# NICHOLAS CHRISTIE-BLICK

### **Abbreviated Curriculum Vitae**

30 January, 2017

Lamont-Doherty Earth Observatory of Columbia University P.O. Box 1000, 61 Route 9W, Palisades, New York 10964-8000 Cell: (845) 709-2320. FAX: (845) 365-8150.

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Date and place of birth: 3 June, 1953; St Albans, UK. U.S./British citizen.

Google Scholar profile: <a href="http://scholar.google.com/citations?hl=en&user=vD6gJnEAAAAJ">http://scholar.google.com/citations?hl=en&user=vD6gJnEAAAAJ</a> Most articles are available in pdf form: <a href="http://academiccommons.columbia.edu/catalog">http://academiccommons.columbia.edu/catalog</a>

### **DEGREES**

**Ph.D.**, University of California, Santa Barbara, 1979 (Geology). Advisor: John C. Crowell<sup>1</sup>.

**B.A.** (Honours), University of Cambridge (King's College), UK, 1974 (Natural Sciences/Geology). [M.A. awarded, 1978.]

### PROFESSIONAL CAREER

**Professor**, Department of Earth and Environmental Sciences and Lamont-Doherty Earth Observatory of Columbia University<sup>2</sup>, Palisades, New York 10964-8000.

[Assistant Professor, 1983-1987. Associate Professor, 1987-1993.

Promotion to tenure, 1989. **Professor**, 1993 to present. **Associate Chair**, 2002-2004.

Chair, and Deputy Director, Lamont-Doherty Earth Observatory, 2004-2006.]

**Senior Research Geologist** (Basin Exploration Division), Exxon Production Research Company<sup>3</sup>, P.O. Box 2189, Houston, Texas 77252-2189, 1981-1983.

[Research Geologist, 1980-1981.]

**Postdoctoral Assistant Research Geologist**, Department of Geological Sciences<sup>4</sup>, University of California, Santa Barbara, California 93106, 1979-1980.

# CURRENT RESEARCH: SEDIMENTARY GEOLOGY AND TECTONICS

# Sedimentation Processes, Crustal Deformation, and Deep-Time Earth History

Current research is aimed at such varied topics as how sedimentation responds to sea-level change, deformation and other phenomena; mechanisms of crustal extension, with particular reference to the low-angle normal fault paradox; and the geology of the Neoproterozoic Era, an interval of time that is unusual for its climatic extremes and as a threshold in the history of life.

Opportunities are available at Columbia for students to learn about and to undertake projects in these and other aspects of sedimentary geology and tectonics.

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<sup>&</sup>lt;sup>1</sup> Deceased, 13 May, 2015, the day after his 98<sup>th</sup> birthday, in Montecito, California.

<sup>&</sup>lt;sup>2</sup> Formerly Department of Geological Sciences (before 1996) and Lamont-Doherty Geological Observatory (before 1993).

<sup>&</sup>lt;sup>3</sup> Now ExxonMobil Upstream Research Company (since 2000).

<sup>&</sup>lt;sup>4</sup> Now Department of Earth Science (since 2005).

#### RESEARCH GRANT

# **Petroleum Research Fund (American Chemical Society)**

**54919-ND8**, U/Pb<sup>40</sup>Ar/<sup>39</sup>Ar coupling approach for the reconstruction of paleo-river systems: A case study of the Siluro-Devonian Old Red Sandstone of Scotland, 2015-2017.

The project involves a geochronological test of the idea that the Old Red Sandstone represents the deposits of a regional-scale river system draining the Caledonides of Greenland and Norway, comparable to the way in which the Indus and Ganges rivers drain the Himalaya today. We are interested also in the related issue of how basins developed through a combination of strike slip, extension and orogen-parallel crustal shortening. The project is being spearheaded by Michael J. DeLuca as part of his Ph.D. research.

# **NEW PROJECTS**

# **Testing the Extensional Detachment Paradigm:** A Borehole Observatory in the Sevier Desert Basin

I am lead proponent for an International Continental Scientific Drilling Program (ICDP) initiative to test the extensional detachment paradigm in the Sevier Desert basin, Utah. A priority in 2017 is to seek funds to acquire geophysical data to evaluate the character of the sub-Tertiary contact, and to provide 3–D context for a coring project at the ARCO Hole-in-Rock #1 well.

We continue to work at several other locations in the Basin and Range Province: the Death Valley region of eastern California; adjacent parts of Nevada, Arizona and Utah; and southeastern Idaho.

# Stratigraphic Response to Deformation and Sea-Level Change in the Gulf of Suez, Egypt

The Gulf of Suez, Egypt provides a unique opportunity for evaluating how sedimentation responds to crustal deformation and sea-level change in a setting in which both are known to have been important. A project currently being developed in collaboration with Dr Ahmed El-Barkooky at the University of Cairo will involve physical stratigraphic and structural mapping, sedimentology, high-resolution Sr isotopic dating, biostratigraphy, and cyclostratigraphy to investigate how patterns of sedimentation and erosion relate to the propagation of faults and folds, the tilting of fault blocks, and independently quantified sea-level change during the early Miocene. Options are being explored for co-ordinating outcrop studies with a subsurface project.

### **AWARDS AND HONORS**

**Distinguished Alumnus Award**, Department of Geological Sciences<sup>4</sup>, University of California, Santa Barbara, 2005.

2003 Outstanding Paper in the Journal of Sedimentary Research, Stephen F. Pekar, Nicholas Christie-Blick, Kenneth G. Miller, and Michelle A. Kominz, "Quantitative constraints on the origin of stratigraphic architecture at passive continental margins: Oligocene sedimentation in New Jersey, U.S.A." Journal of Sedimentary Research, v. 73, p. 227-245. Awarded in 2005.

Best Teacher Award, selected by undergraduate students in the Department of Earth and Environmental Sciences of Columbia University, 2010<sup>5</sup>; and by graduate students in 2008 and 1996<sup>6</sup>.

Fellow, Geological Society of America, 1995.

<sup>&</sup>lt;sup>5</sup> The inaugural year of this annual award.

<sup>&</sup>lt;sup>6</sup> Second place in 1995. The award for the 2007-08 academic year was made in January, 2009.

# MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science, American Association of Petroleum Geologists<sup>7</sup>, American Geophysical Union, Geological Society of America, International Association of Sedimentologists, SEPM (Society for Sedimentary Geology).

## **COURSES TAUGHT**

### **Columbia University**

Sedimentary Geology (4 pts), 1997, 1999, 2001, 2003, 2005, 2007, 2010, 2013, 2015, and planned for Fall, 2017

Geological Excursion to Death Valley, California (2 pts), 2002-2006, 2008-2009, 2011, 2013-2017, and planned for Spring 2018

<sup>8</sup>Frontiers of Science (4 pts), 2008-2010, 2012, 2014

Sedimentary Environments and Facies (3 pts), 1985, 1987, 1990, 1994, 1999, 2002

Sedimentary Basins (3 pts), 1985, 1988, 1992, 1994, 1998, 2000

Introduction to Sedimentary Geology (4 pts), 1984-1986<sup>9</sup>, 1991, 1993, 1995

Introduction to Earth Sciences II (with J.D. Hays; 3-4 pts), 1988, 1989 (twice), 1991

Principles of Stratigraphy (3 pts), 1983

#### **Seminars:**

Stratigraphy: Sedimentation and Tectonics (1 pt), 2011

Structural Geology: Tectonic Evolution of the Norwegian Caledonides

(with H.K. Brueckner; 1 pt), 2010

Structural Geology: Basin and Range Extensional Tectonics (2 pts), 2004

Stratigraphy: Geological Interpretation of Seismic Reflection Data (2 pts), 2000

Stratigraphy: Trends and Events in Terminal Proterozoic Earth History (2 pts), 1996

Stratigraphy: Seismic and Sequence Stratigraphy (2 pts), 1993

Stratigraphy: Interpretation of Seismic Reflection Profiles (2 pts), 1988

Sedimentology: Sheet Sandstones (1 pt), 1986

Structural Geology: Regional Tectonics of Western North America

(with J. Helwig; 2 pts), 1984

# **Field Seminars:**

Basin and Range Tectonics (2 pts, 9 days), Fall, 2016

Basin and Range Extensional Tectonics (1 pt, 12 days), 2005

Cretaceous Sevier Orogen-Foreland Transect of Central Utah (2 pts, 12 days), 2001

Foreland Sedimentation and Tectonics in the Canadian Rocky Mountains (2 pts, 12 days), 1998

<sup>&</sup>lt;sup>7</sup> My membership of AAPG will be allowed to lapse in 2017. It is my judgment that the organization has deviated from its stated mission "to foster scientific research, to advance the science of geology, to promote technology, and to inspire high professional conduct" – in favor of preserving the scientific status quo.

<sup>&</sup>lt;sup>8</sup> Frontiers of Science integrates modern science into Columbia's famed Core Curriculum, and since its first full year in 2004-05 the course has been a requirement for every Columbia College undergraduate. I chaired the course in Fall, 2010, 2012 and 2014.

<sup>&</sup>lt;sup>9</sup> These courses were team-taught with J.E. Sanders during the years indicated. Sanders retired from Barnard College in 1989, and died on 20 October, 1999.

