

CURRICULUM VITAE (SHORT VERSION) AND PUBLICATION LIST FOR BIRGER SCHMITZ

Schmitz, Birger, born 1955-10-26 in Överluleå, Sweden. Married, four children 33, 30, 22 and 20 years old. Nationality: Sweden.

Education

- Post Doc (1988-02-01 to 1989-09-01) at the Lawrence Berkeley Laboratory, California, USA (invitation from physics Nobel Prize Laureate, Luis W. Alvarez).
- PhD studies (1983-07-01 to 1988-02-12) in Mineralogy, Petrology and Geochemistry at the Dept. of Geology, Stockholm University, Sweden. Title of thesis: "Paleoceanographic implications of major and trace element distributions in fossil, marine sediments".

Current positions

- Professor in Geology (since 2012-03-01) at the Department of Physics, Lund University, Sweden.
- Honorary Research Associate (since 2010-11-18) at the Chicago Field Museum, USA.
- Affiliate Faculty Member (since 2014-04-01) at the Hawai'i Institute of Geophysics and Planetology, University of Hawai'i at Manoa, Honolulu, USA.

Previous positions

- Professor in Bedrock Geology (2004-01-01 to 2012-02-28) at the Department of Geology, Lund University, Sweden.
- Associate Professor (1989-1999) and Professor (2000-2003) in Marine Geology at the Department of Marine Geology, Goteborg University, Sweden.
- Affiliate Graduate Faculty Member (2009-2014) of the Geology Department at the University of Hawai'i at Manoa, Honolulu, USA.
- Adjunct Senior Scientist (2009-2012) at Woods Hole Oceanographic Institution, USA.

Fellowships, awards and recognition

- Wiess Visting Professor, (2002-11-02 to 2003-04-30) Rice University, Houston, Texas, USA (see <http://earthscience.rice.edu/directory/wiess-visiting-professor/>)
- Awarded prize "Outstanding Researcher" by the Swedish Research Council, Nov. 2002.
- Ranked as Outstanding Researcher in the "Research and Quality 2008" evaluation at Lund University (statement: *Relevance: Outstanding; Lund's research in this exciting research new research field has gained substantial international interest; unique research niche. Vitality: Outstanding: a relatively small group that has significant input to the international research agenda; ranked in the top 2% of all science disciplines by the Swedish Research Council.*)
- Honorary taxonomic patronyms *Fasciculithus schmitzii* (a calcareous nannoplankton species) and *Alocopocythere schmitzii* (an ostracode species). Names given in recognition of my role as the leader of the Paleocene Working Group, see below.

Funding

- Ranked one step below budget cut off for an ERC-AdG in 2009. Grades 3.5/4 (applicant) + 3.5/4 (project) in panel evaluations.
- Obtained an ERC-AdG of 1,950 k € in 2011. Ranking grades 3.5/4 (applicant) + 4/4 (project).
- Obtained a prestigious Wallenberg Foundation Grant in 2014 of ca. 2,300 k € shared 50/50 with astronomers Melvyn Davis and Anders Johansen at the Astronomy Department of Lund University.
- Through the past two decades I have been funded by three- or four-year grants (each ca. 300-400 k €) from the Swedish Research Council.

Supervision of graduate students and post docs

In total, supervision of 18 Ph.D. students and 11 post docs; below are given the names of individuals supervised post-2007 (*= present students or post docs):

- Post docs: Matthias Meier, Surya Rout, Fredrik Terfelt, Anders Cronholm, Linus Ros, Tania Stanton, Shiyong Liao*(all at Lund University).
- PhD students: Carl Alwmark, Samuele Boschi*, Anders Cronholm, Johanna Mellgren, and Ellinor Martin*, (all at Lund University).
- Co-supervisor of international PhD students: Philipp Heck (ETH-Zürich), Matthias Meier (ETH-Zürich), and Francois Paquay and Caroline Caplan* (Univ. Manoa, Hawaii).

Organisation of scientific meetings (a selection)

- Member of the Scientific Committee of the 33rd International Geological Congress, Oslo, Aug. 2008 (6000 participants). Arranged and hosted the Theme of the Day "Earth and Beyond" with many renowned scientists as speakers (e.g. M. Mayor, M. Zuber, W. Alvarez).
- Member of the scientific committees of conferences *Climate and Biota of the Early Paleogene* (CBEP) in Göteborg 1999, Wyoming 2001, Bilbao 2006, New Zealand 2009 and Salzburg 2011 (ca. 120-200 participants at the meetings). Initiated and organized the first of the meetings, Göteborg 1999, with a clear CBEP vision in this still thriving biannual conference series (see *Paleoceanography* v. 14, p. 559-560).
- Co-organizer (with M. Davies and A. Johansen) of meeting *Impacts in Planetary Systems*, in Lund May 15-17, 2017. The meeting attracted about 80 participants most of them leading scientists in the field from the US and Europe.

Reviewing and commission of trust (a selection only)

- 2017-2018 Member of the Scientific Advisory Board of National Geographic Society, Washington DC (Changing Planet Panel).
- 2012-2016 Member of the Scientific Advisory Board of the European Global Exploration Fund, National Geographic Society.
- 1993-2010 Chairman of the Paleocene Working Group. Led the work defining the Global

- Stratotype Sections and Points for the Selandian and Thanetian stages in the International Geological Timescale (GSSPs ratified by the International Union of Geological Sciences in Sep. 2008).
- 2003-2009 Chairman of the Geology and Geophysics Panel at the Swedish Research Council.
- 2001-2004 President of the Geological Society of Sweden.
- 1996-2001 Secretary of the International Subcommittee on Paleogene Stratigraphy.
- 2007- Member of the Editorial Board of *Geologica Acta*.
- 1999-2005 Member of the Editorial Board of *Chemical Geology*
- General Frequent (on average every second week) reviews for international research councils and leading scientific journals.

Memberships of scientific societies

- Member of professional societies, e.g. Meteoritical Society, Geological Society of America, Geochemical Society, American Geophysical Union, International Big History Association.
- Elected member of the Royal Physiographic Society in Sweden (since 2004) and the Royal Academy of Forestry and Agriculture in Sweden (since 2009, in role as climate expert).

Peer-reviewed scientific articles

- 1) **B. Schmitz** (1984) Stress-induced variations of remanent magnetism in Late Quaternary varved clay. *Earth and Planetary Science Letters* 9:422-426.
- 2) **B. Schmitz** (1985) Metal precipitation in the Cretaceous-Tertiary boundary clay at Stevns Klint, Denmark. *Geochimica et Cosmochimica Acta* 49:2361-2370.
- 3) **B. Schmitz** (1987) Remanent magnetism of Late Quaternary varved clay. *Stockholm Contributions in Geology* 40:63-82.
- 4) **B. Schmitz** (1987) Barium, equatorial high-productivity and the northward wandering of the Indian continent. *Paleoceanography* 2:63-77.
- 5) **B. Schmitz** (1987) The TiO₂/Al₂O₃ ratio in Cenozoic Bengal Abyssal Fan sediments and its use as a paleostream energy indicator. *Marine Geology* 76:195-206.
- 6) **B. Schmitz**, P. Andersson and Jeremy Dahl (1988) Iridium, sulfur isotopes and rare earth elements in the Cretaceous-Tertiary boundary clay at Stevns Klint, Denmark. *Geochimica et Cosmochimica Acta* 52:229-236.
- 7) **B. Schmitz** (1988) Paleoceanographic implications of major and trace element distributions in fossil, marine sediments. *Meddelanden från Stockholms Universitets Geologiska Institution* 272:1-130.

