# Geomorphorum

Spring 2020

**News of the AAG Geomorphology Specialty Group**

## 2020…what a year!

Well, it goes without saying that the first half of 2020 has been quite the year! It was a disappointment that we couldn't see each other at the AAG meeting in Denver, but I hope that this newsletter finds you and your family well and healthy during this continued pandemic.

In my final duties as 2019-20 GSG chair, I wanted to update you on a few items from AAG and the GSG executive board.

In our SG chairs virtual meeting last month there were a few items that I thought worthy to bring to your attention.

1. Plans are underway to hold both an in-person and virtual meeting in Seattle next year. Things may change, but that is the plan as of our 5/28 meeting.
2. Watch for a new AAG website format soon.
3. An AAG COVID Rapid Response Team has been formed. It consists of five different committees that are working on various topics and proposals to help members, students, departments, etc. A blue-ribbon panel will review the recommendations from these five committees and vote on proposals to fund.
4. AAG is working on a new undergraduate award.
5. A new international position on the AAG Council has been developed.

From the GSG Executive Board

1. Congratulations to Mike Daniels who has been elected to serve as GSG chair for 2020-21.
2. We have voted to move our 2020 Distinguished Lecturer in Geomorphology and Society speaker, Dr. Ellen Wohl, to the 2021 meeting in Seattle. Dr. Wohl has graciously agreed to join us there.
3. Stay tuned for conversations about needed budget adjustments/enhancements for the GSG.
4. We have been in conversation this month about how we as a specialty group can engage in thoughtful conversation and make forward progress on issues of racism and gender inequality in our field. We support the AAG statement on racism, but wonder if we could or should go further than simply reiterating that support. Stay tuned for more news from the incoming executive board about how they would **like to involve the entire specialty group in this conversation.**

It has been a pleasure to serve as your chair this year. I hope to see many of you in Seattle!

Jennifer Burnham, Augustana College

## 2020 Mel Marcus Distinguished Career Award

**We are pleased to announce that Ellen Wohl (Colorado State University) is the 2020 recipient of the Mel Marcus Distinguished Career Award.**

Below are abbreviated nomination comments from Anne Chin.

Professor Wohl is, without a doubt, among the world leaders of our generation shaping and advancing the discipline of geomorphology, and of fluvial geomorphology in particular. Her contributions are almost impossible to quantify and to put into words, because they are so numerous, so deep and so wide. I will try to highlight Dr. Wohl's remarkable career in terms of her scientific output and its global impact, her service to our discipline in leadership roles, her mentorship of students and junior colleagues, the concrete ways in which she has made a difference in improving diversity in our discipline, particularly in the recruitment and training of female geomorphologists, and her efforts to make our science count in the real world toward a better future. In short, for over three decades, Professor Wohl has served as a tireless global ambassador of our discipline. I can think of few people whose contributions have been as influential, as unique, and as vast.

First, the scientific output. The words that come to mind are "astonishing," "astounding," "enviable," unparalleled," "prolific," "legendary," "hard to fathom," "impossible to fully characterize," "how does she do it?" Ellen Wohl has published *at least* 226 refereed publications in addition to garnering over $5.6 million in research grants. I qualify this statement with the "at least" phrase because she works so fast that the numbers seem to increase every time we blink. But it is not just the quantity of research, but also the content, the quality, and the impact. Besides the journal articles, Dr. Wohl has authored at least 31 book chapters, 13 single-authored books, and numerous other monographs and special publications. One such book published in 2014, *Rivers in the Landscape: Science and Management* is a text that many of us use in our fluvial geomorphology courses.

All in all, Professor Wohl's research has changed the way we think about how fluvial systems operate in several important areas. Her earlier work questioned our traditional view of river systems. It transformed our understanding of bedrock rivers as fixed, inherited forms to systems capable of dynamic adjustments and feedbacks among flow, sediment dynamics, and channel morphology. Similarly, whereas mountain rivers had been less well understood than their lowland counterparts, Dr. Wohl's research informed the fundamental ways in which they work in terms of hydraulics, sediment transport, and channel morphology. More recently, through detailed and extensive field data collection, Ellen has built and validated conceptual models regarding the role of in-stream wood at the landscape scale. Still more recently, Professor Wohl's research has changed our view about how mountain river systems store and export carbon—from primarily exporting carbon to complex geomorphic systems interacting with biota and climate. As Dr. Wohl's inquiries have evolved over the decades, it seems that she has taken us along on a journey of fascination and discovery, all the while inspiring all with her passion and boundless energy.