Nicholas Christie-Blick: Curriculum Vitae, January, 2017

Tectonics and Sedimentation in Eastern California and Adjacent Nevada (2 pts, 12 days), 1995

Sedimentation and Tectonics in the Cretaceous Foreland Basin and Adjacent Orogen, Utah, Wyoming and Idaho (2 pts, 12 days), 1992

Modern Carbonate Environments of Southern Florida (1 pt, 3 days), 1989

Tectonics and Sedimentation in Southern California (2 pts, 12 days), 1988

Tectonic and Stratigraphic Evolution of Southern Appalachians (1 pt, 7 days), 1984

### **Biosphere 2 Center:**

Guest lectures, 1999, 2000.

#### **Short Course**

Short course in sequence stratigraphy, Universidad del País Vasco, Bilbao, Spain, 1992

### **Guest Classes at Other Universities**

University of Cape Town, South Africa, 2012

University of Pretoria, Pretoria, South Africa, 2012

University of Canterbury, Christchurch, New Zealand, 2007

Williams College, Massachusetts, 2003

Oxford University, Oxford, UK, 1996

University of Missouri, Columbia, Missouri, 1995

# **Exxon Production Research Company**

Fundamentals of structural analysis, 1981-1983

Basin tectonics (field school) – segments on strike-slip and extensional tectonics, 1982-1983

## POSTDOCTORAL RESEARCH SCIENTISTS

**Stephen F. Pekar.** Postdoctoral Research Scientist, 2000-2003. Calibration of the stratigraphic response to glacioeustatic change using oxygen isotopic data (Oligocene, New Jersey). Present position: Professor, Queens College, City University of New York.

**Linda E. Sohl.** Postdoctoral Research Scientist, 2000-2001. Exploring the limits of life on Earth: Environmental extremes of the Neoproterozoic "super" glacial and interglacial cycles. Present position: Associate Director of Research and Project Development, Center for Climate Systems Research, Columbia University, and Goddard Institute for Space Studies, New York.

**Martin J. Kennedy.** Postdoctoral Research Associate, collaborative with L.A. Derry at Cornell University, 1994-1996. Research in stable isotope geochemistry of carbonate glacial cycles and radiogenic tracers in terrestrial ecosystems. Present position: Professor and Director of the Sprigg Geobiology Centre, University of Adelaide, Australia.

**Sanjeev Gupta.** Postdoctoral Research Scientist, 1994-1995. Controls on sequence geometry and bounding surfaces in ramp settings. Present position: Professor, Imperial College, London, UK.

**John P. Grotzinger.** Postdoctoral Fellow, 1985-1986. Tectonics and sedimentation of the 1.9 Ga Kilohigok foreland basin, northwest Canadian shield. Member, National Academy of Sciences (since 2002). Present position: Fletcher Jones Professor of Geology, California Institute of Technology, Pasadena.

#### RESEARCH OF GRADUATE STUDENTS

#### **Current Student**

**Michael J. DeLuca.** Dissertation topic: Applications of geochronology and thermochronology to studies in tectonics and sedimentation. Ph.D. expected, 2020.

# **Ph.D.s Completed**

Marc A. Vankeuren (Ph.D., 2015). Dissertation topic: A structural and <sup>40</sup>Ar/<sup>39</sup>Ar geochronological re-evaluation of low-angle normal faults in southeastern Idaho. Present position: Teacher (Earth science), Grant Union High School, Sacramento, California.

**Rafael V. Almeida (Ph.D., 2014).** Dissertation topic: Mechanisms and magnitude of Cenozoic crustal extension in the vicinity of Lake Mead, Nevada and the Beaver Dam Mountains, Utah: Geochemical, geochronological, thermochronological and geophysical constraints. Present position: Earth Observatory of Singapore.

Andrew S. Madof (Ph.D., 2010). Dissertation topic: Noneustatic controls on sediment accumulation in the upper Cretaceous of western Colorado and Pliocene to Holocene of offshore Louisiana. Present position: Chevron Energy Technology Company, Houston, Texas.

**Byrdie Renik** (**Ph.D., 2010**)<sup>10</sup>. Dissertation topic: Distribution of Neogene extension and strike slip in the Death Valley region, California-Nevada, with implications for palinspastic reconstruction and models of normal faulting. NSF Graduate Research Fellow. Present position: ExxonMobil, Houston, Texas.

**Katherine C. Leonard (Ph.D., 2009).** Dissertation topic: Antarctic snow drift processes (Research Advisor, B. Tremblay, McGill University). Present position: École Polytechnique Fédérale de Lausanne, Switzerland.

**Ganqing Jiang (Ph.D., 2002).** Dissertation topic: Neoproterozoic sequence and chemostratigraphy. Present position: Professor, University of Nevada, Las Vegas.

**Linda E. Sohl (Ph.D., 2000).** Dissertation topic: Paleoclimatology of the Neoproterozoic interglacial to Marinoan glacial succession (~650-575 Ma), central Flinders Ranges, South Australia. Heezen Prize. Present position: Associate Director of Research and Project Development, Center for Climate Systems Research, Columbia University, and Goddard Institute for Space Studies, New York.

André A. Bender (Ph.D., 2000). Dissertation topic: Mechanisms of intracratonic and rift basin formation: Insights from Canning basin, northwest Australia (Co-advisor, G.D. Karner; defended in 1998). Present position: Eurofins-Anatech, Rio de Janeiro, Brazil.

Ann E. Holmes (Ph.D., 1996). Dissertation topic: Paleozoic depositional and structural history of the Canning basin, Western Australia, and constraints on eustatic change. Present position: Mildred Routt Distinguished Teaching Professor, University of Tennessee, Chattanooga.

**Neal W. Driscoll (Ph.D., 1992).** Dissertation topic: Tectonic and depositional processes inferred from stratal relationships (Co-advisor, J.K. Weissel). Heezen Prize. Present position: Professor, Scripps Institution of Oceanography, La Jolla, California.

Marjorie E. Levy (Ph.D., 1991). Dissertation topic: Late Proterozoic and Early Cambrian sedimentation, sequence stratigraphy, and tectonic evolution of the eastern Great Basin. (P.E. Olsen assumed the role of advisor for 1990-91 academic year.) Present position: Chevron Energy Technology Company, San Ramon, California.

**Kenneth W. Hudnut (Ph.D., 1989).** Dissertation topic: Active tectonics of the Salton Trough, southern California. Present position: U.S. Geological Survey, Pasadena, California.

<sup>&</sup>lt;sup>10</sup> Ph.D. defended with distinction.

# Past M.Phil. Students

**David F. Scheuing (M.Phil., 1990).** Research topic: The effect of structure on paleomagnetic data collected in complexly deformed terranes: A case study from the San Jacinto fault zone, southern California. Present position: environmental consulting industry, Liverpool, New York.

**David S. McCormick (M.Phil., 1989).** Research topic: Sedimentology and stratigraphy of the Early Proterozoic Burnside Formation, Kilohigok basin, northwestern Canada (Co-Advisor, J.P. Grotzinger). NSF Graduate Research Fellow. Ph.D., 1992, Massachusetts Institute of Technology (Advisor, J.P. Grotzinger). Present position: Geology Program Manager and Principal Geologist at Schlumberger, Cambridge, Massachusetts.

### Past M.A. Students

**Attreyee Ghosh (M.A., 2003).** Research topic: Neogene and Pleistocene sequence development at the New Jersey continental margin. Ph.D., 2008, State University of New York, Stony Brook (Advisor, W.E. Holt). Present position: Assistant Professor, Indian Institute of Science, Bangalore, India.

Melissa J. Saurborn (M.A., 2000). Research topic: Unconformity development in tectonically active settings (Co-advisor, G.D. Karner). Present position: Samson Resources, Denver, Colorado.

# **Current Ph.D. Advisory Committees**

Guleed Ali. (Advisor, S.R. Hemming). NSF Graduate Research Fellow. Ph.D. expected, 2017.

# Past Ph.D. Advisory and Defense Committees

Reader and/or chair of defense committee for 49 other Ph.D. dissertations, 1985-2017.

**Abagael R. West (Ph.D., 2017).** Dissertation topic: Multidisciplinary approaches to understanding the origins and evolution of Notoungulata (Mammalia: Placentalia) (Advisor, J. Flynn). NSF Graduate Research Fellow. Present position: Rea Postdoctoral Fellow, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania.

Margaret A. Reitz (Ph.D., 2015). Dissertation topic: The structural evolution of the Calabrian forearc: a multidisciplinary approach to investigating time-transgressive deformation (Advisor, M.S. Steckler). Present position: SUNY Geneseo.

**John A. Templeton (Ph.D., 2015).** Dissertation topic: Structural evolution of Hornelen basin (Devonian, Norway) from detrital thermochronometry (Advisor, M.H. Anders). NSF Graduate Research Fellow. Present position: ConocoPhillips, Houston, Texas.

Elizabeth Pierce Davis (formerly Elizabeth L. Pierce; Ph.D., 2012). Dissertation topic: Antarctica's geologic and ice sheet history from isotopic sedimentary provenance studies (Advisor: S.R. Hemming). Present position: Arlington, Massachusetts.

