

Award

2007 Barringer Medal for Christian Koeberl

The Barringer Medal and Award are bestowed by the Meteoritical Society for outstanding work in the field of impact cratering and/or work that has led to a better understanding of impact phenomena. This year the award goes to Christian Koeberl, and I cannot imagine any other colleague in the impact cratering community who deserves this award more. What do you think when you hear the name “Christian Koeberl”? Scientist extraordinaire and prolific publisher? Tireless researcher and e-mail addict? Bon vivant? Collector of rare African masks, historic maps, and first edition books? Gourmet cook, wine aficionado, generous host? Art and music lover? Do these terms describe this complex character sufficiently? I have known Christian for twenty years and am still amazed at his multifaceted personality and interests.

However, here he is cited for his achievements as a scientist and university teacher. Born (1959) and bred (ever since) in Vienna, he became fascinated by natural sciences early in his school years (his voracious appetite—also for the devouring of books—has not abated since), and this prime interest was nurtured by some excellent teachers. It was further fuelled by the exciting space exploration events of the 1970s; astronomy soon became a prime hobby. Initially at the Technical University in Vienna, Christian began studies to prepare a career as an applied chemist but in 1980 took up majors in astronomy and chemistry, studies completed in 1983 at the University of Graz with a dissertation about the geochemistry of impact glasses. This topic allowed him to combine his dual interests in chemistry and astronomy. Needless to say that both his Ph.D. dissertation and subsequent *rigorosum* were rated first class. From 1983–1985, Christian carried out several cosmochemical research projects at the Institute for Analytical Chemistry of the University of Vienna and then became Assistant Professor at the University of Vienna. He also participated in a highly successful expedition to Antarctica. A second dissertation (habilitation) in the field of geo- and cosmochemistry was completed in 1990 and that same year he was tenured. Several overseas stays as visiting scientist or professor took him to the Lunar and Planetary Institute, to the Carnegie Institution, University of the Witwatersrand, Dartmouth College, and the Open University. In 1998, Christian was appointed Associate Professor in the Institute of Geochemistry. Another benchmark event was reached in 1999 when Christian Koeberl and Dona Jalufka were married. I am happy to report



Christian Koeberl.

that I could be instrumental to this achievement, as the groom required steady assistance with his bow tie in order to complete the due process. With Dona on his side, Christian—if at all possible—became even more successful and productive (perhaps because of the occasional retreat to Villa Koeberl in Coldigioco?). Undoubtedly, she deserves to be congratulated on this award as well.

During the intervening years, our awardee went from strength to strength, receiving several other major awards. His incredible application, tenacity, and strength of will, his ability to seek out new research avenues and methods, and to enter numerous productive collaborations extending back to his early career produced an amazing research output. This, in turn, yielded, *inter alia*, the prestigious Start Prize of the Austrian Federal Government in 1996 and the Novartis Award for Chemistry in 1997. These two generous awards allowed Christian to travel widely for on-site research and

worldwide collaboration, but primarily to gain experience in top laboratories and from first-rate research groups. He also was able to completely rebuild his own analytical facility and add to the neutron activation analytical lab a stable isotope facility—further broadening his already wide-ranging interests and activities. Other important honors and awards include election as a Fellow of the Meteoritical Society (1994), Fellow of the Geological Society of South Africa (2000), and Member of the Austrian Academy of Sciences (2006).

But what makes Christian Koeberl the outstanding scientist who deserves the Barringer Medal and Award? There are four areas that need to be emphasized: his research endeavors and successes, his service to the impact cratering community, his continuing promotion of the importance of impact cratering among scientists and the general public, and, finally, his many efforts to train postgraduate students from highly diverse backgrounds. Regarding Christian's research activities, there are two main thrusts paramount within his work: the investigation of impact cratering related processes through detailed and multidisciplinary physical-chemical-mineralogical-geological investigations of the products of impact, and the testing of new methodologies that can be applied in these investigations. He has made important contributions to our knowledge of a large number of impact structures, sometimes contributing to the confirmation of their origins. He has been instrumental in conceiving of and carrying to fruition a number of comprehensive impact-related projects, including several International Continental Scientific Drilling Program (ICDP) drilling projects (Bosumtwi, where he was lead PI, Chesapeake Bay, for which he is one of four PIs, and the imminent El'gygytgyn project with Christian as one of the PIs, as well as the earlier comprehensive drilling project of the Manson structure). His work has not been limited to the study of impact structures; he has also extensively contributed to the investigations of terrestrial mass extinction horizons (including the late Eocene, K-Pg, Tr-J, and P-Tr strata), of meteorites and lunar rocks, Antarctic meteorite field studies, snowball earth issues, and a whole range of other geoscientific and environmental science issues. While his heart has always been in impact cratering research first, he has accumulated a wealth of knowledge about a significant sector of other current research thrusts, and whenever appropriate or convenient, he has linked up with other groups to investigate himself or train students in such subjects as well.