- 8) **B. Schmitz** (1988) Origin of microlayering in Ir-rich marine Cretaceous-Tertiary boundary clays. *Geology* 16:1068-1073.
- 9) G. Åberg, B. Collini, and **B. Schmitz** (1989) K-Ar analyses from the Siljan Ring impact structure, Sweden. *Geologiska Föreningens Förhandlingar* 111:355-360.
- 10) **B. Schmitz** (1990) Replies on two Comments by F.T. Kyte and B.F. Bohor on Origin of Microlayering in Ir-rich Marine Cretaceous-Tertiary Boundary Clays. *Geology* 18:89-92.
- 11) **B. Schmitz** (1990) Reply on Comment by D.M. Triplehorn on Origin of microlayering in Ir-rich marine Cretaceous-Tertiary boundary clays. *Geology* 18:93-94.
- 12) **B. Schmitz**, G. Izett, H.V. Michel, and F. Asaro (1990) Detailed iridium profile across the K-T boundary at the Carmel site near Madrid, Colorado; (in: G. Izett, The Cretaceous-Tertiary boundary interval, Raton Basin, Colorado and New Mexico). *Geological Society of America, Special Papers* 249:50-51.
- 13) **B. Schmitz**, G. Åberg, L. Werdelin, P. Forey, and S.-E. Bendix-Almgren (1991) $^{87}\text{Sr}/^{86}\text{Sr}$, Na, F, Sr, and La in skeletal fish debris as a measure of the paleosalinity of fossil fish habitats. *Geological Society of America Bulletin* 103:786-794.
- 14) **B. Schmitz**, F. Asaro, H.V. Michel, H.R. Thierstein, and B.T. Huber (1991) Element stratigraphy across the Cretaceous-Tertiary boundary in ODP Hole 738C. *Proceedings of the Ocean Drilling Program, Scientific Results* 119:719-730.
- 15) H.R. Thierstein, F. Asaro, W. Ehrmann, B.T. Huber, H.V. Michel, H. Sakai, and **B. Schmitz** (1991) The Cretaceous-Tertiary boundary at Site 738C, South Kerguelen Plateau. *Proceedings of the Ocean Drilling Program, Scientific Results* 119:849-868.
- 16) **B. Schmitz** (1992) Chalcophile elements and Ir in continental Cretaceous-Tertiary boundary clays from the Western Interior of the U.S. *Geochimica et Cosmochimica Acta* 56:1695-1704.
- 17) **B. Schmitz** (1992) An iridium anomaly in the Ludlow Bone Bed from the upper Silurian, England. *Geological Magazine* 129:359-362.
- 18) **B. Schmitz**, G. Keller, and O. Stenvall (1992) Stable isotope and foraminiferal changes across the Cretaceous-Tertiary boundary at Stevns Klint, Denmark - Arguments for long-term oceanic instability before and after bolide- impact event. *Palaeogeography, Palaeoclimatology, Palaeoecology* 98:233-260.
- 19) G. Keller, E. Barrera, **B. Schmitz**, and E. Mattson (1993) Gradual mass extinction, species survivorship and long-term environmental changes across the Cretaceous-

- Tertiary boundary in high latitudes. *Geological Society of America Bulletin* 105:979-997.
- 20) **B. Schmitz** (1993) Discussion on an iridium anomaly in the Ludlow Bone Bed from the Upper Silurian, England. *Geological Magazine* 130:855-856.
 - 21) **B. Schmitz** (1994) The Paleocene Epoch - stratigraphy, global changes and events. *GFF* 116:39-41.
 - 22) **B. Schmitz**, L. Jeppsson, and J. Ekvall (1994) A search for impact ejecta and shocked quartz grains in Silurian sediments on Gotland, Sweden. *Geological Magazine* 131:361-367.
 - 23) **B. Schmitz** (1994) Geochemical high-resolution stratigraphy of Ir-rich marine Cretaceous/Tertiary boundary clays in Denmark, Spain and New Zealand. In: Extinction and the fossil record (Ed. E. Molina), *Cuadernos Interdisciplinarios vol. 5*, Libreria General, Zaragoza, p.121-140.
 - 24) S. D. Charisi, and **B. Schmitz** (1995) Stable ($\delta^{13}\text{C}$, $\delta^{18}\text{O}$) and strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopes through the Paleocene at Gebel Aweina, eastern Tethyan region. *Palaeogeography, Palaeoclimatology, Palaeoecology* 116:103-130.
 - 25) **B. Schmitz**, C. Heilmann-Clausen, C. King, E. Steurbaut, F.P. Andreasson, R. Corfield, and J. Cartlidge (1996) Stable isotope and biotic evolution in the North Sea during the early Eocene: Albæk Hoved Section, Denmark. *Geological Society Special Publication* 101:275-306.
 - 26) S.D. Charisi, and **B. Schmitz** (1996) Early Eocene paleoceanography and palaeoclimatology of the N. Atlantic: Stable isotopic results from DSDP Hole 550. *Geological Society Special Publication* 101:457-471.
 - 27) **B. Schmitz**, and F. Asaro (1996) Iridium geochemistry of volcanic ash from the early Eocene rifting of the northeastern Atlantic and some other Phanerozoic events. *Geological Society of America Bulletin* 108: 489-504.
 - 28) **B. Schmitz**, R.P. Speijer, and M.-P. Aubry (1996) The latest Paleocene benthic extinction event on the southern Tethyan shelf, Egypt: Foraminiferal stable isotopic ($\delta^{13}\text{C}$, $\delta^{18}\text{O}$) records. *Geology* 24:347-350.
 - 29) R.P. Speijer, **B. Schmitz**, M.-P. Aubry, and S.D. Charisi (1996) The latest Paleocene benthic extinction event: punctuated turnover in outer neritic foraminiferal faunas from Egypt. *Israel Journal of Earth Sciences* 44:207-222.

- 30) **B. Schmitz**, and F. Asaro (1996) A six metres expanded Ir anomaly in the earliest Danian at Nye Klöv, Denmark: The record of diffusion and reworking. *GFF* 118:124-125.
- 31) Speijer, R.P., G.J. van der Zwaan, and **B. Schmitz** (1996) The impact of Paleocene-Eocene boundary events on middle neritic benthic foraminiferal assemblages from Egypt. *Marine Micropaleontology* 28:99-132.
- 32) X. Orue-Etxebarria, E. Apellaniz, J.I. Baceta, R. Coccioni, R. Dileo, J. Dinares-Turell, S. Galeotti, S. Monechi, K. Nunez-Betelu, J.M. Pares, A. Payros, V. Pujalte, J.M. Samsó, **B. Schmitz**, J. Serra-Kiel, and J. Tosquella. (1996) Physical and bio-stratigraphic analysis of two prospective Paleocene-Eocene boundary stratotypes in the deep-water Basque Basin, Western Pyrenees: The Trabakua Pass and Ermua sections. *Neues Jahrbuch für Geologie, Paläont. Abh.* 201:179-242.
- 33) **B. Schmitz**, and R. P. Speijer (1996) Stable isotope ($\delta^{13}\text{C}$, $\delta^{18}\text{O}$) records across the Cretaceous-Tertiary transition at Geulhemmerberg, South Netherlands. *Geologie en Mijnbouw* 75:245-253.
- 34) **B. Schmitz**, M. Lindström, F. Asaro, and M. Tassinari (1996) Geochemistry of meteorite-rich marine limestone strata and fossil meteorites from the lower Ordovician at Kinnekulle, Sweden. *Earth and Planetary Science Letters* 145:31-48.
- 35) F. P. Andreasson, and **B. Schmitz** (1996) Winter and summer temperatures during the middle Eocene in France from *Turritella* $\delta^{18}\text{O}$ records. *Geology* 24:1067-1070.
- 36) F.P. Andreasson, **B. Schmitz**, and D. Spiegler (1996) Stable isotopic composition of early Eocene fish apatite from Hole 913B: An indicator of the early Norwegian-Greenland Sea paleosalinity. *Proceedings of the Ocean Drilling Program, Scientific Results* 151:538-591.
- 37) E.I. Thompson, and **B. Schmitz** (1997) Barium and the late Paleocene $\delta^{13}\text{C}$ maximum: Evidence of increased oceanic surface productivity. *Paleoceanography* 12:239-254.
- 38) **B. Schmitz**, S.D. Charisi, E.I. Thompson, and R.P. Speijer (1997) Barium, SiO_2 -excess and P_2O_5 as proxies of biological productivity in the Middle East during the Paleocene and the latest Paleocene benthic extinction event. *Terra Nova* 9:95-99.
- 39) **B. Schmitz**, B. Peucker-Ehrenbrink, M. Lindström and M. Tassinari (1997) Accretion rates of meteorites and extraterrestrial dust in the Early Ordovician. *Science* 278:88-90.