Michelle Spaulding (Ph.D., 2011). Dissertation topic: Phylogeny and evolution of locomotor modes in *Carnivoramorpha (Mammalia)* (Advisor, J. Flynn). NSF Graduate Research Fellow. Present position: Assistant Professor, Purdue University North Central, Westville, Indiana.

**Andres Giallombardo (Ph.D., 2009).** Dissertation topic: New Cretaceous mammals from Mongolia and the early diversification of Eutheria (Advisor, J. Flynn). Present position: American Museum of Natural History.

**Sterling J. Nesbitt (Ph.D., 2009)**<sup>10</sup>. Dissertation topic: The early evolution of Archosaurs: Relationships and the origin of major clades (Advisor, P.E. Olsen). NSF Graduate Research Fellow. Present position: Assistant Professor, Virginia Polytechnic and State University, Blacksburg, Virginia.

Christopher D. Walker (Ph.D., 2008). Dissertation topic: A gravity slide origin for the Mormon Peak detachment: Re-examining the evidence for extreme extension in the Mormon Mountains, southeastern Nevada, U.S.A. (Advisor, M.H. Anders). Present position: BP, Houston, Texas.

- **Daniel T. Ksepka (Ph.D., 2007).** Dissertation topic: Phylogeny, histology and functional morphology of fossil penguins (Sphenisciformes) (Advisor, M. Norell). NSF Graduate Research Fellow. Present position: Curator of science, Bruce Museum, Greenwich, Connecticut.
- **Jun Liu (Ph.D., 2007).** Dissertation topic: New material from North Carolina and phylogeny, taxonomy of *Traversodontidae (Synapsida: Cynodontia)* (Advisor, P.E. Olsen). Present position: Beijing, People's Republic of China.
- **Jessica H. Whiteside (Ph.D., 2006).** Dissertation topic: Catastrophic, climatic, and biotic modulation of ecosystem evolution (Advisor, P.E. Olsen). Goldwater Scholar. NSF Graduate Research Fellow. Present position: Lecturer, University of Southampton, UK.
- **Susan R. Zimmerman (Ph.D., 2006).** Dissertation topic: Chronology and paleoclimate records of the late Pleistocene Wilson Creek Formation, Mono Lake, California (Advisor: S.R. Hemming). NSF Graduate Research Fellow. Present position: Center for Accelerator Mass Spectrometry, Lawrence Livermore National Laboratory.
- **Michael Tischer (Ph.D., 2006).** Dissertation topic: The structure and development of the ocean-continent boundary of the Exmouth Plateau and Cuvier margin, northwest Australia: Implications for extensional strain partitioning (Advisor: G.D. Karner). Present position: Project geoscientist at NEOS GeoSolutions, Denver, Colorado.
- **Zvi Karcz (Ph.D., 2005).** Dissertation topic: An observational and experimental study of pressure solution (Advisor, C.H. Scholz). Present position: VP Exploration, Delek Drilling and Avner Oil, Herzelia, Israel.
- **Matthew C. Mihlbachler (Ph.D., 2005).** Dissertation topic: Phylogenetic systematics of the *Brontotheriidae (Mammalia, Perissodactyla)* (Advisor: Jin Meng). Present position: Associate Professor of Anatomy, New York Institute of Technology, College of Osteopathic Medicine, Old Westbury, New York.
- Emma C. Rainforth (Ph.D., 2005). Dissertation topic: Ichnotaxonomy of the fossil footprints of the Connecticut Valley (early Jurassic, Newark Supergroup, Connecticut and Massachusetts) (Advisor: P.E. Olsen). Present position: Professor, Ramapo College, New Jersey.
- **Malka L. Machlus (Ph.D., 2004).** Dissertation topic: Orbital forcing of continental Eocene climate: Detailed stratigraphy and <sup>40</sup>Ar/<sup>39</sup>Ar dating of the Green River Formation in Wyoming (Advisor: P.E. Olsen). Present position: Kingsborough Community College.
- **Diego Pol (Ph.D., 2004).** Dissertation topic: Phylogenetic relationships of basal Sauropodomorph dinosaurs (Advisor, M. Norell). Present position: Museo Paleontológico Egidio Feruglio, Patagonia, Argentina.
- MaryAnn L. Malinconico (Ph.D., 2002). Dissertation topic: Lacustrine organic sedimentation, organic metamorphism, and thermal history of selected early Mesozoic rift basins, eastern U.S.A. (Advisor, P.E. Olsen). Present position: Research Associate, Lafayette College, Easton, Pennsylvania.
- Candace O. Major (Ph.D., 2002)<sup>10</sup>. Dissertation topic: Non-eustatic controls on sea level in semi-enclosed basins (Advisor, W.B.F. Ryan). Present position: National Science Foundation, Washington, D.C.
- **Stewart Wills (Ph.D., 2000).** Dissertation topic: Evaluating models of detachment faulting (Advisor, M.H. Anders). NSF Graduate Research Fellow. Present position: Editor and Content Director, *Optics & Photonics News* at The Optical Society.
- Jia Fang (Ph.D., 2000). Dissertation topic: Styles and distribution of continental extension derived from the rift basins of eastern Papua New Guinea (Advisor, J.C. Mutter). Present position: Teacher (physics), Union County Vocational Technical School, New Jersey.
- **Peter M. LeTourneau (Ph.D., 1999).** Dissertation topic: Tectonic co-evolution of the Late Triassic Taylorsville and Richmond rift basins: Results of an integrated stratigraphic, structural and

- paleomagnetic analysis (Advisor, P.E. Olsen). Present position: President, Mark GeoEnvironmental Sciences, New York.
- Marc A. Carrasco (Ph.D., 1998). Dissertation topic: Morphological variation in the dentition of kangaroo rats (genus *Dipodomys*) and its use in distinguishing species in the fossil record (Advisor, M.C. McKenna). NSF Graduate Research Fellow. Present position: Research Associate, Department of Integrative Biology, University of California, Berkeley.
- **Jan M. Vermilye (Ph.D., 1996).** Dissertation topic: The growth of natural fracture systems: A fracture mechanics approach (Advisor, C.H. Scholz). Present position: Seismo Tectonic Reservoir Monitoring, Lyons, Colorado.
- **John P. McGinnis (Ph.D., 1995).** Dissertation topic: Stratigraphic discontinuities and their implication for continental margin evolution (Advisors, G.D. Karner and D.E. Hayes). Present position: Senior Vice President, Exploration and Development, Seneca Resources Corporation, Houston, Texas.
- **Victor J. DiVenere (Ph.D., 1994).** Dissertation topic: Paleomagnetic results from Marie Byrd Land, West Antarctica: Tectonic implications for West Antarctica and the Atlantic-Pacific circuit (Advisor, D.V. Kent). Present position: Associate Professor, Long Island University-C.W. Post campus, New York.
- **John R. Hopper (Ph.D., 1994).** Dissertation topic: Studies of the evolution of continental rifts (Advisor, W.R. Buck). Present position: Senior Research Geophysicist, Geological Survey of Denmark and Greenland (GEUS), Copenhagen, Denmark.
- **Ulisses T. Mello (Ph.D., 1994).** Dissertation topic: Thermal and mechanical history of sediments in extensional basins (Advisors, G.D. Karner and R.N. Anderson). Present position: IBM Research, Brazil.
- Carlos Pirmez (Ph.D., 1994). Dissertation topic: Growth of a submarine meandering channel-levee system on Amazon fan (Advisor, W.B.F. Ryan). Present position: Shell Italia Exploration and Production, Inc., Houston, Texas.
- Weibin Wang (Ph.D., 1994). Dissertation topic: Experimental and theoretical studies of rock friction and wear (Advisor, C.H. Scholz). Deceased, September 11, 2001.
- **Sarah J. Fowell (Ph.D., 1994).** Dissertation topic: Palynology of Triassic/Jurassic boundary sections from the Newark Supergroup of eastern North America: Implications for catastrophic extinction scenarios (Advisor, P.E. Olsen). Present position: Associate Professor, University of Alaska, Fairbanks.
- **David J. Reynolds (Ph.D., 1993).** Dissertation topic: Sedimentary basin evolution: tectonic and climatic interaction (Advisors, M.S. Steckler and P.E. Olsen). Present position: ExxonMobil Exploration Company, Houston, Texas.
- Cecilia M.G. McHugh (Ph.D., 1993). Dissertation topic: Submarine canyon and deep-sea fan systems of passive and active continental margins (Advisor, W.B.F. Ryan). Present position: Professor, Queens College, City University of New York.
- Mark A. Chandler (Ph.D., 1991). Dissertation topic: The Early Jurassic climate: General Circulation Model simulations and the paleoclimate record (Advisor, D.H. Rind). Present position: Associate Research Scientist, Goddard Institute for Space Studies (NASA), New York.
- Jin Meng (Ph.D., 1991). Dissertation topic: Craniodental morphologies and systematics of *Didymoconidae (Insectivora, Mammalia)* (Advisor, M.C. McKenna). Present position: Curator, American Museum of Natural History, New York.
- **Karen R. Schmitt (Ph.D., 1991).** Dissertation topic: Sandstone intrusions of the Andean fold-thrust belt (51-54°S): Implications for the paleohydrogeologic evolution of the southernmost Andes (Advisor, I.W.D. Dalziel). NSF Graduate Research Fellow. Present position: Dean, School of Arts

and Sciences, and Vice Provost for Research and Sponsored Programs, University of Alaska Southeast.