I wish to add one other note of reflection in nominating my colleague Ellen Wohl for this prestigious award. Normally, it seems hard to imagine that someone with such a high level of achievement could be generous, personable, and humble. But it is true: Ellen Wohl is all of these things. As many have remarked, Ellen is not overly driven or at all self-congratulatory. She just goes about doing her work because she loves it and it gives her joy. Her generosity is reflected in the selfless ways in which she suggests colleagues for opportunities and nominates them for honors and awards at every turn. I have certainly benefitted from Ellen's generosity in these ways. On the personable side, Ellen often invites colleagues into her home for working sessions and social occasions—as I have gone several times and once with Carol Harden, even enjoying meals together that Ellen would prepare herself. Yes, with Ellen Wohl, it is possible to be all those things while a world-class visionary researcher.

## 2020 G.K. Gilbert Award

**We are pleased to share the news that the 20202 Grove Karl Gilbert Award for Excellence in Geomorphology research goes to: Christy Swann, Doug Sherman, and Ryan Ewing for their paper "Experimentally derived thresholds for windblown sand on Mars",Geophysical Research Letters, 2019.**

Below is the nomination statement from Paul Gares:

I am writing to offer my enthusiastic support of the nomination of Drs. Christy Swann, Douglas J. Sherman and Ryan C. Ewing for the G.K. Gilbert award for Excellence in Geomorphological Research. This nomination is being made for their contribution to aeolian dynamics on Mars based on their paper "Experimentally-derived threshold for windblown sand on Mars" published in Geophysical Research Letters in 2019. This paper represents a large step forward in understanding aeolian sediment transport in the Martian environment. The authors present the conundrum of the occurrence of winds whose speeds are insufficient to produce sediment transport when visual observations by Mars landers and satellite imagery have recorded instances of sand movement during wind events. They hypothesize that sporadic sediment movement can occur at slower wind speeds and proceed to evaluate this hypothesis through a carefully crafted wind tunnel study. The critical component of this approach is to replicate the Martian environment in an earth-based wind tunnel which they are able to do in a specially designed tunnel. Their results quite conclusively support their hypothesis. Their contribution to Martian air flow dynamics would appear, therefore, to be quite significant.

The background to the experiment is elaborately laid out in their paper, such that the various theories of air flow and sediment movement are well-documented by the lengthy bibliography that is provided. The methodology that the researchers employed appears to have been conceived carefully so as to maximize the likelihood that their experiment would be successful. As best as I can determine from my own understanding of the dynamics of airflow, the entire experiment can be seen as a significant improvement to the understanding of Martian aeolian systems. I would conjecture that the results that Swann, Sherman and Ewing present in this particular publication will be recognized a seminal contribution to both the field of aeolian geomorphology in general, as well as to planetary science.

Although my knowledge of aeolian dynamics is confined to the surface of planet Earth, I understand enough to recognize how significant this research is, and I heartily support their nomination to receive the 2020 G.K. Gilbert award. I am quite convinced that Gilbert himself would be of the same opinion.

Paul A. Gares
Professor Emeritus of Geography
East Carolina University

## 2020 GSG Student Awards

**Reds Wolman Student Research Award**

Ph.D level

**Anais Zimmer**, University Texas at Austin "Future of periglacial landscapes: Biogeomorphic interactions and novel alpine ecosystems in the Tropical Andes and French Alps".

Advisor: Tim Beach

M.S. level

No submissions

**Graduate Student Paper Awards**

Because of the virtual conference status, no student paper awards were given this year.

Please strongly consider submitting papers for next year though!

**Undergraduate Poster Award**

Because of the virtual conference status, no student poster awards were given this year.