- 40) R.P. Speijer, **B. Schmitz**, and G.J. van der Zwaan (1997) Benthic foraminiferal extinction and repopulation in response to latest Paleocene Tethyan anoxia. *Geology* 25:683-686.
- 41) **B. Schmitz**, F. Asaro, E. Molina, S. Monechi, K. von Salis and R. Speijer (1997) High-resolution iridium, $\delta^{13}\text{C}$, $\delta^{18}\text{O}$, foraminifera and nannofossil records across the latest Paleocene benthic extinction event at Zumaya, Spain. *Palaeogeography, Palaeoclimatology, Palaeoecology* 133:49-68.
- 42) **B. Schmitz**, S.L. Ingram, D.T. Dockery III, and G. Åberg (1997) Testing $^{87}\text{Sr}/^{86}\text{Sr}$ as a paleosalinity indicator on mixed marine, brackish-water and terrestrial vertebrate skeletal apatite in late Paleocene-early Eocene near-coastal sediments, Mississippi. *Chemical Geology (Isotope Geoscience Section)* 140:275-287.
- 43) F.P. Andreasson, and **B. Schmitz** (1997) Reply to two Comments by R.T. Klein and H.C. Fricke and L.M.A. Purton and M.D. Brasier on Winter and summer temperatures of the early middle Eocene of France from *Turritella* $\delta^{18}\text{O}$ profiles. *Geology* 25:958-960.
- 44) **B. Schmitz**, E. Molina, and K. von Salis (1998) The Zumaya section in Spain: A possible global stratotype section for the Selandian and Thanetian stages. *Newsletters on Stratigraphy* 36:35-42.
- 45) R. P. Speijer, and **B. Schmitz** (1998) A benthic foraminiferal record of Paleocene sea-level changes and trophic conditions at Gebel Aweina, Egypt. *Palaeogeography, Palaeoclimatology, Palaeoecology* 137:79-101.
- 46) S.D. Charisi, and **B. Schmitz** (1998) Paleocene to early Eocene paleoceanography of the Middle East: $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ isotopes from foraminiferal calcite. *Paleoceanography* 13:106-118.
- 47) F.P. Andreasson, and **B. Schmitz** (1998) Middle Eocene seasonal temperatures in the eastern equatorial Atlantic from chemical profiles of mollusk shells. *Paleoceanography* 13:183-192.
- 48) D.B. Patterson, K.A. Farley and **B. Schmitz** (1998) Preservation of extraterrestrial ^3He in 480 Myr-old marine limestones and meteorites. *Earth and Planetary Sciences Letters* 163:315-325.
- 49) S.D. Charisi, **B. Schmitz** and C. Perissoratis (1998) Paleoceanography of the Aegean Sea during formation of sapropel S1: $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ records from foraminifera and pteropod shells. *Earth Sciences Centre, Göteborg University, Series A*, 32:1-24.

- 50) F.P. Andreasson, **B. Schmitz** and E. Jönsson (1999) Surface-water seasonality from stable isotope profiles of *Littorina littorea* shells: Implications for paleoenvironmental reconstructions of coastal areas. *Palaios* 14:273-281.
- 51) I. Arenillas, E. Molina and **B. Schmitz** (1999) Planktic foraminiferal and $\delta^{13}\text{C}$ isotopic changes across the Paleocene/Eocene boundary at Possagno (Italy), *International Journal of Earth Sciences* 88:352-364.
- 52) L.C. Sloan, **B. Schmitz**, M.-P. Aubry and J. Zachos (1999) Early Paleogene Warm Climates and Biosphere Dynamics: Meeting in Göteborg makes progress in deciphering the dynamics of past greenhouse worlds. *Paleoceanography* 14:559-560.
- 53) P. Gawenda, W. Winkler, **B. Schmitz** and T. Adatte (1999) Climate and bioproductivity control on carbonate turbidite sedimentation (Paleocene to earliest Eocene, Gulf of Biscay, Zumaia, Spain). *Journal of Sedimentary Research* 69:1253-1261.
- 54) R.P. Speijer, **B. Schmitz** and P. Luger (2000) Late Paleocene events in the Middle East: Stratigraphical implications for low- to middle-latitude successions and correlations. *Journal of the Geological Society, London* 157:37-47.
- 55) H. Egger, C. Heilmann-Clausen and **B. Schmitz** (2000) The Paleocene/Eocene boundary interval of a Tethyan deep-sea section and its correlation with the North Sea Basin. *Bulletin Société Géologique de France* 171:207-216.
- 56) F. P. Andreasson and **B. Schmitz** (2000) Temperature seasonality in the early middle Eocene North Atlantic region: Evidence from stable isotope profiles of marine gastropod shells. *Geological Society of America Bulletin* 112:628-641.
- 57) **B. Schmitz** (2000) News and Views: Plankton cooled a greenhouse. *Nature* 407:143-144.
- 58) **B. Schmitz**, V. Pujalte and K. Núñez-Betelu (2001) Climate and sea-level perturbations during the Initial Eocene Thermal Maximum: Evidence from siliciclastic units in the Basque Basin (Ermua, Zumaya and Trabakua Pass), northern Spain. *Palaeogeography, Palaeoecology, Palaeoclimatology* 165:299-320.
- 59) **B. Schmitz** and F. P. Andreasson (2001) Air humidity and lake $\delta^{18}\text{O}$ during the latest Paleocene-earliest Eocene in France from recent and fossil freshwater and marine gastropod $\delta^{18}\text{O}$, $\delta^{13}\text{C}$ and $^{87}\text{Sr}/^{86}\text{Sr}$. *Geological Society of America Bulletin* 113:774-789.