Roy W. Schlische (Ph.D., 1990). Dissertation topic: Aspects of the structural and stratigraphic development of early Mesozoic rift basins of eastern North America (Advisor, P.E. Olsen). Present position: Professor, Rutgers University, New Jersey.

**Angela M. Barone (Ph.D., 1989).** Dissertation topic: Morphotectonic evolution of subsea volcanoes near the boundary of separating plates: examples from rifting and spreading stages (Advisor, W.B.F. Ryan). Present position: unknown (residing in Italy).

**Patrick L. Williams (Ph.D., 1989).** Dissertation topic: Aspects of earthquake geology and seismotectonics of the southern San Andreas and related faults, southern California (Advisor, L.R. Sykes). Present position: Independent contractor, Lettis Consultants International, Walnut Creek, California.

**John D. Miller (Ph.D., 1988).** Dissertation topic: Paleomagnetism applied to tectonic problems in the Appalachians of North America (Advisor, D.V. Kent). Present position: BP, Houston, Texas.

**Kenneth S. Coles (Ph.D., 1988).** Dissertation topic: Stratigraphy and structure of the Pinecone sequence, Roberts Mountains allochthon, Nevada, and aspects of mid-Paleozoic sedimentation and tectonics in the Cordilleran geosyncline (Advisor, R. Schweickert). Present position: Associate Professor, Indiana University of Pennsylvania, Indiana, Pennsylvania.

**Audrey A. Massa (Ph.D., 1988).** Dissertation topic: The origin of sandy shore-parallel ridges and the formation of modern spits: examples from the western end of Fire Island, New York (Advisor, J.E. Sanders). Present position: Hazard Mitigation Planning, FEMA, New York City.

Suzanne B. O'Connell (Ph.D., 1986). Dissertation topic: Anatomy of modern submarine depositional and distributary systems (Advisor, W.B.F. Ryan). Present position: Professor, Wesleyan University, Connecticut.

Michelle A. Kominz (Ph.D., 1986). Dissertation topic: Geophysical modeling studies (Advisor, W.C. Pitman, III). Present position: Professor, Western Michigan University.

William J. Devlin (Ph.D., 1986). Dissertation topic: Geologic and isotopic studies related to latest Proterozoic—early Cambrian rifting and initiation of a passive continental margin, southern British Columbia, Canada, and north-eastern Washington, U.S.A. (Advisor, G.C. Bond). Present position: Retired from ExxonMobil in Southbury, Connecticut.

Craig Nicholson (Ph.D., 1985). Dissertation topic: Crustal structure and fault kinematics from the analysis of microearthquake data (Advisor, L.R. Sykes). Present position: Marine Science Institute, University of California, Santa Barbara.

**Julian Thorne (Ph.D., 1985).** Dissertation topic: Studies in stratology: the physics of stratigraphy (Advisor, A.B. Watts). Present position: Chevron Energy Technology Company, San Ramon, California.

**John A. Farre (Ph.D., 1985).** Dissertation topic: The importance of mass wasting processes on the continental slope (Advisor, W.B.F. Ryan). Present position: Retired from ExxonMobil.

## **Past Masters Advisory Committees**

**Naomi Lubick (M.A., 2000).** Research topic: Post-glacial knickpoint retreat on streams in the Finger Lakes region of New York (Advisor, K.A. Kastens; Earth and Environmental Science Journalism Program). Present position: Freelance writer, Stockholm, Sweden.

Member of advisory committees or briefly, advisor, for miscellaneous other students.

### **External Advisor**

**Raed Badr.** Provisional dissertation topic: Sequence stratigraphy and architecture of syn-rift sediments, eastern margin of the Gulf of Suez, Egypt (Advisor, A.N. El Barkooky, University of Cairo, Egypt). Member of advisory committee. Ph.D. expected, 2020.

**Safiya M. Hassan (Ph.D., 2011).** Dissertation topic: Sequence stratigraphy and sedimentology of the lower Miocene Moghra Formation in the Qattara depression, northwestern Egypt (Advisors, A.N. El Barkooky, University of Cairo, Egypt, and G.I.A. El-Gawad, Beni-Suef University, Egypt). Present position: Beni-Suef University.

### **External Examiner**

Christi L. Browne (Ph.D., 2014). Dissertation topic: Professional Learning Communities (PLCs) as a means for school-based science curriculum change (Advisor, A.E. Rivet, Teachers College, Columbia University). Present position: Scarsdale Middle School. http://www.scarsdaleschools.k12.ny.us/Domain/301

Mark D. Smith (Ph.D., 2009). Dissertation topic: Stratigraphic and geochemical evolution of the Old Fort Point Formation, southern Canadian Cordillera: The deep-marine perspective of Ediacaran post-glacial environmental change (Advisor, R.W.C. Arnott, University of Ottawa). Present position: ExxonMobil.

**Paul R. Gammon (Ph.D., 1997).** Dissertation topic: Sequence stratigraphy of the Mangaopari basin, southeastern North Island, New Zealand (Advisor, R.M. Carter, James Cook University, Townsville, Queensland, Australia). Present position: Geological Survey of Canada, Ottawa.

**David T. Miller (Ph.D., 1994).** Dissertation topic: A Delamerian fold-thrust belt: The Stuart shelf to the Murray basin province; geological, geophysical and structural evidence (Advisor, A.E. Grady, Flinders University, Adelaide, South Australia). Present position: unknown.

**David S. McCormick (Ph.D., 1992).** Dissertation topic: Evolution of an Early Proterozoic alluvially-dominated foreland basin, Burnside Formation, Kilohigok Basin, N.W.T., Canada (Advisor, J.P. Grotzinger, Massachusetts Institute of Technology). Present position: Geology Program Manager and Principal Geologist at Schlumberger, Cambridge, Massachusetts.

**Pietro A. DiBona (Ph.D., 1989).** Dissertation topic: Geologic history and sequence stratigraphy of the Late Proterozoic Wonoka Formation, northern Flinders Ranges, South Australia (Advisor, C.C. von der Borch, Flinders University, Adelaide, South Australia). Present position: Chevron, Perth, Australia.

#### UNDERGRADUATE MENTORING

**John D. Wilding (B.A. expected, 2017; intern, 2014).** Project topic: Crustal extension and volcanic geochronology. Co-mentors: S.R. Hemming, M.H. Anders and M.A. Vankeuren.

**Sarah W.M. George (B.A., 2014, Wellesley College, Massachusetts; summer intern, 2013).** Project topic: How does the Earth's crust stretch? A field-based geo/thermochronological study. Co-mentors: S.R. Hemming and M.H. Anders. Present position: Masters program, University of Texas, Austin (Advisor: B.K. Horton).

Marissa M. Tremblay (B.A., 2012, Barnard College; summer intern, 2009). Senior thesis topic: Late Miocene tilting of the Resting Spring Range, California. Co-mentors: S.R. Hemming (2009-2012) and B. Renik (2009). Goldwater Scholar, 2011. NSF Graduate Research Fellow. Present position: Ph.D. program, University of California, Berkeley (Advisor, D.L. Shuster).

Emily H.G. Cooperdock (formerly Goldstein; B.A., 2011). Senior thesis topic: Depositional setting and detrital zircon analysis of the Jardine metasedimentary sequence from the South Snowy block in Yellowstone National Park. NSF Graduate Research Fellow. Present position: Ph.D. program, University of Texas, Austin (Advisor, D.F. Stockli).

- **Peri Sasnett (B.A., 2011; summer intern, 2009).** Senior thesis topic: Surface exposure dating of phreatic eruptions at Ubehebe Crater, Death Valley, California. Co-mentors: B.M. Goehring and J.M. Schaefer. Fulbright Scholar, University of Canterbury, Christchurch, New Zealand. Present position: Teton National Park.
- **Lila S. Neiswanger (B.A., 2012; summer intern, 2009).** Project topic: Provenance of Miocene breccia-bearing beds in southern Nevada, with implications for the magnitude of crustal extension in the Lake Mead transect. Co-mentors: B. Renik, S.R. Hemming and M.Y. Cai. Present position: freelance stage manager/ theater technician, Sydney, Australia.
- Ilana Somasunderam (B.A., 2009; summer intern, 2008). Senior thesis topic: Early Miocene sedimentation, paleoecology and strontium isotope geochronology. Co-mentors: S.L. Goldstein and S.F. Pekar (Queens College, City University of New York). Present position: Environmental media specialist, Crissy Field Center, San Francisco, California.
- **Samuel C. Schon (B.A., 2006).** Senior thesis topic: Re-evaluation of extensional fault geometry and kinematics at Azure Ridge in the South Virgin Mountains, Nevada. Ph.D., 2012, Brown University (Advisor, J. Head). Present position: ExxonMobil, Houston, Texas.
- Yekaterina (Kate) Gluzberg (B.A., 2004; Rabi Scholar, 2003). Project topic: Rainfall patterns, growth and "drought" in the suburbs of New York City. Co-mentors: B. Lyon (EI-IRI, meteorology) and U. Lall (SEAS-DEEE, hydrology). Present position: Volunteer Projects Manager, Partnerships for Parks, City of New York Parks and Recreation.
- Jessyca Harris Keeler (formerly Harris; B.S., 1995, St Lawrence University, Canton, New York; summer intern, 1994). Project topic: Late Cenozoic seismic stratigraphy of the U.S. mid-Atlantic continental margin. Present position: Owner, Align Partnerships, Conway Center, New Hampshire (Portland, Maine area).
- Rebecca Hayden Kennedy (formerly Hayden; A.B., 1987, Barnard College). Senior thesis topic: Neoproterozoic stratigraphy in the northern Sheeprock Mountains, Utah. Present position: Pennsylvania Environmental Council.
- **Co-Director of Undergraduate Studies**, Department of Earth and Environmental Sciences, Columbia University, 2007-2011.
- **Chair, Rabi Scholars Program (Columbia University)**, 2002-2011. The purpose of the program is to foster undergraduate science in Columbia College by attracting and providing research opportunities to the most able students. During the years in which I was involved, the program included about 35-40 scholars at any one time, representing first through senior years, and drawn from across the sciences and mathematics.