Please strongly consider submitting papers for next year

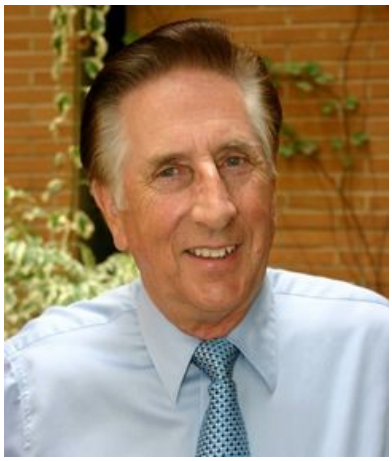
## GSG Member News

**Congratulations to Dave Butler** who retired from the Department of Geography at Texas State University on September 1, 2019 after serving on the faculty there for 22 years. Dr. Butler served as advisor for 18 completed Ph.D. and 41 master's graduates, and as a member of 41 completed Ph.D. and 63 master's graduate committees. He served on international graduate committees for students in Switzerland, Austria, Australia, Spain, and South Africa. He has published over 200 refereed journal papers and book chapters, edited/co-edited 10 special issues of journals, and authored/co-edited 10 books. Among his many awards for teaching and research, Dave received the 1998 G.K. Gilbert Award for Excellence in Geomorphological Research and the Melvin G. Marcus Distinguished Career Award from the Geomorphology Specialty Group of the AAG. In his retirement, Dave continues his research in zoogeomorphology, and geomorphic processes and environmental change in mountain environments.


**Congratulations to Frank Magilligan** who was awarded a Guggenheim Award for 2020-21 for the fields of Geography and Environmental Studies.

https://www.gf.org/fellows/all-fellows/Frank-Magilligan/

## GSG Member News Continued (*Edited from Glen MacDonald*)



It is with a heavy heart that I write to inform you of the passing of Professor Antony (Tony) R. Orme. Professor Orme received his undergraduate degree and doctorate from the University of Birmingham and served at UCLA from 1968 to 2010 as a faculty member in the Department of Geography. Upon official retirement he quickly rejoined the ranks as Director of the UC White Mountain Research Center from 2012 to 2016. This is almost half a century of dedicated service to UCLA.

Professor Orme was a geomorphologist and worked in a number of systems – literally from the mountains to the sea. He was particularly fond of coastlines. He was also keenly interested in the history of geology and geomorphology and published scholarly pieces on that topic. Orme served as an editor for a number of journals, books and book series. In addition, Professor Orme was a gifted cartographer and scientific illustrator who could visually bring to life the objects of his study. During his career Tony not only rose to the rank of Full Professor, but was Chair of the UCLA Department of Geography from 1974 to 1977. He was then appointed Dean of Social Sciences from 1977 to 1983.

Professor Orme was honored by a number of prestigious awards including Honorary Life Member and Honorary Fellow of the British Society for Geomorphology, Founders' Medal and Frost Lecturer, British Geomorphological Research Group, Mel Marcus Distinguished Career Award from the AAG Geomorphology Specialty Group, and the UCLA Edward A. Dickson Emeriti Professorship Award.

## Call for Submissions *(Submitted by Ulrich Kamp)*

***Journal:*** Remote Sensing
***Special Issue:*** Remote Sensing for Geomorphological Mapping
***Submission Deadline:*** 30 September 2020
https://www.mdpi.com/journal/remotesensing/special_issues/geomorphologic_mapping

Dear Colleagues,
Earth's surface is the interface where lithosphere, atmosphere, hydrosphere, biosphere, and humansphere meet. Geomorphology, the "the study of Earth's form," is an exciting field that is concerned with this surface. It sits at the intersection of disciplines such as geology, hydrology, climatology, pedology, biology, ecology, environmental sciences and studies, social sciences, economics, and others. Natural and anthropogenic hazards like landslides, hurricanes, and dam failures mainly affect Earth's thin skin. Hence, knowledge about landscapes and landforms, geomorphological processes, and the evolution of them is essential in planning for improved humanscapes.

First steps in understanding geomorphologic features are detecting and mapping them, followed by scientific analysis and interpretation. Today, geographical information science tools, i.e. remote sensing and geographic information systems, represent the standard approach in geomorphological mapping that—like the technologies themselves—is advancing rapidly. New satellite sensors deliver increasingly detailed spatial, multispectral and multitemporal information, and unmanned aerial systems (UAVs) allow for inexpensive adhoc missions.