- 60) **B. Schmitz** and M. Tassinari (2001) Fossil meteorites. In: *Accretion of Extraterrestrial Matter Throughout Earth's History*, Peucker-Ehrenbrink, B. and Schmitz, B. (Editors), Kluwer Publishers, New York, pp. 319-331.
- 61) E.M. Crouch, C. Heilmann-Clausen, H. Brinkhuis, H.E.G. Morgan, K.M. Rogers, H. Egger and **B. Schmitz** (2001) Global dinoflagellate event associated with the late Paleocene thermal maximum. *Geology* 29:315-318.
- 62) **B. Schmitz**, M. Tassinari, B. Peucker-Ehrenbrink (2001) A rain of ordinary chondritic meteorites in the early Ordovician. *Earth and Planetary Sciences Letter* 194:1-15.
- 63) **B. Schmitz**, E.I. Thompson, L. Bornmalm and C. Heilmann-Clausen (2003) A paleoenvironmental reconstruction of the early late Paleocene North Sea from intra-shell $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ profiles of mollusks. *Geological Society of America Special Papers* 369:263-274.
- 64) H. Egger, J. Fenner, C. Heilmann-Clausen, F. Rögl, R.F. Sachsenhofer and **B. Schmitz** (2003) Paleoproductivity of the western Tethys (Austria) around the Paleocene-Eocene transition. *Geological Society of America Special Papers* 369:133-146.
- 65) V. Pujalte, X. Orue-Etxebarria, **B. Schmitz**, J. Tosquella, J.I. Baceta, A. Payros, G. Bernaola, F. Caballero and E. Apellaniz (2003) The basal Ilerdian (earliest Eocene) turnover of larger foraminifera: age constraints based on calcareous plankton and $\delta^{13}\text{C}$ profiles from southern Pyrenean sections (Spain). *Geological Society of America Special Papers* 369:205-222.
- 66) **B. Schmitz**, M. Tassinari and T. Häggström (2003) Sediment-dispersed extraterrestrial chromite traces a major asteroid disruption event. *Science* 300:961-964.
- 67) **B. Schmitz** and V. Pujalte (2003) Sea-level, humidity and land erosion records across the initial Eocene thermal maximum in a continental-marine transect in northern Spain. *Geology* 31:689-692.
- 68) E. Molina, E. Angori, I. Arenillas, H. Brinkhuis, E.M. Crouch, J. Hardenbol, H.-P. Luterbacher, S. Monechi, S. and **B. Schmitz** (2003) Correlation between the Paleocene-Eocene boundary and the Ilerdian at Campo, Spain. *Revue de Micropaléontologie* 46:95-109.
- 69) **B. Schmitz**, Shot stars: a rain of meteorites in the Ordovician (2003) *Geoscientist* 13:4-7.

- 70) **B. Schmitz**, B. Peucker-Ehrenbrink, C. Heilmann-Clausen, G. Åberg, F. Asaro, and C.-T. A. Lee (2004) Basaltic explosive volcanism, but no comet impact, at the Paleocene-Eocene boundary: High-resolution PGE, $^{187}\text{Os}/^{188}\text{Os}$, $^3\text{He}/^4\text{He}$ and $^{87}\text{Sr}/^{86}\text{Sr}$ records from Egypt, Spain and Denmark. *Earth and Planetary Science Letters* 225:1-17.
- 71) P. Reza Heck, **B. Schmitz**, H. Bauer, A. N. Halliday and R. Wieler. (2004) Fast delivery of meteorites to Earth after a major asteroid collision 480 Myr. *Nature* 430:323-325.
- 72) M. Tassinari, **B. Schmitz**, and A. Löfgren (2004) The first fossil meteorite from the mid-Ordovician of the Gullhögen quarry, Billingen, southern Sweden. *GFF* 126:321-324.
- 73) H. Egger, M. Homyoun, H. Huber, F. Rögl and **B. Schmitz** (2005) Early Eocene climatic, volcanic and biotic events in the Untersberg section (Northwestern Tethys, Austria). *Palaeogeography, Palaeoclimatology, Palaeoecology* 217:243-264
- 74) J. Burman and **B. Schmitz** (2005) Periwinkle (*Littorina littorea*) intrashell $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ records from the mid-Holocene Limfjord region, Denmark: A new high-resolution paleoenvironmental proxy approach. *The Holocene* 15:1-10.
- 75) H.P. Luterbacher, J.R. Ali, F.M. Gradstein, J.J. Hooker, S. Monechi, J.G. Ogg, J. Powell, U. Rohl, A. Sanfilippo, and **B. Schmitz** (2005) Paleogene, in *A Geological Timescale 2004* (Eds. F. Gradstein, J. Ogg and A. Smith). Cambridge University Press, p. 384-408.
- 76) V. Pujalte and **B. Schmitz** (2005) The stratigraphy of the Tremp Group revisited ("Garumnian", Tremp-Graus basin, South Pyrenees). *Geogaceta* 38:79-82.
- 77) J. Burman, O. Gustafsson, M. Segl, and **B. Schmitz** (2005) A simplified method of preparing phosphoric acid for stable isotope analyses of carbonates. *Rapid Communications in Mass Spectrometry* 19:1-3.
- 78) **B. Schmitz** and T. Häggström (2006) Extraterrestrial chromite in Middle Ordovician marine limestone at Kinnekulle, southern Sweden - traces of a major asteroid breakup event. *Meteoritics and Planetary Science* 41:455-466.
- 79) M. Calner, A. Kozłowska-Dawidziuk, M. Masiak, and **B. Schmitz** (2006) A shoreline to deep basin correlation chart for the middle Silurian coupled extinction-stable isotopic event. *GFF* 128:79-84.

- 80) S.M. Bergström, M.M. Saltzman and **B. Schmitz** (2006) First record of the Hirnantian (Upper Ordovician) $\delta^{13}\text{C}$ excursion in the North American Midcontinent. *Geological Magazine* 143:657-678.
- 81) **B. Schmitz**, B.B. Ellwood, B. Peucker-Ehrenbrink, A. El Hassani and P. Bultynck (2006) Platinum group elements and $^{187}\text{Os}/^{186}\text{Os}$ in a purported impact ejecta layer near the Eifelian-Givetian stage boundary, Middle Devonian. *Earth and Planetary Science Letters* 249:162-172.
- 82) E. Molina, C. Gonzalvo, M.A. Mancheño, S. Ortiz, **B. Schmitz**, E. Thomas and K. von Salis (2006) Integrated stratigraphy and chronostratigraphy across the Ypresian-Lutetian transition in the Fortuna Section (Betic Cordillera Spain). *Newsletters on Stratigraphy* 42:1-19.
- 83) C. Alwmark and **B. Schmitz** (2007) Extraterrestrial chromite in the resurge deposits of the early Late Ordovician Lockne crater, central Sweden. *Earth and Planetary Science Letters* 253:291-303.
- 84) **B. Schmitz** and V. Pujalte (2007) Abrupt increase in seasonal extreme precipitation at the Paleocene-Eocene boundary. *Geology* 35:215-218.
- 85) T. Häggström and **B. Schmitz** (2007) Distribution of extraterrestrial chromite in Middle Ordovician Komstad Limestone in the Killeröd quarry, southern Sweden. *Bulletin of the Geological Society of Denmark* 55:37-58.
- 86) **B. Schmitz** and S.M. Bergström (2007) Chemostratigraphy in the Swedish Upper Ordovician: Regional significance of the Hirnantian $\delta^{13}\text{C}$ excursion (HICE) in the Boda Limestone of the Siljan region. *GFF* 129:133-140.
- 87) R. C. Greenwood, **B. Schmitz**, J. B. Bridges, R.W. Hutchison and I.A. Franchi (2007) Disruption of the L-chondrite parent body: New oxygen isotope evidence from Ordovician relict chromite grains. *Earth and Planetary Science Letters* 262:204-213.
- 88) N.C. Barta, S.M. Bergström, M.R. Saltzman and **B. Schmitz** (2007) First record of the Ordovician Guttenberg $\delta^{13}\text{C}$ excursion (GICE) in New York state and Ontario: Local and regional chronostratigraphic implications. *Northeastern Geology and Environmental Sciences* 29:276-298.
- 89) J.C. Bridges, **B. Schmitz**, R. Hutchison, R.C. Greenwood, M. Tassinari, I.A. Franchi (2007) Petrographic classification of mid-Ordovician fossil meteorites from Sweden. *Meteoritics and Planetary Science* 42:1781-1789.