#### HIGH SCHOOL MENTORING

**Alexander Beekman (Senior Experience Internship).** Bergen County Technical Schools, 2014-15. Project topic: Is Rockland's water supply still in danger? Present position: New York University.

# PUBLISHED ARTICLES<sup>11</sup>

- Blick, N.H., 1979, Stratigraphic, structural and paleogeographic interpretation of upper Proterozoic glaciogenic rocks in the Sevier orogenic belt, northwestern Utah: Ph.D. dissertation, Santa Barbara, University of California, 633 p.
- 1. Blick, N., 1981, Late Precambrian glaciation in Utah, *in* Hambrey, M.J., and Harland, W.B., eds., *Earth's Pre-Pleistocene Glacial Record:* International Geological Correlation Programme, Project 38: Cambridge, Cambridge University Press, p. 740-744.
- 2. Knoll, A.H., Blick, N., and Awramik, S.M., 1981, Stratigraphic and ecologic implications of late Precambrian microfossils from Utah: *American Journal of Science*, v. 281, p. 247-263.
- 3. Christie-Blick, N., 1982, Upper Precambrian (Eocambrian) Mineral Fork Tillite of Utah: A continental glacial and glaciomarine sequence: Discussion: *Geological Society of America Bulletin*, v. 93, p. 184-186.
- 4. Christie-Blick, N., 1982, Upper Proterozoic and Lower Cambrian rocks of the Sheeprock Mountains, Utah: Regional correlation and significance: *Geological Society of America Bulletin*, v. 93, p. 735-750.
- 5. Christie-Blick, N., 1982, Pre-Pleistocene glaciation on Earth: Implications for climatic history of Mars: *Icarus*, v. 50, p. 423-443.
- 6. Christie-Blick, N., 1983, Structural geology of the southern Sheeprock Mountains, Utah: Regional significance, *in* Miller, D.M., Todd, V.R., and Howard, K.A., eds., *Tectonic and Stratigraphic Studies in the Eastern Great Basin:* Geological Society of America Memoir 157, p. 101-124.
- 7. Christie-Blick, N., 1983, Glacial-marine and subglacial sedimentation, Upper Proterozoic Mineral Fork Formation, Utah, *in* Molnia, B.F., ed., *Glacial-Marine Sedimentation:* New York, Plenum Press, p. 703-776.
- 8. Crittenden, M.D., Jr., Christie-Blick, N., and Link, P.K., 1983, Evidence for two pulses of glaciation during the late Proterozoic in northern Utah and southeastern Idaho: *Geological Society of America Bulletin*, v. 94, p. 437-450.
- 9. Christie-Blick, N., 1985, Upper Proterozoic glacial-marine and subglacial deposits at Little Mountain, Utah: *Brigham Young University Geology Studies*, v. 32, Part 1, p. 9-18.
- 10. Christie-Blick, N., and Biddle, K.T., 1985, Deformation and basin formation along strike-slip faults, *in* Biddle, K.T., and Christie-Blick, N., eds., *Strike-Slip Deformation, Basin Formation, and Sedimentation:* Society of Economic Paleontologists and Mineralogists Special Publication No. 37, p. 1-34.
- 11. Biddle, K.T., and Christie-Blick, N., 1985. Glossary Strike-slip deformation, basin formation, and sedimentation, *in* Biddle, K.T., and Christie-Blick, N., eds., *Strike-Slip Deformation, Basin Formation, and Sedimentation:* Society of Economic Paleontologists and Mineralogists Special Publication No. 37, p. 375-386.
- 12. Biddle, K.I., and Christie-Blick, N.H., 1985, Basin formation, structural traps, and controls on hydrocarbon occurrence along wrench-fault zones: *Offshore Technology Conference*, Houston, OTC 4872, p. 291-295. [Biddle's middle initial is T, not I. I do not use mine in publications.]
- 13. Bond, G.C., Christie-Blick, N., Kominz, M.A., and Devlin, W.J., 1985, An early Cambrian rift to post-rift transition in the Cordillera of western North America: *Nature*, v. 315, p. 742-746.

<sup>&</sup>lt;sup>11</sup> Twenty-three articles with more than 100 citations; more than 8,000 total citations; h-index = 41. (Data from Science Citation Index Expanded and Google Scholar. <a href="http://scholar.google.com/citations?hl=en&user=vD6gJnEAAAAJ">http://scholar.google.com/citations?hl=en&user=vD6gJnEAAAAJ</a>)

Most articles are available in pdf form: <a href="http://academiccommons.columbia.edu/catalog">http://academiccommons.columbia.edu/catalog</a>

- 14. Harding, T.P., Vierbuchen, R.C., and Christie-Blick, N., 1985, Structural styles, plate-tectonic settings and hydrocarbon traps of divergent (transtensional) wrench faults, *in* Biddle, K.T., and Christie-Blick, N., eds., *Strike-Slip Deformation, Basin Formation, and Sedimentation:* Society of Economic Paleontologists and Mineralogists Special Publication No. 37, p. 51-77.
- 15. Christie-Blick, N., 1986, Sea-level fluctuations. Coastal onlap and sea-level change, *in* 1987 *Yearbook of Science and Technology*, supplement to Encyclopedia of Science and Technology: New York, McGraw-Hill, p. 413-416.
- 16. Christie-Blick, N., Grotzinger, J.P., and von der Borch, C.C., 1988, Sequence stratigraphy in Proterozoic successions: *Geology*, v. 16, p. 100-104.
- 17. Christie-Blick, N., and Link, P.K., 1988, Glacial-marine sedimentation, Mineral Fork Formation (Late Proterozoic), Utah, *in* Holden, G.S., ed., *Geological Society of America Field Trip Guidebook*, Centennial Meeting Denver, Colorado: Colorado School of Mines Professional Contributions, No. 12, p. 259-274.
- 18. Christie-Blick, N., Mountain, G.S., and Miller, K.G., 1988, Sea level history: *Science*, v. 241, p. 596.
- 19. von der Borch, C.C., Christie-Blick, N., and Grady, A.E., 1988, Depositional sequence analysis applied to Late Proterozoic Wilpena Group, Adelaide Geosyncline, South Australia: *Australian Journal of Earth Sciences*, v. 35, p. 59-71.
- 20. Christie-Blick, N., and Levy, M., 1989, Stratigraphic and tectonic framework of Upper Proterozoic and Cambrian rocks in the western United States, *in* Christie-Blick, N., and Levy, M., eds., *Late Proterozoic and Cambrian Tectonics, Sedimentation, and Record of Metazoan Radiation in the Western United States:* 28th International Geological Congress Field Trip Guidebook T331, American Geophysical Union, p. 7-22.
- 21. Christie-Blick, N., and Levy, M., 1989, Concepts of sequence stratigraphy, with examples from strata of Late Proterozoic and Cambrian age in the western United States, *in* Christie-Blick, N., and Levy, M., eds., *Late Proterozoic and Cambrian Tectonics, Sedimentation, and Record of Metazoan Radiation in the Western United States:* 28th International Geological Congress Field Trip Guidebook T331, American Geophysical Union, p. 23-38.
- 22. Levy, M., and Christie-Blick, N., 1989, Pre-Mesozoic palinspastic reconstruction of the eastern Great Basin (western United States): *Science*, v. 245, p. 1454-1462.
- 23. von der Borch, C.C., Grady, A.E., Eickhoff, K.H., DiBona, P., and Christie-Blick, N., 1989, Late Proterozoic Patsy Springs Canyon, Adelaide Geosyncline: submarine or subaerial origin?: *Sedimentology*, v. 36, p. 777-792.
- 24. Christie-Blick, N., 1990, Sequence stratigraphy and sea-level changes in Cretaceous time, *in* Ginsburg, R.N., and Beaudoin, B., eds., *Cretaceous Resources, Events and Rhythms:* NATO ASI Series C, v. 304, Dordrecht, Kluwer Academic Publishers, p. 1-21.
- 25. Christie-Blick, N., Mountain, G.S., and Miller, K.G., 1990, Seismic stratigraphic record of sea-level change, *in Sea-Level Change:* Studies in Geophysics, Washington, D.C., National Academy Press, p. 116-140.
- 26. Christie-Blick, N., von der Borch, C.C., DiBona, P.A., 1990, Working hypotheses for the origin of the Wonoka canyons (Neoproterozoic), South Australia: *American Journal of Science*, v. 290-A (Cloud volume), p. 295-332.
- 27. DiBona, P.A., von der Borch, C.C., and Christie-Blick, N., 1990, Sequence stratigraphy and evolution of a basin-slope succession: The Late Proterozoic Wonoka Formation, Flinders Ranges, South Australia: *Australian Journal of Earth Sciences*, v. 37, p. 135-145.
- 28. Christie-Blick, N., 1991, Onlap, offlap, and the origin of unconformity-bounded depositional sequences: *Marine Geology*, v. 97, p. 35-56.