This Special Issue aims to collect contributions that represent the frontier in geomorphological mapping as a geospatial analysis tool without any restriction to the diversity of ideas and experiences. It aims to portray new techniques, methodologies, and applications. Both qualitative and quantitative approaches are of interest.

Ulrich Kamp
Guest Editor

## Meet your 2020-2021 GSG Board

Chair —Mike Daniels

Treasurer—Lisa Davis

Awards Chair—Kory Konsoer

Awards Committee members — Ranbir Kang and Katherine Lininger

Webmaster—Kory Konsoer

Advisory Board — Jennifer Burnham, Tim Beach, Peng Gao

Please welcome our newest member of the Board, Katherine Lininger!

## International Association of Geomorphologists Call for Submissions

From Lucio Cunha of the IAG

As part of the preparation of the IAG International X Geomorphology Conference, to be held in Coimbra (Portugal), from 6 to 10 September 2021, a list with the thematic sessions of the Conference program was established.

The IAG and the APGeom, the main promoters of the Conference, would like to invite the international scientific associations that work directly or indirectly on Geomorphology to join us in this organization, so we invite you to propose special sessions that may interest your members or that may help to publicize the activities you develop.

We would be delighted if you could tell us if you would be interested in participating and, if so, which special session you intend to hold (about 2 hours) and which major thematic session it would be part of.

If you are interested in organizing a session, please contact Lucio (luciogeo@fl.uc.pt ).

If you have IAG questions please contact Allan James, our IAG liaison (ajames@mailbox.sc.edu)

| N | Thematic sessions |
|---|---|
| 1 | General and Historical Geomorphology |
| 2 | Methods and Techniques in Geomorphology |
| 3 | Geomorphological Mapping, GIS and Remote Sensing |
| 4 | Forms, Processes and Landscape Change |
| 5 | Climatic Geomorphology |
| 6 | Tectonic Geomorphology |
| 7 | Fluvial Geomorphology |
| 8 | Arid Zones and Aeolian Geomorphology |
| 9 | Marine and Coastal Geomorphology |
| 10 | Volcanic Geomorphology |
| 11 | Karst Geomorphology |
| 12 | Mountain Geomorphology |
| 13 | Glacial and Periglacial Geomorphology |
| 14 | Weathering, Soils and Landforms |
| 15 | Hillslope Processes and Landforms |
| 16 | Geomorphological Hazards and Risk Management |
| 17 | Applied Geomorphology |
| 18 | Geoarchaeology |
| 19 | Connectivity in Geomorphology |
| 20 | Urban Geomorphology and Anthropogenic Landscapes |
| 21 | Geoheritage, Cultural Geomorphology and Geotourism |
| 22 | Planetary Geomorphology |

## GSG Budget Report *(from Mike Daniels)*

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|---|---|---|---|---|
| *8/31/19* | *Balance forward* | | | *$ 4,428.24* |
| 9/20/19 | IAG Dues 2018-2019 | | (1,142.95) | 3,285.29 |
| 9/30/19 | Dues collected for Sept 2019 | 24.00 | | 3,309.29 |
| 10/31/19 | Dues collected for Oct 2019 | 285.00 | | 3,594.29 |
| 11/30/19 | Dues collected for Nov. 2019 | 109.00 | | 3,703.29 |
| 12/16/19 | Urban - website reimbursement | | (60.00) | 3,643.29 |
| 12/31/19 | Dues collected for Dec. 2019 | 86.00 | | 3,729.29 |
| 1/31/20 | Dues collected for Jan. 2020 | 138.00 | | 3,867.29 |
| 2/29/20 | Dues collected for Feb 2020 | 87.00 | | 3,954.29 |
| 3/31/20 | Dues collected for March 2020 | 50.00 | | 4,004.29 |
| 4/30/20 | Dues collected for April 2020 | 51.00 | | 4,055.29 |
| | | | | |
| **4/30/20** | **Balance** | | | **4,055.29** |

As we have worked to catch up on our backlog of IAG dues, our balance has dropped considerably over the past two years. Watch for upcoming conversations about how we might work to bolster our funds. Ideas are always welcome!

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