- 90) A. Cronholm and **B. Schmitz** (2007) Extraterrestrial chromite in latest Maastrichtian and Paleocene pelagic limestone at Gubbio, Italy: The flux of unmelted ordinary chondrites. *Meteoritics and Planetary Science* 42:2099-2109.
- 91) M.-P. Aubry, K. Ouda, C. Dupuis, W.A. Berggren, J.A. Van Couvering, J. Ali, H. Brinkhuis, P.R. Gingerich, C. Heilmann-Clausen, J. Hooker, D.V. Kent, C. King, R. W. O. B. Knox, P. Laga, E. Molina, **B. Schmitz**, E. Steurbaut and D. R. Ward (2007) The Global Standard Stratotype-section and Point (GSSP) for the base of the Eocene Series in the Dababiya section (Egypt). *Episodes* 30:271-286.
- 92) I. Arenillas, E. Molina, S. Ortiz and **B. Schmitz** (2008) Foraminiferal and $\delta^{13}\text{C}$ isotopic event-stratigraphy across the Danian-Selandian transition at Zumaya (northern Spain): chronostratigraphic implications. *Terra Nova* 20:38-44.
- 93) **B. Schmitz**, D. A. T. Harper, B. Peucker-Ehrenbrink, S. Stouge, C. Alwmark, A. Cronholm, S. M. Bergström, M. Tassinari and X. Wang (2008) Asteroid break-up linked to mid-Ordovician biodiversification event. *Nature Geoscience* 1:49-53.
- 94) H. Dypvik, J. Plado, C. Heinberg, E. Håkansson, L.J. Pesonen, **B. Schmitz** and S. Raiskila (2008) Impact structures and events - a Nordic perspective. *Episodes* 31:1-8.
- 95) P. R. Heck, **B. Schmitz**, H. Baur and R. Wieler (2008) Noble gases in fossil micrometeorites and meteorites from 470 Myr old sediments from southern Sweden and new evidence for the L chondrite parent body break-up event. *Meteoritics & Planetary Science* 43:517-528.
- 96) C. Alwmark and **B. Schmitz** (2009) The origin of the Brunflo meteorite and extraterrestrial chromite in mid-Ordovician limestone from the Gärde quarry (Jämtland, central Sweden). *Meteoritics & Planetary Science* 44:95-106.
- 97) V. Pujalte, **B. Schmitz**, J.I. Baceta, X. Orue-Etxebarria, G. Bernaola, J. Dinarès-Turel, A. Payros, E. Apellaniz and F. Caballero (2009) Correlation of the Thanetian-Ilerdian turnover of larger foraminifera and the Paleocene-Eocene thermal maximum: confirming evidence from the Campo area (Pyrenees, Spain). *Geologica Acta* 7:161-175.
- 98) V. Pujalte, J.I. Baceta, **B. Schmitz**, X. Orue-Etxebarria, A. Payros, G. Bernaola, E. Apellaniz, F. Caballero, A. Robador, J. Serra-Kiel and J. Tosquella (2009) Redefinition of the Ilerdian Stage (early Eocene). *Geologica Acta* 7:177-194.
- 99) H. Egger, C. Heilmann-Clausen and **B. Schmitz** (2009) From the shelf to abyss: Record of the Paleocene/Eocene-boundary in the Eastern Alps (Austria). *Geologica Acta* 7:215-227.

- 100) S.M. Bergström, C. Xu, **B. Schmitz**, S. Young, J.-Y. Rong and M.R. Saltzman (2009) First documentation of the Ordovician Guttenberg $\delta^{13}\text{C}$ excursion in Asia: Chemostratigraphy of the Pagoda and Yanwashan formations in southeastern China. *Geological Magazine* 146:1-11.
- 101) **B. Schmitz**, A. Cronholm, and A. Montanari (2009) A search for extraterrestrial chromite in the late Eocene Massignano section, central Italy. *Geological Society of America Special Papers* 452:71-82.
- 102) P. Ahlberg, N. Axheimer, L. E. Babcock, M.E. Eriksson, **B. Schmitz**, and F. Terfelt (2009) Cambrian high-resolution biostratigraphy and carbon isotope chemostratigraphy in Scania, Sweden: first record of the SPICE and DICE excursions in Scandinavia. *Lethaia* 42:2-16.
- 103) C. Alwmark and **B. Schmitz** (2009) Relict silicate inclusions in extraterrestrial chromite and their use in the classification of fossil chondritic material. *Geochimica et Cosmochimica Acta* 73:1472-1486.
- 104) S.M. Bergström, **B. Schmitz**, M.R. Saltzman and W.D. Huff (2010) The Upper Ordovician Guttenberg $\delta^{13}\text{C}$ excursion (GICE) in North America and Baltoscandia: Occurrence, chronostratigraphic significance, and paleoenvironmental relationships. *Geological Society of America Special Papers* 466:37-67 .
- 105) C. Alwmark, **B. Schmitz** and K. Kirsimäe (2010) The mid-Ordovician Osmussaar Breccia in Estonia linked to the disruption of the L-chondrite parent body in the asteroid belt. *Geological Society of America Bulletin* 122:1039-1046.
- 106) S.M. Bergström, S. Young and **B. Schmitz** (2010) Katian (Upper Ordovician) $\delta^{13}\text{C}$ chemostratigraphy and sequences stratigraphy in the United States and Baltoscandia: a regional comparison. *Palaeogeography, Palaeoclimatology, Palaeoecology* 296:217-234.
- 107) **B. Schmitz**, S. M. Bergström and W. Xiaofeng (2010) The middle Darriwilian (Ordovician) $\delta^{13}\text{C}$ excursion (MDICE) discovered in the Yangtze Platform succession in China: Implications of its first recorded occurrence outside Baltoscandia. *Journal of the Geological Society, London* 167:249-259.
- 108) P.R. Heck , T. Ushikubo, **B. Schmitz**, N.T. Kita, M.J. Spicuzza, and J.W. Valley (2010) A single asteroidal source for extraterrestrial Ordovician chromite grains from Sweden and China: High-precision oxygen three-isotope SIMS analyses. *Geochimica et Cosmochimica Acta* 74:497-509.

- 109) M.M.M. Meier, **B. Schmitz**, H. Baur, and R. Wieler (2010) Noble gases in individual L chondritic micrometeorites preserved in an Ordovician limestone. *Earth and Planetary Science Letters* 290:54-63.
- 110) A. Cronholm and **B. Schmitz** (2010) Extraterrestrial chromite distribution across the mid-Ordovician Puxi River section, central China: Evidence for a global major spike in flux of L-chondritic matter. *Icarus* 208:36-48.
- 111) S. M. Bergström, S. Agematsu and **B. Schmitz** (2010) Global Upper Ordovician correlation by means of $\delta^{13}\text{C}$ chemostratigraphy: Implications of the discovery of the Guttenberg $\delta^{13}\text{C}$ excursion (GICE) in Malaysia. *Geological Magazine* 147:641-651.
- 112) S.M. Bergström, **B. Schmitz**, S.A. Young and D. L. Bruton (2010) The $\delta^{13}\text{C}$ chemostratigraphy of the Upper Ordovician Mjøsa Formation at Furuberget near Hamar, southeastern Norway: Baltic, Trans-Atlantic and Chinese relation. *Norwegian Journal of Geology* 90:65-78.
- 113) **B. Schmitz**, P.R. Heck, C. Alwmark, N.T. Kita, M.M.M. Meier, B. Peucker-Ehrenbrink, T. Ushikubo, and J. W. Valley (2011) Determining the impactor of the Ordovician Lockne crater: Oxygen and neon isotopes in chromite versus sedimentary PGE signatures. *Earth and Planetary Science Letters* 306:149-155.
- 114) S.M. Bergström, **B. Schmitz**, S.A. Young and D.L. Bruton (2011) Lower Katian (Upper Ordovician) $\delta^{13}\text{C}$ chemostratigraphy, global correlation, and sea-level changes in Baltoscandia. *GFF* 133:1-17.
- 115) C. Alwmark, **B. Schmitz**, S. Holm, F. Maroni and M. Stampanoni (2011) A 3-D study of mineral inclusions in chromite from ordinary chondrites using synchrotron microtomography - method and applications. *Meteoritics & Planetary Science* 46: 1071-1081.
- 116) R. Wieler, C. Alwmark, P.R. Heck, M.M.M. Meier and **B. Schmitz** (2011) Comment on "Radiation History of Fossil Meteorites from Sweden" by V.A. Alexeev (2010) *Solar System Research*, 44, 311-319. *Solar System Research* 45:459-461.
- 117) S.M. Bergström, M. Kleffner, **B. Schmitz**, B.D. Cramer (2011) Revision of the position of the Ordovician/Silurian boundary in southern Ontario: regional chronostratigraphic implications of $\delta^{13}\text{C}$ chemostratigraphy of the Manitoulin Formation and associated strata. *Canadian Journal of Earth Sciences* 48:1447-1470.
- 118) M. Soliman, M.P. Aubry, **B. Schmitz** and R. Sherrell (2011) Enhanced coastal paleo-productivity and nutrient supply at the Paleocene/Eocene (P/E) boundary: mineralogical

and geochemical evidence from the Global Stratotype Section and Point (GSSP), Egypt. *Paleogeography, Palaeoecology, Palaeoclimatology* 310:365-377.