- 29. Levy, M., and Christie-Blick, N., 1991, Tectonic subsidence of the early Paleozoic passive continental margin in eastern California and southern Nevada: *Geological Society of America Bulletin*, v. 103, p. 1590-1606.
- 30. Levy, M., and Christie-Blick, N., 1991, Late Proterozoic paleogeography of the eastern Great Basin, *in* Cooper, J.D., and Stevens, C.H., eds., *Paleozoic Paleogeography of the Western United States II*: Pacific Section, SEPM, Book 67, v. 1, p. 371-386.
- 31. Christie-Blick, N., 1992, Stratigraphy, *in Encyclopedia of Science and Technology:* New York, McGraw-Hill, 7th edition, p. 483-485.
- 32. O'Brien, P.E., and Christie-Blick, N., 1992, Glacially grooved surfaces in the Grant Group, Grant Range, Canning Basin and the extent of Late Palaeozoic Pilbara ice sheets: *BMR Journal of Australian Geology and Geophysics*, v. 13, p. 87-92.
- 33. Kennard, J.M., Southgate, P.N., Jackson, M.J., O'Brien, P.E., Christie-Blick, N., Holmes, A.E., and Sarg, J.F., 1992, New sequence perspective on the Devonian reef complex and the Frasnian-Famennian boundary, Canning basin, Australia: *Geology*, v. 20, p. 1135-1138.
- 34. Holmes, A.E., and Christie-Blick, N., 1993, Origin of sedimentary cycles in mixed carbonate-siliciclastic systems: An example from the Canning basin, Western Australia, *in* Loucks, R.G., and Sarg, J.F., eds., *Carbonate Sequence Stratigraphy. Recent Developments and Applications:*American Association of Petroleum Geologists Memoir 57, p. 181-212.
- 35. Link, P.K., Christie-Blick, N., Devlin, W.J., Elston, D.P., Horodyski, R.J., Levy, M., Miller, J.M.G., Pearson, R.C., Prave, A., Stewart, J.H., Winston, D., Wright, L.A., and Wrucke, C.T., 1993, Middle and Late Proterozoic stratified rocks of the western U.S. Cordillera, Colorado Plateau, and Basin and Range province, *in* Reed, J.C., Jr., Bickford, M.E., Houston, R.S., Link, P.K., Rankin, D.W., Sims, P.K., and Van Schmus, W.R., eds., *Precambrian: Conterminous U.S.:* Boulder, Colorado, Geological Society of America, The Geology of North America, Volume C-2, p. 463-595.
- 36. Anders, M.H., and Christie-Blick, N., 1994, Is the Sevier Desert reflection of west-central Utah a normal fault?: *Geology*, v. 22, p. 771-774.
- 37. Levy, M., Christie-Blick, N., and Link, P.K., 1994, Neoproterozoic incised valleys of the eastern Great Basin, Utah and Idaho: Fluvial response to changes in depositional base level, *in* Dalrymple, R.W., Boyd, R., and Zaitlin, B.A., eds., *Incised Valley Systems: Origin and Sedimentary Sequences:* SEPM (Society for Sedimentary Geology) Special Publication No. 51, p. 369-382.
- 38. Link, P.K., Miller, J.M.G., and Christie-Blick, N., 1994, Glacial-marine facies in a continental rift environment: Neoproterozoic rocks of the western United States Cordillera, *in* Deynoux, M., Miller, J.M.G., Domack, E.W., Eyles, N., Fairchild, I.J., and Young, G.M., eds., *Earth's Glacial Record:* Cambridge, Cambridge University Press, p. 29-46.
- 39. Christie-Blick, N., and Driscoll, N.W., 1995, Sequence stratigraphy: *Annual Review of Earth and Planetary Sciences*, v. 23, p. 451-478.
- 40. Christie-Blick, N., Dyson, I.A., and von der Borch, C.C., 1995, Sequence stratigraphy and the interpretation of Neoproterozoic earth history, *in* Knoll, A.H., and Walter, M., eds., *Neoproterozoic Stratigraphy and Earth History: Precambrian Research*, v. 73 (special volume), p. 3-26.
- 41. Anders, M.H., Christie-Blick, N., and Wills, S., 1995, Is the Sevier Desert reflection of west-central Utah a normal fault?: Reply: *Geology*, v. 23, p. 670.
- 42. Driscoll, N.W., Hogg, J.R., Christie-Blick, N., and Karner, G.D., 1995, Extensional tectonics in the Jeanne d'Arc Basin, offshore Newfoundland: implications for the timing of break-up between Grand Banks and Iberia, *in* Scrutton, R.A., Stoker, M.S., Shimmield, G.B., and Tudhope, A.W., eds., *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region:* Geological Society, London, Special Publications, v. 90, p. 1-28.

- 43. Christie-Blick, N., 1997, Neoproterozoic sedimentation and tectonics in west-central Utah, *in* Link, P.K., and Kowallis, B.J., eds., *Proterozoic to Recent Stratigraphy, Tectonics and Volcanology, Utah, Nevada, Southern Idaho and Central Mexico: Brigham Young University Geology Studies*, v. 42, Part 1, p. 1-30.
- 44. Christie-Blick, N., Austin, J.A., Jr., and Shipboard Scientific Party, 1998, Introduction: Oligocene to Pleistocene eustatic change at the New Jersey continental margin a test of sequence stratigraphy, *in* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, *Continuing the New Jersey Mid-Atlantic Sea-Level Transect:* College Station, Texas, Ocean Drilling Program, p. 5-16.
- 45. Anders, M.H., Christie-Blick, N., and Wills, S., 1998, Extensional collapse along the Sevier Desert reflection, northern Sevier Desert basin, western United States: Comment: *Geology*, v. 26, p. 474.
- 46. Austin, J.A., Jr., Christie-Blick, N., Malone, M., Mountain, G.S., and the Leg 174A Shipboard Scientific Party, 1998, Miocene to Pleistocene sand-rich sequences and sea-level changes at the New Jersey outer shelf: Results from Leg 174A: *JOIDES Journal*, v. 24, No. 1, p. 4-6 and 19.
- 47. Miller, K.G., Mountain, G.S., Browning, J.V., Kominz, M., Sugarman, P.J., Christie-Blick, N., Katz, M.E. and Wright, J.D., 1998, Cenozoic global sea level, sequences, and the New Jersey Transect: Results from coastal plain and continental slope drilling: *Reviews of Geophysics*, v. 36, p. 569-601.
- 48. Shipboard Scientific Party, 1998, Site 1071, *in* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, *Continuing the New Jersey Mid-Atlantic Sea-Level Transect:* College Station, Texas, Ocean Drilling Program, p. 37-97.
- 49. Shipboard Scientific Party, 1998, Site 1072, *in* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, *Continuing the New Jersey Mid-Atlantic Sea-Level Transect:* College Station, Texas, Ocean Drilling Program, p. 99-152.
- 50. Shipboard Scientific Party, 1998, Site 1073, *in* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, *Continuing the New Jersey Mid-Atlantic Sea-Level Transect:* College Station, Texas, Ocean Drilling Program, p. 153-191.
- 51. Christie-Blick, N., 1999, Formation, *in Encyclopedia of Science and Technology:* New York, McGraw-Hill, 9th edition (on-line version).
- 52. Christie-Blick, N., Sohl, L.E., and Kennedy, M.J., 1999, Considering a Neoproterozoic snowball Earth: *Science*, v. 284, p. 1087. [Full text: http://www.sciencemag.org/cgi/content/full/284/5417/1087a]
- 53. Sohl, L.E., Christie-Blick, N., and Kent, D.V., 1999, Paleomagnetic polarity reversals in Marinoan (ca. 600 Ma) glacial deposits of Australia: Implications for the duration of low-latitude glaciation in Neoproterozoic time: *Geological Society of America Bulletin*, v. 111, p. 1120-1139.
- 54. Steckler, M.S., Mountain, G.S., Miller, K.G., and Christie-Blick, N., 1999, Reconstruction of Tertiary progradation and clinoform development on the New Jersey passive margin by 2-D backstripping: *Marine Geology*, v. 154, p. 399-420.
- 55. Metzger, J.M, Flemings, P.B., Christie-Blick, N., Mountain, G.S., Austin, J.A., Jr., and Hesselbo, S.P., 2000, Late Miocene to Pleistocene sequences at the New Jersey outer continental shelf (ODP Leg 174A, Sites 1071 and 1072): *Sedimentary Geology*, v. 134, p. 149-180.
- 56. Christie-Blick, N., 2001, Stratigraphy, *in Encyclopedia of Science and Technology:* New York, McGraw-Hill, 9th edition (on-line version). [A revised and extended version of the 1992 article.]
- 57. Christie-Blick, N., Williams, G.E., and Gostin, V.A., 2001, Discussion on mantle plume uplift in the sedimentary record: origin of kilometre-deep canyons within late Neoproterozoic successions, South Australia: *Journal of Geological Society, London*, v. 158, p. 573-576.