A further interest of Christian's is the African impact cratering record, and one for which we have enjoyed many forays into Africa together. Considering the analytical methodology available to the impact worker, Christian has on several occasions been at the forefront of application of new techniques, such as his pioneering work in application of the Re-Os isotope method for the recognition of impact projectiles. Since his student days, Christian has been

fascinated by the formation of tektites, and he has applied a series of state-of-the-art techniques to the microscopic and submicroscopic analysis of these enigmatic glasses. Impact melts investigated by him range from the geologically relatively young tektites to the Archean and Proterozoic "spherule layers." I cannot think of any aspect of the analytical investigation of impactites where Christian and his postgraduate students have not contributed essential knowledge.

Christian Koeberl's service to the impact (and the wider scientific) community is too extensive to be discussed in detail. He has served, often as chair or secretary, on numerous panels and committees of the European Science Foundation (ESF), UNESCO, the Austrian Academy of Sciences, the Meteoritical Society, ICDP, and DOSECC. He has been particularly influential in the leadership of the second phase of the successful ESF IMPACT program. In 1989, early in his career, he hosted the Annual Meeting of the Meteoritical Society in Vienna, which, I believe, is still the largest MetSoc conference ever held. Since then he has contributed to the organization of a host of other conferences, workshops, and symposia.

Despite all these involvements and interests, Christian throughout his career has been a dedicated and truly prolific publisher of his research results. He has, as of June 2007, published no fewer than 3 books and 308 scientific articles, with about 140 of these listing him as principal author. What is more, he has edited a further 6 books and published numerous popular articles that served to promote impact cratering widely. Christian is also a true convert to e-mailism. Wherever this frequent flyer happens to be, he does find a way to correspond instantaneously with his many friends and colleagues.

Despite his prolific research and publication activities, Christian has always been supportive of the scientific community, be it as a member of editorial boards (including *Meteoritics & Planetary Science*, *Geochimica et Cosmochimica Acta*, *Geology*, and *Geochemical Journal*), or frequent reviewer. He is currently serving on many science boards and has been a frequent member of panel discussions and an invited speaker at conferences. He is outspoken and does not hesitate to deliver incisive analysis—thereby managing to often move discussion to the next level.

Special mention must be made of his extensive effort in support of collaborations with Eastern European scientists, and his support as lecturer, supervisor, and friend of his postgraduate students—many of whom have originated from developing countries (including Ethiopia, Uganda, Ghana, Zambia, Vietnam, and Mongolia). This has led to a valuable transfer of scientific and technical knowledge, and continuing association of some of these countries with state-of-the-art research programs.

I have to conclude on a personal note. Since Christian and I met at the (in)famous Cryptoexplosion and Catastrophes

in the Geological Record workshop in 1987, we have collaborated closely and become the best of friends. Christian has to no small degree fertilized my own research activities with data, ideas, and discussion, for which I am hugely grateful. We have had great expeditions, feasts, and lots of good fun, and occasional arguments that—as it should be among friends—never lasted to the next day. I am sure that there are others who join me in thanking Christian for his friendship, generosity, and entertaining character.

Bevan French has found the right words when he said, “Christian Koeberl has carried out important specialized studies on such [diverse] impact phenomena as post-impact hydrothermal phenomena and diamond formation in impact

events. Through his collaborations, publications, and other activities, he has helped to make impact geology a rigorous and respected discipline, and he has contributed greatly to bringing the field into the mainstream of current earth science.” For this, Christian Koeberl deserves the Barringer Medal and Award, and I am honored to have been able to prepare this citation for this outstanding scientist and my close friend.

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