

# INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE

## The IUGG Electronic Journal

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This monthly newsletter is intended to keep IUGG Members and individual scientists informed about the activities of the Union, its Associations and interdisciplinary bodies, and the actions of the IUGG Secretariat, Bureau, and Executive Committee. Past issues are posted on the IUGG website. E-Journals may be forwarded to those who will benefit from the information. Your comments are welcome.

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#### 1. IUGG – The People at the Forefront (X)

## Priscilla Grew, Member of the Finance Committee 2019-2023

Just one year ago, we were COVID-carefree, happily preparing to travel to Montreal for our traditional IUGG General Assembly. For me, it was an exciting dream come true to have been nominated for the IUGG Finance Committee. As Chair of the US National Committee for IUGG 2003-2011, I had been excited to serve as a member of Council at IUGG 2007 in Perugia and 2011 in Melbourne, and on the IUGG Statutes and Bylaws Committee 2005-2011. Some of you may also remember Ester Sztein and me working our booth in Melbourne, urging you to come to Hawaii as we partnered with the American Geophysical Union (AGU) in promoting our unsuccessful US bid to host IUGG 2015.

I had an unconventional scientific career. Born in the Adirondack Mountains, I was an only child, my mother was a musician and my father was a Congregational minister in Schroon Lake, New York. He was born in India in 1905 in the missionary family that founded Kodaikanal International School. He wanted to hear Albert Schweitzer speak, so he took us to the lectures and concerts of the International Goethe Bicentennial in Aspen, Colorado in 1949. I begged my parents every year afterward to return to Aspen. In 1959 we came back after my freshman year as a declared Physics major at Bryn Mawr College. On a Maroon Creek horseback ride, I met a geologist who taught me that the slanting layers in the Maroon Bells were uplifted sedimentary rocks, and I suddenly realised you could do geology for "work" and not just enjoy it on vacations! I switched my major to Geology

and was awarded a national scholarship to study for a Ph.D. at the University of California-Berkeley. I attended my first International Mineralogical Association (IMA) meeting in Cambridge and Cornwall in 1966. I was still working on my thesis in November 1966 when the Geological Society of America (GSA) met in San Francisco. Rev. Prof. James W. Skehan S.J. interviewed me at the meeting, and although I had zero teaching experience, he hired me as an Instructor to start teaching at the private Jesuit Boston College starting in January 1967 (women students were not admitted until 1970). As department chairman, Fr. Skehan strongly encouraged me to continue to participate in international scientific meetings. I went with him to the ill-fated International Geological Congress (IGC) in Prague 1968, and I participated in the IAVCEI Volcanoes and Their Roots meeting at Oxford in 1969 and the AZOPRO Excursions to Lake Baikal and Yugoslavia in 1969 and 1970. By the time I next returned to Maroon Creek in 1971, I was Co-Convener with my Boston College colleague Robert E. Riecker of the Penrose Conference on Fracture Mechanics and Earthquake Source Mechanisms held in Snowmass.

I was extremely fortunate during my early career to have three extraordinary IUGS/IUGG mentors who were wonderful role models devoted to advancing international scientific cooperation: geochemist William S. Fyfe (1927-2013, President of IUGS 1992-1996), physicist Orson Anderson (1924-2019), and science diplomat Charles "Chuck" Drake (1924-1997, President of AGU 1984-1986). Fyfe was my thesis adviser at Berkeley and my enthusiastic supporter for the rest of his life. I first met Anderson and Drake as they led the concluding meeting of the Upper Mantle Project held in Flagstaff, Arizona in 1970. This meeting set the stage for the emergence of the IUGS/IUGG InterUnion Commission on Geodynamics and launched Drake's role as leader of the US Geodynamics Project during the decade of the 1970s. We attended IUGG in Moscow in 1971 and the IUGS/IUGG InterUnion Commission on Geodynamics Working Group 5, Properties and Processes of the Earth's Interior, was established with Anderson as Chairman, Fyfe as Vice-Chairman and me as Secretary. Our WG-5 met at IASPEI in Lima and at the First and Second Kimberlite Conferences in Cape Town in 1973 and Santa Fe in 1978, IMA Regensburg 1974, IUGG Grenoble 1975, and IGC in Sydney 1976. After the successor International Lithosphere Program (ILP) was established in 1980, I continued to participate in IUGG in Vancouver 1987, Boulder 1995, and Birmingham 1999. As a member of the US Coordinating Committee on Continental Drilling, I represented the Minnesota



Priscilla Grew 1993: Ski-equipped LC-130 at the Greenland Ice Sheet Project GISP-2 Summit site, elevation 3200 meters.