- 58. Anders, M.H., Christie-Blick, N., Wills, S., and Krueger, S.W., 2001, Rock deformation studies in the Mineral Mountains and Sevier Desert of west-central Utah: Implications for upper crustal low-angle normal faulting: *Geological Society of America Bulletin*, v. 113, p. 895-907.
- 59. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2001, Are Proterozoic cap carbonates and isotopic excursions a record of gas hydrate destabilization following Earth's coldest intervals?: *Geology*, v. 29, p. 443-446.
- 60. Kennedy, M.J., Christie-Blick, N., and Prave, A.R., 2001, Carbon isotopic composition of Neoproterozoic glacial carbonates as a test of paleoceanographic models for snowball Earth phenomena: *Geology*, v. 29, p. 1135-1138.
- 61. Pekar, S.F., Christie-Blick, N., Kominz, M.A., and Miller, K.G., 2001, Evaluating the stratigraphic response to eustasy from Oligocene strata in New Jersey: *Geology*, v. 29, p. 55-58.
- 62. Stewart, J.H., Gehrels, G.E., Barth, A.P., Link, P.K., Christie-Blick, N., and Wrucke, C.T., 2001, Detrital zircon provenance of Mesoproterozoic to Cambrian arenites in the western United States and northwestern Mexico: *Geological Society of America Bulletin*, v. 113, p. 1343-1356.
- 63. Christie-Blick, N., and Austin, J.A., Jr., 2002, Synopsis of Leg 174A postcruise science, *in* Christie-Blick, N., Austin, J.A., Jr., and Malone, M.J., eds., *Proceedings of the Ocean Drilling Program, Scientific Results*, v. 174A, p. 1-13.

  [http://www-odp.tamu.edu/publications/174A\_SR/synopsis/synopsis.htm]
- 64. Jiang Ganqing, Christie-Blick, N., Kaufman, A.J., Banerjee, D.M., and Rai, V., 2002, Sequence stratigraphy of the Neoproterozoic Infra Krol Formation and Krol Group, Lesser Himalaya, India: *Journal of Sedimentary Research*, v. 72, p. 524-542.
- 65. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2002, Are Proterozoic cap carbonates and isotopic excursions a record of gas hydrate destabilization following Earth's coldest intervals?: Reply: *Geology*, v. 30, p. 287-288.
- 66. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2002, Are Proterozoic cap carbonates and isotopic excursions a record of gas hydrate destabilization following Earth's coldest intervals?: Reply: *Geology*, v. 30, p. 763.
- 67. Pekar, S.F., Christie-Blick, N., Kominz, M.A., and Miller, K.G., 2002, Calibration between eustatic estimates from backstripping and oxygen isotopic records for the Oligocene: *Geology*, v. 30, p. 903-906.
- 68. Jiang Ganqing, Christie-Blick, N., Kaufman, A.J., Banerjee, D.M., and Rai, V., 2003, Carbonate platform growth and cyclicity at a terminal Proterozoic passive margin, Infra Krol Formation and Krol Group, Lesser Himalaya, India: *Sedimentology*, v. 50, p. 921-952.
- 69. Pekar, S.F., Christie-Blick, N., Miller, K.G., and Kominz, M.A., 2003, Quantitative constraints on the origin of stratigraphic architecture at passive continental margins: Oligocene sedimentation in New Jersey, U.S.A.: *Journal of Sedimentary Research*, v. 73, p. 227-245.
- 70. Jiang Ganqing, Kennedy, M.J., and Christie-Blick, N., 2003, Stable isotopic evidence for methane seeps in Neoproterozoic postglacial cap carbonates: *Nature*, v. 426, p. 822-826.
- 71. Jiang Ganqing, Sohl, L.E., and Christie-Blick, N., 2003, Neoproterozoic stratigraphic comparison of the Lesser Himalaya (India) and Yangtze block (South China): Paleogeographic implications: *Geology*, v. 31, p. 917-920.
- 72. McHugh, C.M.G., Pekar, S.F., Christie-Blick, N., Ryan, W.B.F., Carbotte, S., and Bell, R., 2004, Spatial variations in a condensed interval between estuarine and open-marine settings: Holocene Hudson River estuary and adjacent continental shelf: *Geology*, v. 32, p. 169-172.
- 73. Pekar, S.F., McHugh, C.M.G., Christie-Blick, N., Jones, M., Carbotte, S.M., Bell, R.E., and Lynch-Stieglitz, J., 2004, Estuarine processes and their stratigraphic record: Paleosalinity and sedimentation changes in the Hudson estuary (North America): *Marine Geology*, v. 209, p. 113-129.

- 74. Knoll, A.H., Walter, M.R., Narbonne, G.M., and Christie-Blick, N., 2004, A new period for the geologic time scale: *Science*, v. 305, p. 621-622.
- 75. Machlus, M., Hemming, S.R., Olsen, P.E., and Christie-Blick, N., 2004, Eocene calibration of geomagnetic polarity time scale reevaluated: Evidence from the Green River Formation of Wyoming: *Geology*, v. 32, p. 137-140.
- 76. Knoll, A.H., Walter, M.R., Narbonne, G.M., and Christie-Blick, N., 2004, Three "first places" for Ediacaran Period: *Episodes*, v. 27, p. 222.
- 77. Lyon, B., Christie-Blick, N., and Gluzberg, Y., 2005, Water shortages, development, and drought in Rockland County, New York: *Journal of American Water Resources Association*, December, p. 1457-1469.
- 78. Wills, S., Anders, M.H., and Christie-Blick, N., 2005, Pattern of Mesozoic thrust surfaces and Tertiary normal faults in the Sevier Desert subsurface, west-central Utah: *American Journal of Science*, v. 305, p. 42-100.
- 79. Zhang Shihong, Jiang Ganqing, Zhang Junming, Song Biao, Kennedy, M.J., and Christie-Blick, N., 2005, U-Pb sensitive high-resolution ion microprobe ages from the Doushantuo Formation in south China: Constraints on late Neoproterozoic glaciations: *Geology*, v. 33, p. 473-476.
- 80. Miller, K.G., Kominz, M.A., Browning, J.V., Wright, J.D., Mountain, G.S., Katz, M.E., Sugarman, P.J., Cramer, B.S., Christie-Blick, N., and Pekar, S.F., 2005, The Phanerozoic record of global sealevel change: *Science*, v. 310, p. 1293-1298.
- 81. Anders, M.H., Christie-Blick, N., and Walker, C.D., 2006, Distinguishing between rooted and rootless detachments: A case study from the Mormon Mountains of southeastern Nevada: *Journal of Geology*, v. 114, p. 645-664.
- 82. Jiang Ganqing, Kennedy, M.J., Christie-Blick, N., Wu Huaicun, and Zhang Shihong, 2006, Stratigraphy, sedimentary structures, and textures of the late Neoproterozoic Doushantuo cap carbonate in South China: *Journal of Sedimentary Research*, v. 76, p. 978-995.
- 83. Kaufman, A.J., Jiang Ganqing, Christie-Blick, N., Banerjee, D.M., and Rai, V., 2006, Stable isotope record of the terminal Neoproterozoic Krol platform in the Lesser Himalayas of northern India: *Precambrian Research*, v. 147, p. 156-185.
- 84. Knoll, A.H., Walter, M.R., Narbonne, G.M., and Christie-Blick, N., 2006, The Ediacaran Period: a new addition to the geologic time scale: *Lethaia*, v. 39, p. 13-30.
- 85. Christie-Blick, N., and Anders, M.H., 2007, Regional structure and kinematic history of the Sevier fold-and-thrust belt, central Utah: Discussion: *Geological Society of America Bulletin*, v. 119, p. 506-507.
- 86. Christie-Blick, N., Anders, M.H., Wills, S., Walker, C.D., and Renik, B., 2007, Observations from the Basin and Range Province (western United States) pertinent to the interpretation of regional detachment faults, *in* Karner, G.D., Manatschal, G., and Pinheiro, L.M., eds., *Imaging, Mapping and Modelling Continental Lithosphere Extension and Breakup:* Geological Society, London, Special Publications, v. 282, p. 421-441.
- 87. Christie-Blick, N., Pekar, S.F., and Madof, A.S., 2007, Is there a role for sequence stratigraphy in chronostratigraphy?: *Stratigraphy*, v. 4, No. 2/3, p. 217-229.
- 88. Jiang Ganqing, Kaufman, A.J., Christie-Blick, N., Zhang Shihong, and Wu Huaichun, 2007, Carbon isotope variability across the Ediacaran Yangtze platform in South China: Implications for a large surface-to-deep ocean δ<sup>13</sup>C gradient: *Earth and Planetary Science Letters*, v. 261, p. 303-320.
- 89. Walker, C.D., Anders, M.H., and Christie-Blick, N., 2007, Kinematic evidence for downdip movement on the Mormon Peak detachment: *Geology*, v. 35, p. 259-262.