- 119) S. Holm, C. Alwmark, W. Alvarez and **B. Schmitz** (2011) Shock barometry of the Siljan impact structure, Sweden. *Meteoritics & Planetary Science* 12:1888-1909.
- 120) **B. Schmitz**, V. Pujalte, E. Molina, S. Monechi, X. Orue-Etxebarria, L. Alegret, E. Apellaniz, I. Arenillas, M.-P. Aubry, J.-I. Baceta, W. Berggren, G. Bernaola, F. Caballero, A. Clemmensen, J. Dinarès-Turell, C. Dupuis, C. Heilmann-Clausen, A. Hilario Orús, R. Knox, M. Martín-Rubio, S. Ortiz, A. Payros, M. Rose Petrizzo, K. von Salis, R. P. Speijer, J. Sprong, E. Steurbaut and E. Thomsen (2011) The global stratotype sections and points for the bases of the Selandian (Middle Paleocene) and Thanetian (Upper Paleocene) stages at Zumaia, Spain. *Episodes* 34:220-243.
- 121) J.I.S. Mellgren, **B. Schmitz**, L. Ainsaar, K. Kirsimäe and M. E. Eriksson (2012) Conodont-dating of the Middle Ordovician breccia cap-rock limestone on Osmussaar Island, north-western Estonia. *Estonian Journal of Earth Sciences* 61:133-148.
- 122) M.E. Eriksson, A. Lindskog, M. Calner, J.I.S. Mellgren, S.M. Bergström, F. Terfelt and **B. Schmitz** (2012) Biotic dynamics and carbonate microfacies of the conspicuous Darriwilian (Middle Ordovician) "Täljsten" interval, south-central Sweden. *Paleogeography, Palaeoecology, Palaeoclimatology* 367:89-103.
- 123) M.-P. Aubry, O. Rodriguez, D. Bord, L. Godfrey, **B. Schmitz**, and R.W.O'B. Knox (2012) The First Radiation of the Fasciculiths: Morphologic adaptations of the coccolithophores to oligotrophy. *Austrian Journal of Earth Sciences* 105:29-38.
- 124) C. Alwmark, **B. Schmitz**, M.M.M. Meier, H. Baur and R. Wieler (2012) A global rain of micrometeorites following the break-up of the L-chondrite parent body - evidence from solar wind implanted Ne in fossil extraterrestrial chromite grains from China. *Meteoritics & Planetary Science* 47:1297-1304.
- 125) S.M. Bergström, M. Kleffner and **B. Schmitz** (2012) Late Ordovician-Early Silurian $\delta^{13}\text{C}$ chemostratigraphy in the Upper Mississippi Valley: implications for chronostratigraphy and depositional interpretations. *Earth and Environmental Science Transactions of the Royal Society of Edinburgh* 102:1-20.
- 126) A. Lindskog, **B. Schmitz**, A. Cronholm, and A. Dronov (2012) A Russian record of a Middle Ordovician meteorite shower: Extraterrestrial chromite at Lynna River, St. Petersburg region. *Meteoritics & Planetary Science* 47:1274-1290.
- 127) K. Bjärnberg and **B. Schmitz** (2013) Large spinel grains in a CM chondrite (Acfer 331): Implications for reconstructions of ancient meteorite fluxes. *Meteoritics & Planetary Science* 48:180-194.

- 128) **B. Schmitz** (2013) Extraterrestrial spinels and the astronomical perspective on Earth's geological record and evolution of life. (Invited review). *Chemie der Erde* 73:117-145.
- 129) G.L. Albanesi, S. Bergström, **B. Schmitz**, F. Serra, N.A. Feltes, G.G. Voldman, and G. Ortega (2013). Darriwilian (Middle Ordovician) $\delta^{13}\text{C}_{\text{carb}}$ chemostratigraphy in the Precordillera of Argentina: Documentation of the middle Darriwilian Isotope Carbon Excursion (MDICE) and its use for intercontinental correlation. *Palaeogeography, Palaeoecology, Palaeoclimatology* 389:48-63.
- 130) V.P. Pujalte, **B. Schmitz**, J.I. Baceta (2014) Sea-level changes across the Paleocene-Eocene boundary in the Spanish Pyrenees and other basins, and their possible link with the Paleocene-Eocene thermal maximum and North Atlantic magmatism. *Palaeogeography, Palaeoecology, Palaeoclimatology* 393:45-60.
- 131) F. Terfelt, M.E. Eriksson, **B. Schmitz** (2014). The Cambrian-Ordovician transition in dysoxic facies in Baltica – diverse faunas and carbon isotope anomalies. *Palaeogeography, Palaeoecology, Palaeoclimatology* 394:59-73.
- 132) M.M.M. Meier, **B. Schmitz**, C. Alwmark, R. Trappitsch, C. Maden, R. Wieler (2014) He and Ne in individual chromite grains from the regolith breccia Ghubara (L5): Exploring the history of the L chondrite parent body regolith. *Meteoritics & Planetary Science* 49:576-594.
- 133) S.M. Bergström, M.E. Eriksson, S. Young, P. Ahlberg, **B. Schmitz** (2014) Hirnantian (latest Ordovician) $\delta^{13}\text{C}$ chemostratigraphy in southern Sweden and globally: A refined integration with the graptolite and conodont zone successions. *GFF* 136:355-386.
- 134) M.M.M. Meier, **B. Schmitz**, A. Lindskog, C. Maden, R. Wieler (2014) Cosmic-ray exposure ages of fossil micrometeorites from mid-Ordovician sediments at Lynna River, Russia. *Geochimica et Cosmochimica Acta* 125, 338-350.
- 135) V. Pujalte, **B. Schmitz** (2014) Comment on "Magnitude and profile of organic carbon isotope records from the Paleocene-Eocene Thermal Maximum: Evidence from northern Spain" by Manners et al. *EPSL* 376:220-230. *Earth and Planetary Science Letters* 395:291-293.
- 136) **B. Schmitz**, G.R. Huss, M.M.M. Meier, B. Peucker-Ehrenbrink, R.P. Church, A. Cronholm, M.B. Davies, P.R. Heck, A. Johansen, K. Keil, P. Kristiansson, G. Ravizza, M. Tassinari, F. Terfelt (2014) A fossil winonaite-like meteorite in Ordovician limestone: A piece of the impactor that broke up the L-chondrite parent body? *Earth and Planetary Science Letters* 400:145-152.

