planetary science with emphasis on studies of meteorites and other extraterrestrial materials that further our understanding of the origin and history of the solar system." Besides the Society's publications, the annual scientific meetings, establishing official names for newly found meteorites, and the awards sponsored by the Society, there are other ways by which we work toward furthering our mission. This includes supporting student travel to conferences and workshops, supporting student research, assisting scientists from economically disadvantaged countries, supporting classes or field schools, especially those that bring meteoritics and planetary science to developing countries, compiling oral histories from prominent members of the Society, and supporting outreach to the broader public community on meteoritics and planetary science.

To support these activities, the Society has created an Endowment Fund. The majority of the Endowment consists of the *General Fund*, which can support one-time activities that are not part of the normal Society business. The Endowment Fund also has named funds, the *Nier Fund*, the *McKay Fund*, and the *TIM Fund*, which were established for specific purposes. Details about activities supported by all of these Funds can be found under: Activities Supported on the society website.

committees, including the Rosetta mission to comet 67P/Churyumov-Gerasimenko. With scientists from the DLR (Deutsches Institut für Luft- und Raumfahrt) and Ernst-Mach-Institut für Kurzzeit-Dynamik, Dieter developed a test program for the Lithopanspermia hypothesis that suggested that primitive lifeforms could sustain high shock conditions, a fundamental requirement for transfer of life between planetary bodies. Dieter was also dedicated to public outreach and education, spearheaded the establishment of the first-class planetary science museum in the Ries crater in Nördlingen, and developed the ZERIN (Zentrum for Ries-Krater-Forschung in Nördlingen) facility. These institutions were the foundation for the creation of the Global Geopark Ries. Dieter took the helm of the

Museum für Naturkunde Berlin in 1993 and initiated a reawakening of this formidable institution after its slumber during East German times.

Dieter Stöffler was awarded national/international recognition for his achievements, including the Gottfried-Wilhelm-Leibniz Prize, the naming of asteroid 4283 (1988) "Stöffler", the Barringer Medal for Impact Cratering Research, Fellowship in the Meteoritical Society, Membership in the Berlin-Brandenburg Academy of Sciences, Membership in the German National Academy of Sciences Leopoldina, and the Ries Cultural Award. Dieter served the Meteoritical Society for many years, organizing the Annual Meeting in Berlin (1996) and as Society President (1997–1998).

Dieter is survived by his partner, Heide Schmidt-Schubert, his two sons, Dirk and Bernd, and granddaughter, Luca.

Wolf Uwe Reimold, Natasha Artemieva, Lutz Hecht, Thomas Kenkmann, Falko Langenhorst, Kai Wuennemann

* For the full version of this tribute to Dieter, please see the Society website.

For those who wish to assist in this mission, donations can be made to the General Fund or to any of the specific Funds (see Ways to Contribute on the society website).

ANNUAL MEETING SCHEDULE

2023	(86 th Annual Meeting) August 13–18, Los Angeles, USA
2024	(87 th Annual Meeting) July 28–Aug 2, Brussels, Belgium
2025	(88 th Annual Meeting) July 14–18, Perth, Australia
2026	(89 th Annual Meeting) July/August TBD, Frankfurt, Germany

RENEW YOUR MEMBERSHIP NOW!

Please don't forget to renew your membership for 2023. Students, this is particularly important if you are interested in applying for one of our student presentation awards, as you must be a member to be eligible. You can renew online at https://meteoritical.org/membership/join.