Geological Survey at the ILP Superdeep Continental Drilling meeting in Jaroslavl, USSR in 1988.

Meanwhile, in 1971 Fyfe (and a reluctant Fr. Skehan) had supported my unconventional decision to leave the tenure-track faculty position at Boston College to accept the offer from Anderson and Drake to become Executive Secretary of their National Science Foundation Lake Powell Research Project (LPRP) based at UCLA and the Museum of Northern Arizona in Flagstaff. Led by Coordinators Orson Anderson and University of Arizona anthropologist Jerrold Levy, LPRP was a pioneering 9-institution transdisciplinary natural sciences and social sciences study with

17 subprojects focused on the impact of coal and water resource development in the Colorado River Basin, including its impact on the Navajo Nation. Through contacts in our water law subproject at UCLA, this experience later led to my appointments by former California Governor Jerry Brown as Director of the California Department of Conservation (1977-1981) and Commissioner of the California Public Utilities Commission (1981-1986). Those positions in turn enabled me to become

Director of the Minnesota Geological Survey (1986-1993) and then Vice Chancellor for Research at the University of Nebraska-Lincoln (UNL) 1993-1999. I led the effort to return the US National Ice Coring Office from Alaska back to Nebraska, and was thrilled to join the US National Science Foundation "Job Walk" flight in June 1993 to the summit of the Greenland Ice Sheet, shortly before the drill reached bedrock below the ice at the GISP-2 site.

As Professor of Earth and Atmospheric Sciences, I returned to teaching and served 2003-2015 as Director of the University of Nebraska State Museum of Natural History. Since retiring in 2015, I still volunteer as Faculty Fellow of our Daugherty Water for Food Global Institute and continue to serve as UNL Native American Graves Protection and Repatriation Act Coordinator, the position I have held since 1998.

Most of all when reflecting on the past, I am filled with gratitude to my husband Edward Grew. I could never have pursued my unconventional career opportunities without his steadfast support and willingness to live alone



Priscilla Grew 2020: Anthropology Division, University of Nebraska State Museum. Photo credit: Greg Nathan, UNL University Communications.

and put up with a commuter marriage for 45 years! Ed is Research Professor at the University of Maine-Orono in petrologic mineralogy. I am deeply touched and honoured that our Russian friends have obtained International Mineralogical Association approval for a new mineral in the Garnet Supergroup that they have named after me: Galuskina, I., Galuskin, E., Vapnik, Y., Zeli´nski, G., and Prusik, K. (2020) Priscillagrewite-(Y), IMA 2020-002, in: CNMNC Newsletter 55, Eur. J. Mineral., 32. They discovered microscopic crystals of priscillagrewite-(Y) in a green layer in the Daba marble quarry, Tulul Al Hammam area, Hatrurim Complex, Jordan. The type specimen will be curated at the Fersman Mineralogical Museum of the Russian Academy of Sciences in Moscow along with the Galuskins' new minerals edgrewite and hydroxyledgrewite which they named for Ed in 2011 from the Upper Chegem caldera, Northern Caucasus, Kabardino-Balkaria, Russia. So at least our namesake minerals will be cozy together in the Fersman even though COVID-19 keeps Ed and me apart in Nebraska and Maine! The name priscillagrewite-(Y) recognises my having published in 1969 the first electron beam scanning photographs of oscillatory Mn zoning in eclogite garnet, part of my Berkeley thesis on the Tiburon Peninsula, California, the type locality for lawsonite. I am especially delighted that there is also an anthropology connection, because archaeologists have reported that "green Dabba Marble" was used to make some of the earliest Neolithic stone beads and pendants in the Near East.

In my nomination speech to Council in Montreal, I recalled having been a graduate student at the University of California-Berkeley in awe of the international dignitaries who came to our campus during my first IUGG in 1963. I owe an immense debt to my husband Ed and to the many mentors who have supported me during my career. I am very honoured at this time in my life to have the chance to serve IUGG, as we try our best to help today's students and early career scientists succeed in our daunting new COVID-19 world.

#### 2. IUGG Yearbook 2020



An updated <u>IUGG Yearbook 2020</u> is now available. This step was necessary as, due to the COVID-19 pandemic, we have received many amendments and changes over the last few months. Thanks to the National Committees, the Associations and Commissions for helping to update the information in the Yearbook! During 2020, updates on addresses and other information in the Yearbook should be sent to the <u>IUGG Secretariat</u> as soon as they are known.