- 137) **B. Schmitz**, S. Boschi, A. Cronholm, P.R. Heck, S. Monechi, A. Montanari, F. Terfelt (2015) Fragments of Late Eocene Earth-impacting asteroids indicate disturbance of asteroid belt. *Earth and Planetary Science Letters* 425:77-83.
- 138) D. Lenaz, F. Princivale, **B. Schmitz** (2015) First crystal-structure determination of chromites from an acapulcoite and ordinary chondrites. *Mineralogical Magazine* 79:755-765.
- 139) A. Lindskog, M.E. Eriksson, C. Tell, F. Terfelt, E. Martin, P. Ahlberg, **B. Schmitz**, F. Marone (2015) Mollusk maxima and marine events in the Middle Ordovician. *Palaeogeography, Palaeoecology, Palaeoclimatology* 440:53-65.
- 140) V. Pujalte, J.I. Baceta, **B. Schmitz** (2015) A massive input of coarse-grained siliciclastics in the Pyrenean Basin during the PETM: the missing ingredient of a coeval abrupt change in hydrological regime. *Climate of the Past* 11:1653-1672.
- 141) M.E. Eriksson, F. Terfelt, R. Elofsson, A. Maas, F. Marone, A. Lindskog, D. Waloszek, **B. Schmitz**, M. Stampanoni (2016) Baring it all – undressing Cambrian ”Orsten” phosphatocopine crustaceans using synchrotron X-ray tomographic microscopy. *Lethaia* 49:312-326.
- 142) P.R. Heck, **B. Schmitz**, S.S. Rout, T. Tenner, K. Villalon, A. Cronholm, F. Terfelt, N.T. Kita (2016) A search for H-chondritic chromite in sediments that formed immediately after the breakup of the L-chondrite parent body 470 Ma ago. *Geochimica et Cosmochimica Acta* 177:120-129.
- 143) **B. Schmitz**, Q.-Z. Yin, M.E. Sanborn, M. Tassinari, C.E. Caplan, G.R. Huss (2016) A new type of solar-system material recovered from Ordovician limestone. *Nature Communications* DOI: 10.1038/ncomms11851.
- 144) S.M. Bergström, M.E. Eriksson, **B. Schmitz**, S.A. Young, P. Ahlberg (2016) Upper Ordovician $\delta^{13}\text{C}_{\text{org}}$ chemostratigraphy, K-bentonite stratigraphy, and biostratigraphy in southern Scandinavia: A reappraisal *Palaeogeography, Palaeoecology, Palaeoclimatology* 454:175-188
- 145) A. Payros, V. Pujalte, X. Orue-Etxebarria, E. Apellaniz, G. Bernaola, J.I. Baceta, F. Caballero, J. Dinares-Turell, S. Monechi, S. Ortiz, **B. Schmitz**, J. Tosquella (2017) The relevance of Iberian sedimentary successions for Paleogene stratigraphy and timescales. *Stratigraphy & Timescales* 1:393-489.
- 146) P.R. Heck, **B. Schmitz**, W.F. Bottke, S.S. Rout, N.T. Kita, A. Cronholm, C. Defouilloy, A. Dronov, F. Terfelt (2017) Rare meteorites common in the Ordovician period. *Nature Astronomy* 1:1-6, DOI: 10.1038/s41550-016-0035

- 146) S. Boschi, **B. Schmitz**, P.R. Heck, A. Cronholm, C. Defouilloy, N.T. Kita, S. Monechi, A. Montanari, S.S. Rout, F. Terfelt (2017) Late Eocene ^3He and Ir anomalies associated with ordinary chondritic spinels. *Geochimica et Cosmochimica Acta* 204:205-218.
- 147) **B. Schmitz**, P.R. Heck, W. Alvarez, S.S. Rout, N.T. Kita, A. Cronholm, C. Defouilloy, E. Martin, J. Smit, F. Terfelt (2017) Meteorite flux to Earth in the Early Cretaceous as reconstructed from sediment-dispersed extraterrestrial spinels. *Geology* 45:807-810.
- 148) S.S. Rout, P.R. Heck, N. Zaluzec, T. Ishii, J. Wen, D. Miller, **B. Schmitz** (2017) Shocked chromites in fossil L chondrites: A Raman spectroscopy and transmission electron microscopy study. *Meteoritics & Planetary Science* 52:1776-1796.
- 149) D. Lenaz, **B. Schmitz** (2017) Crystal-structure refinement of chromites from two achondrites, their T-f(O_2) conditions and implications. *Meteoritics & Planetary Science* 52:1763-1775.
- 150) N.N. Lee, J. Fritz, M.D. Fries, J.F. Gil, A. Beck, A. Pellinen-Wannberg, **B. Schmitz**, A. Steele, B. Hofmann (2017) The extreme biology of meteorites: Their role in understanding the origin and distribution of life on Earth and in the universe. In H. Stan-Lotter, S. Fendrihan, (eds.) *Adaption of Microbial Life to Environmental Extremes*, Springer International Publishing, p. 283-325.
- 151) S.M. Bergström, D.L. Bruton, **B. Schmitz**, F. Terfelt (2017) Local and trans-Atlantic chemostratigraphic significance of new $\delta^{13}\text{C}_{\text{carb}}$ data from the Sandbian and Katian stages (Middle-Upper Ordovician) of the Oslo region, Norway. *GFF* 139:289-300.
- 152) V. Pujalte, E. Apellaniz, F. Caballero, S. Monechi, S. Ortiz, X. Orue-Etxebarria, F. Rodríguez-Tovar, **B. Schmitz** (2017) Integrative stratigraphy and climatic events of a new Lower Paleogene reference section from the Betic Cordillera: Rio Gor, Granada Province, SE Spain. *Spanish Journal of Paleontology* 32:185-206.
- 153) S.S. Rout, P.R. Heck, **B. Schmitz** (2018) Shock history of the fossil ungrouped achondrite Österplana 065: Raman spectroscopy and TEM of relict chrome-spinel grains. *Meteoritics & Planetary Science* 53:973-983.
- 154) S.M. Bergström, **B. Schmitz**, H.P. Liu, F. Terfelt, R. M. McKay (2018) High-resolution $\delta^{13}\text{C}$ chemostratigraphy links the Decorah impact structure and Winneshiek Konservat-Lagerstätte to the Darriwilian (Middle Ordovician) global peak influx of meteorites. *Lethaia* doi.org/10.1111/let.12269.
- 155) E. Martin, **B. Schmitz**, H.-P. Schönlaub (2018) From the Mid-Ordovician into the late Silurian: Changes in the micrometeorite flux after the L chondrite parent breakup. *Meteoritics & Planetary Science* 53:2541-2557.