#### 3. IUGG Grants Program 2020-2021 – Awardees

The <u>IUGG Grants Program</u> aims to support projects, of importance to the international geophysical and geodetic community, which explore new scientific ideas, develop future international initiatives, and promote geoscience education. For 2020-2021, IUGG awarded grants to the following projects:

- Data Assimilation and Inverse Problems in Geophysical Sciences (a joint project between CMG, IAGA, IASPEI, and IAVCEI);
- Implementing IUGG 2015 Resolution #4: Organization of the GNSS Tsunami Early Warning (GTEWS) Consortium (a joint project between GRC and IAG);
- A Unified Height Reference System for Africa (AFRUHRS) (a joint project between IAG and IASPEI);
- Paper volcanoes Lab: a way to engage early childhood and primary school children on Earth Science (a joint project between IAVCEI and IASPEI).

The total amount of funds allocated to the projects is USD 50,000.

The deadline for project proposal submission for the funding period 2022-2023 is on *1 April 2022*. More information can be found <u>here</u>.

#### 4. New IUGG Liaison Officer to CODATA

On 16 July 2020, following the recommendation of the IUGG Executive Committee, the IUGG Council appointed Dr. Anatoly Solovyev (Russia) as the new IUGG Liaison Officer to the ISC Committee on Data for Science and Technology (CODATA) for the period 2020-2023 as a successor for Dr. Alena Rybkina (Russia). This step was necessary because Dr. Rybkina recently



became CODATA Vice-President and, therefore, is no longer eligible to act as IUGG Liaison Officer.

Dr. Solovyev is the IAGA National Correspondent for Russia, Chair of the IAGA Interdivisional Commission on History, and Vice-Chair of the Union Commission on Data and Information (UCDI). Since 2019, he has been the Director of the Geophysical Center of the Russian Academy of Sciences.

#### Congratulations to both!

## 5. Report: Workshop on Sea Level Data Archaeology, Paris, France, 10-12 March 2020

The workshop was convened under the auspices of the Intergovernmental Oceanographic Commission of UNESCO and its Global Sea Level Observing System (GLOSS), and co-sponsored by the IHO Tides, Water Level and Currents Working Group (TWCWG) and the IUGG/IAPSO. The main objective was to bring together experts concerned with sea level data rescue activities to explore the potential for a more sustained programmatic approach to cooperation at the international level.

## Sessional topics included:

- Historical sea level data inventories and data at risk;
- Methodology for transfer of paper records to digital data;
- Auxiliary historical archives relative to sea level;
- Applications and knowledge products from recovered data;
- Cooperation perspectives.

More than fifty participants attended the workshop at UNESCO headquarter in Paris between 10 - 12 March 2020.

A full workshop report can be downloaded <u>here</u>.



## 6. IGCP Project proposal call for 2020

The <u>International Geoscience Programme (IGCP)</u> calls for project proposals for the following themes:

- Earth Resources: Sustaining our Society
- Geohazards: Risk and Mitigation Assessment for Sustainable Development
- Geodynamic: Control our Environment
- Hydrogeology: Geoscience of the Water Cycle
- Global Change: Evidence from the Geological Record
- IGCP 2020 Annually Defined Topic: Geoheritage for Sustainable Development

Deadline for project proposals is 15 October 2020.

For more information, please see the <u>2020 call for project proposal flyer</u>, the <u>2020 booklet presenting</u> the programme, <u>IGCP process for National Commissions - explanation of IGCP timelines</u>, <u>processes and main stakeholders</u>, <u>IGCP National Committee contacts</u>, and <u>The UNESCO Evaluation insights #27-PIGG</u>.

UNESCO is the only United Nations organisation with a mandate to support research and capacity in geology and geophysics, having the <u>IGCP</u> as its flagship. IGCP serves as a knowledge hub of UNESCO to facilitate international scientific cooperation in geosciences. IGCPs mission includes promoting sustainable use of natural resources, advancing new initiatives related to geodiversity and geoheritage and geohazards risk mitigation.

If you have further questions, please contact the UNESCO Secretariat.

#### 7. ISC – News from the International Science Council

## Annual Report 2019

The International Science Council's 2019 Annual Report is now available <a href="here">here</a>. 2019 was the Council's first full year of operation – an Action Plan for the coming years was launched, to develop new initiatives and partnerships, and to consolidate existing scientific activities.



#### 8. Awards and Honours

The Asia Oceania Geosciences Society (AOGS) awarded

*Kenji Satake* (Japan), President of the International Association of Seismology and Physics of the Earth's Interior (IASPEI), the 2020 Axford Medal in recognition of his excellence in geoscience.

*Sang-Mook Lee* (Korea, Rep.), President of the IUGG National Committee for the Republic of Korea, the 2020 Wing Ip Medal in recognition for unselfish cooperation and leadership in geoscience in the Asia Oceania region.

Congratulations to both!

## 9. Meetings affected by COVID-19

## **IUGS**

The <u>36th International Geological Congress</u> planned to be held in New Delhi, India, from 9 to 14 November 2020, has been postponed to 16 to 21 August 2021 to be held at the same place.

#### IAG

The IAG sponsored <u>22nd International Workshop on Laser Ranging</u> planned to be held in Kunming, China, from 2 to 6 November 2020, will be postponed to fall 2021.

#### **IAGA**

The IAGA sponsored 9th VERSIM Workshop – VLF/ELF Remote Sensing of Ionospheres & Magnetospheres planned to be held in Kyoto, Japan, from 21 to 25 November 2020, will be organised online from 16 to 20 November 2020.

#### **IAHS**

The IAHS sponsored <u>11th Annual Catchment Science Summer School</u> planned to be held in Birmingham, UK, from 30 August to 4 September 2020, will be organised online at the same dates.

#### **IAVCEI**

The IAVCEI sponsored <u>Cities on Volcanoes 11</u> planned to be held in Heraklion, Greece, from 25 to 30 September 2020, has been postponed to 14 to 18 June 2020 to be held at the same place.

#### 10. Meeting calendar

Meetings are subject to change due to the COVID-19 pandemic.

2020

## August

- 30-4 September, IAHS, Online, 11th Annual Catchment Science Summer School

#### October

- 5-16, ICTP, IUGG, Rabat, Morocco, African Workshop on GNSS and Space Weather
- 7-9, IACS, Concepción, Chile, <u>Third Annual Meeting of the Chilean Cryosphere Society</u> (SOChiCri)
- 11-17, AGI, Earth Science Week
- 19-21, IAG, Shanghai, China, International Workshop on GNSS Ionosphere (IWGI2020)
- 19-21, IAG, Online, <u>International DORIS Service Workshop</u>
- 19-23, SCOR, Online, 2020 SCOR Annual Meeting
- 22-24, CODATA, Paris, France, <u>International FAIR Convergence Symposium and CODATA General Assembly</u>
- 26-30, IAHS, Bydgoszcz, Poland, <u>IAHS/ICCE International Symposium River Sediment</u> Quality and Quantity: Environmental, Geochemical and Ecological Perspectives
- 26-30, CCTF, Online, 22nd Meeting of the Consultative Committee for Time and Frequency
- 26-6 November, ICTP, Addis Ababa, Ethiopia, <u>Integrating Climate Data, Predictions and Projections Into Health Planning</u>

#### November

- 2-6, IAG, Kunming, China, 22nd International Workshop on Laser Ranging
- 9-13, ICTP, IUGG, Trieste, Italy, <u>Impact and Risk Relevant Climate Information from Global Scale Projections to Local Scale Climate Hazards</u>
- 16-20, IAGA, URSI, Online, 9th VERSIM Workshop VLF/ELF Remote Sensing of Ionospheres & Magnetospheres
- 17-19, ICTP, IUGG, Buenos Aires, Argentina, <u>Conference on Regional Climate Modeling</u> and Extreme Events over South America: results from the CORDEX-Flagship Pilot Study
- 24-28, IAHS, Cotonou, Benin, Hydrology of the Major African Basins

- IAMAS, IUGG, Venice, Italy, Understanding the Climatic Response to Strong Volcanic Eruptions - First VolMIP Meeting

#### December

- 13-19, IASPEI, IUGG, Kasane, Botswana, <u>3rd General Assembly of the African Seismological Commission</u>
- 7-11, AGU, San Francisco CA, USA, and Online, AGU Fall Meeting 2020

## Association Scientific Assemblies 2021-2022

- 28 June 2 July 2021, Montpellier, France, IAHS Scientific Assembly
- 28 June 5 July 2021, Beijing, China, IAG Scientific Assembly
- 18-23 July 2021, Possibly Online, <u>IACS-IAMAS-IAPSO Joint Scientific Assembly</u>
- 22-27 August 2021, Hyderabad, India, <u>IAGA-IASPEI Joint Scientific Assembly</u>
- 20-24 January 2022, Rotorua, New Zealand, <u>IAVCEI Scientific Assembly</u>

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