- 156) E. Martin, **B. Schmitz**, A. Montanari (2019) A record of the micrometeorite flux during an enigmatic ^3He anomaly in the Turonian (Late Cretaceous). *Geological Society of America Special Papers* 542:303-318.
- 157) S. Boschi, **B. Schmitz**, F. Terfelt, L. Ros, P. Kristiansson, C. Sulas, S. Monechi (2019) The Popigai impact ejecta layer and extraterrestrial spinels recovered in a new Italian location - the Monte Vaccaro section (Marche Apennines, Italy). *Geological Society of America Special Papers* 542:355-368.
- 158) A. Barnolas, J.C., Larrasoana, V. Pujalte, **B. Schmitz**, F.J. Sierro, M.P. Mata, B.C.J. van den Berg, J.N. Pérez-Asensio, A. Salazar, J.M. Salvany, S. Ledesma, D. Garcia-Castellanos, J. Civis, P.P. Cunha (2019) Alpine Foreland Basins. In C. Quesada, J.T. Oliveira (eds.) *The Geology of Iberia: A Geodynamic Approach*; Regional Geology Reviews, Springer Nature Switzerland AG, p. 7-59.
- 159) L.E. Aguirre-Palafox, W. Alvarez, S. Boschi, E. Martin, **B. Schmitz** (2019) Zircon provenance analysis from lower Paleocene pelagic limestones of the Bottaccione section at Gubbio (Umbria-Marche basin, Italy), *Geological Society of America Special Papers* 542:159-174.
- 160) V. Pujalte, **B. Schmitz**, A. Payros (2019) Lower Paleocene *Microcodium*-rich calcarenites in hemipelagic areas of the Subbetic Zone, SE Spain: Sr isotopes, source area and palaeogeographic implications. *Geogaceta* 66:19-22.
- 161) A. Bredberg, **B. Schmitz** (2019) Human cancer, the naked mole rat and faunal turnovers. *Cancer Medicine* 2019, DOI: 10.1002/cam4.2011.
- 162) V. Pujalte, S. Monechi, S. Ortiz, X. Orue-Etxebarria, F. Rodríguez-Tovar, **B. Schmitz** (2019) *Microcodium*-rich turbidites in hemipelagic sediments during the Paleocene-Eocene Thermal Maximum: Evidence for extreme precipitation events in a Mediterranean climate (Río Gor section, southern Spain). *Global and Planetary Change* 178:153-167.
- 163) D. Lenaz, **B. Schmitz**, W. Alvarez (2019) Terrestrial Cr-spinels in the Maiolica limestone: where are they from? *Geological Society of America Special Papers* 542:121-132.
- 164) S. Boschi, **B. Schmitz**, A. Montanari (2019) Distribution of chrome-spinel grains across the ^3He anomaly of the Tortonian at the Monte dei Corvi section, Italy. *Geological Society of America Special Papers* 542:383-392.
- 165) **B. Schmitz**, K.A. Farley, S. Goderis, P.R. Heck, S.M. Bergström, S. Boschi, P. Claeys, V. Debaille, A. Dronov, M. van Ginneken, D.A.T. Harper, F. Iqbal, J. Friberg, S. Liao, E. Martin, M.M.M. Meier, B. Peucker-Ehrenbrink, B. Soens, R. Wieler, F. Terfelt

(2019) An extraterrestrial trigger for the mid-Ordovician ice age: dust from the breakup of the L-chondrite parent body. *Science Advances* 5:eeax4184.

- 166) **B. Schmitz**, R. Feist, M.M.M. Meier, E. Martin, P.R. Heck, D. Lenaz, D. Topa, H. Busemann, C. Maden, A.A. Plant, F. Terfelt (2019) The micrometeorite flux to Earth during the Frasnian-Famennian transition reconstructed in the Coumiac GSSP section, France. *Earth and Planetary Science Letters* 522:234-243.
- 167) D. Lenaz, V. Lughì, D. Perugini, M. Petrelli, G. Turco, **B. Schmitz** (2019) MgAl₂O₄ spinels from Allende and NWA 763 carbonaceous chondrites: Structural refinement, cooling history and trace element contents. *Meteoritics & Planetary Science* 54, 3089-3100.
- 168) S.M. Bergström, **B. Schmitz**, H.P. Liu, F. Terfelt, R.M. McKay (2019) The age of the Middle Ordovician Winneshiek Shale: reply to a critical review by Lindskog & Young (2019) of a paper by Bergström et al. (2018a). *Lethaia*, doi:10.1111/let.12333.
- 169) S.M. Bergström, **B. Schmitz**, F. Terfelt, M.E. Eriksson, P. Ahlberg (2019) The $\delta^{13}\text{C}$ chemostratigraphy of Ordovician global stratotypes: Geochemical data from the Floian and Sandbian GSSPs in Sweden. *GFF* (in press)

Book reviews (international)

- 1) **B. Schmitz** (2011) Book review: Your Inner Fish - A Journey Into the 3.5 Billion-Year History of the Human Body by Neil Shubin. *Nature* 475:35.
- 2) **B. Schmitz** (2011) Book review: Incoming, Or Why We Should Stop Worrying and Learn to Love the Meteorite by Ted Nield. *Nature* 471:573-574.
- 3) **B. Schmitz** (2012) Book review: How a world came to be. The Story of the Earth by R. M. Hazen. *Nature* 485:39.
- 4) **B. Schmitz** (2013) Book review: The cosmological you. The Universe Within by Neil Shubin. *Nature* 493:25.
- 5) **B. Schmitz** (2019) Book review: The Exoplanet Handbook, 2nd ed. by M. Perryman, Cambridge University, 952 pp. *Meteoritics & Planetary Science* 54:1642-1643.

Edited books or journal issues

- 1) **B. Schmitz** (Scientific Editor) (2000) *Early Paleogene Warm Climates and Biosphere Dynamics*, Extended Abstracts From International Meeting in Göteborg, June 6-13, 1999. *GFF*, Special Issue, 192, volume 122:1.
- 2) B. Peucker-Ehrenbrink, and **B. Schmitz**, (Editors) (2001) *Accretion of Extraterrestrial Matter Throughout Earth's History*, Kluwer Publishers, New York, 466 pp.

- 3) S, Wing, P. Gingerich, **B. Schmitz** and E. Thomas (Editors) (2003) *Causes and Consequences of Globally Warm Climates in the Early Paleogene*. Geological Society of America Special Paper 369, 614 pp.

Popular scientific articles

- 1) **B. Schmitz** (1990) Var det en nerfallande himlakropp som orsakade dinosauriernas död? (Was it an asteroid that caused the extinction of the dinosaurs?) *Forskning och Framsteg* 4/90: 4-13.
- 2) **B. Schmitz** (1990) Dog dinosaurierna när jorden gick i moln? (Did the dinosaurs become extinct when the Earth was covered by dust clouds?) *Forskning och Framsteg* 7/90, 27.
- 3) **B. Schmitz** (1994) Vad vore livet utan katastrofer? (What would life be without catastrophes?) *Forskning och Framsteg* 5/94:58-67.
- 4) **B. Schmitz** (1994) Katastrofit palvelivat kehitystä. *Tiede* 2000 94:49-53.
- 5) **B. Schmitz** (1996) Växthusklimat och värmekatastrof för 55 miljoner år sedan. Vad kan forntiden berätta om framtiden? (Green house climate and warming catastrophe 55 million years ago. What can the past tell about the future?) *Swedish Natural Science Research Council Year Book* 1996 p. 37-48.
- 6) **B. Schmitz** (1998) Fossila meteoriter på Kinnekulle berättar om solsystemet för 480 miljoner år sedan. (Fossil meteorites at Kinnekulle tell about the planetary system 480 million years ago). *Forskning och Framsteg*, 5/98:52-55.
- 7) **B. Schmitz** (1999) Ny chans att titta på unika fossila ordoviciska meteoriter: Paleo Geology Center i Lidköping återuppstår. (New chance to see unique fossil Ordovician meteorites: Paleo Geology Center in Lidköping opens again). *Geologiskt Forum* 21:8-9.
- 8) **B. Schmitz** (2000) Dinosauriernas död och den vetenskapliga "sanningen". (The extinction of the dinosaurs and the scientific "truth"). *Forskning och Framsteg* 5/00:25-27.
- 9) **B. Schmitz** (2004) Värsta växthuskatastrofen (The worst greenhouse catastrophe). *Forskning och Framsteg* 1/04:16-21.
- 10) **B. Schmitz** (2004) Ny bok guidar genom Skånes urtid (New book guides through prehistoric Scania). *Geologiskt forum* 43:5

- 11) **B. Schmitz** (2005) För och emot utomjordisk intelligens (Pro and con extraterrestrial intelligence). *Forskning och Framsteg* 1/05:48-51.
- 12) M. Tieloff, **B. Schmitz** and E. Korochantseva (2007) Kosmische Katastrophe im Erdaltertum. (Cosmic catastrophes in Earth's history). *Sterne und Weltraum* 6/2007: 28-35.
- 13) **B. Schmitz** (2016) Asteroidbältets historia rekonstruerat från jordens sedimentära avlagringar. (The history of the asteroid belt reconstructed from Earth's sedimentary record). *Geologiskt Forum* 92:4-9.