- 90. Pekar, S.F., and Christie-Blick, N., 2008, Resolving apparent conflicts between oceanographic and Antarctic climate records and evidence for a decrease in pCO<sub>2</sub> during the Oligocene through early Miocene (34-16 Ma): Palaeogeography, Palaeoclimatology, Palaeoecology, v. 260, p. 41-49.
- 91. Renik, B., Christie-Blick, N., Troxel, B.W., Wright, L.A., and Niemi, N.A., 2008, Re-evaluation of the middle Miocene Eagle Mountain Formation and its significance as a piercing point for the interpretation of extreme extension across the Death Valley region, California, U.S.A.: *Journal of Sedimentary Research*, v. 78, p. 199-219.
- 92. Machlus, M.L., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2008, Spectral analysis of the lower Eocene Wilkins Peak Member, Green River Formation, Wyoming: Support for Milankovitch cyclicity: *Earth and Planetary Science Letters*, v. 268, p. 64-75.
- 93. Christie-Blick, N., 2009, Volcanism: Eruptions and extinctions: *Nature Geoscience*, v. 2, p. 539-540.
- 94. Christie-Blick, N., Anders, M.H., Manatschal, G., and Wernicke, B.P., 2009, Testing the extensional detachment paradigm: A borehole observatory in the Sevier Desert basin: *Scientific Drilling*, No. 8, p. 57-59.
- 95. Madof, A.S., Christie-Blick, N., and Anders, M.H., 2009, Stratigraphic controls on a salt-withdrawal intraslope minibasin, north-central Green Canyon, Gulf of Mexico: Implications for misinterpreting sea level change: *American Association of Petroleum Geologists Bulletin*, v. 93, p. 535-561.
- 96. Aubry, M.-P., Van Couvering, J.A., Christie-Blick, N., Landing, E., Pratt, B.R., Owen, D.E., and Ferrusquía-Villafranca, I., 2009, Terminology of geological time: Establishment of a community standard: *Stratigraphy*, v. 6, No. 2, p. 100-105.
- 97. Christie-Blick, N., 2011, Time conventions and symbols for use in nuclear chemistry and the Earth and planetary sciences: *Chemistry International*, v. 33, No. 6, Online Supplement, p. s3. www.iupac.org/publications/ci/2011/3306/pac letters-sup.pdf
- 98. Christie-Blick, N., 2011, Time conventions and symbols for use in the Earth and planetary sciences and nuclear chemistry: *Episodes*, v. 34, no. 4, p. 268.
- 99. Christie-Blick, N., 2011, Does God exist? Does it matter?: *American Atheist*, v. 49, No. 3, p. 20-21 and 39.
- 100. Kennedy, M.J., and Christie-Blick, N., 2011, Condensation origin for Neoproterozoic cap carbonates during deglaciation: *Geology*, v. 39, p. 319-322.
- 101. Link, P.K., and Christie-Blick, N., 2011, Neoproterozoic strata of southeastern Idaho and Utah: record of Cryogenian rifting and glaciation, *in* Arnaud, E., Halverson, G.P., and Shields-Zhou, G., eds., *The Geological Record of Neoproterozoic Glaciations:* Geological Society, London, Memoirs, v. 36, p. 425-436.
- 102. Christie-Blick, N., 2012, Geological time conventions and symbols: *GSA Today*, v. 22, no. 2, p. 28-29.
- 103. Anders, M.H., Christie-Blick, N., and Malinverno, A., 2012, Cominco American well: Implications for the reconstruction of the Sevier orogen and Basin and Range extension in west-central Utah: *American Journal of Science*, v. 312, p. 508-533.
- 104. Kennedy, M.J., and Christie-Blick, N., 2012, Condensation origin for Neoproterozoic cap carbonates during deglaciation: Reply: *Geology*, e266, doi:10.1130/G33214Y.1.
- 105. Sasnett, P., Goehring, B.M., Christie-Blick, N., and Schaefer, J.M., 2012, Do phreatomagmatic eruptions at Ubehebe Crater (Death Valley, California) relate to a wetter than present hydroclimate?: *Geophysical Research Letters*, v. 39, L02401, doi:10.1029/2011GL050130.

- 106. Renik, B., and Christie-Blick, N., 2013, A new hypothesis for the amount and distribution of dextral displacement along the Fish Lake Valley-northern Death Valley-Furnace Creek fault zone, California-Nevada: *Tectonics*, v. 32, p. 123-145, doi:10.1029/2012TC003170.
- Madof, A.S., Christie-Blick, N., and Anders, M.H., 2015, Tectonically controlled nearshore deposition: Cozzette Sandstone, Book Cliffs, Colorado, U.S.A.: *Journal of Sedimentary Research*, v. 85, p. 459-488. <a href="http://dx.doi.org/10.2110/jsr.2015.26">http://dx.doi.org/10.2110/jsr.2015.26</a>
- 108. Almeida, R.V., Cai, Y., Hemming, S.R., Christie-Blick, N., and Neiswanger, L.S., 2016, Reexamination of the crustal boundary context of Mesoproterozoic granites in southern Nevada using U-Pb zircon chronology and Nd and Pb isotopic compositions: *Journal of Geology*, v. 124, p. 313-329.
- 109. Madof, A.S., Christie-Blick, N., Anders, M.H., and Febo, L.A., 2017, Unreciprocated sedimentation along a mud-dominated continental margin, Gulf of Mexico, U.S.A.: Implications for sequence stratigraphy in muddy settings devoid of depositional sequences: *Marine and Petroleum Geology*, v. 80, p. 492-516. http://dx.doi.org/10.1016/j.marpetgeo.2016.12.022
- 110. Duan, L., Meng, Q.-R., Christie-Blick, N., and Wu, G.-L., New insights on the Triassic tectonic development of South China from the detrital zircon provenance of Nanpanjiang turbidites: *Geological Society of America Bulletin*, returned to journal following second revision, Jan. 2017.

### **OTHER MANUSCRIPTS**

Almeida, R.V., Christie-Blick, N., Hemming, S.R., Thomson, S., Cai, Y., and Anders, M.H., Reassessing the magnitude and mechanisms of extension and the role of transfer faults in the Lake Mead region, Nevada: New constraints from Frenchman Mountain and Gold Butte: *Geological Society of America Bulletin*.

Holmes, A.E., and Christie-Blick, N., High-resolution sequence stratigraphy and sedimentology of Upper Devonian carbonate platform to starved basin deposits at McWhae Ridge, Canning basin, Western Australia: *Sedimentology*.

Renik, B., Christie-Blick, N., Wright, L.A., and Anders, M.H., The Sheephead fault zone and its role in bounding Neogene extension and magmatism in the Death Valley area, California: *Journal of Geology*.

Tremblay, M.M., Christie-Blick, N., Hemming, S.R., Gombiner, J., Wilding, J.D., Anders, M.H., and Renik, B., Late Miocene tilting of the Resting Spring Range, California, with implications for the rolling hinge model of crustal extension: *Geological Society of America Bulletin*.

Vankeuren, M., Christie-Blick, N., Anders, M.H., and Almeida, R.V., A re-evaluation of detachment faults in the southern Bannock Range, Idaho: *Journal of Geology*.

Walker, C.D., Anders, M.H., and Christie-Blick, N., A gravity slide interpretation of the Mormon Peak detachment: *Geological Society of American Bulletin*.

Yuan, X.P., and Christie-Blick, N., Mechanical properties of the Sevier Desert detachment: an application of Critical Coulomb Wedge theory: *Geology*.

Yuan, X.P., and Christie-Blick, N., Mechanics of low-angle normal faults in the upper crust: Limit analysis: *TBA*.

## **EDITED AND MULTI-AUTHOR VOLUMES**

- 1. Biddle, K.T., and Christie-Blick, N., eds., 1985, *Strike-Slip Deformation, Basin Formation, and Sedimentation:* SEPM Special Publication No. 37, 386 p.
- 2. Christie-Blick, N., and Levy, M., eds., 1989, *Late Proterozoic and Cambrian Tectonics*, *Sedimentation, and Record of Metazoan Radiation in the Western United States:* 28th International Geological Congress Field Trip Guidebook T331, American Geophysical Union, 113 p.
- 3. Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., 1998, Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, *Continuing the New Jersey Mid-Atlantic Sea-Level Transect:* College Station, Texas, Ocean Drilling Program, 324 p.
- 4. Christie-Blick, N., Austin, J.A., Jr., and Malone, M.J., eds., 2002, *Proceedings of the Ocean Drilling Program, Scientific Results*, v. 174A. http://www-odp.tamu.edu/publications/174A SR/174asr.htm

# **EXTENDED ABSTRACTS**

- 1. <sup>12</sup>Christie-Blick, N., 1991, Onlap, offlap, and the origin of unconformity-bounded depositional sequences, *in* Biddle, K.T., and Schlager, W., eds., *The Record of Sea-Level Fluctuations: Sedimentary Geology*, v. 70 (special issue), p. 105-107.
- 2. Christie-Blick, N., 1994, High-resolution sequence stratigraphy of the Wonoka canyons (terminal Proterozoic, South Australia): An unusual example of sequence development associated with overall transgression: *Second High-Resolution Sequence Stratigraphy Conference*, Tremp, Spain, Abstracts, p. 33-40.
- 3. Holmes, A.E., and Christie-Blick, N., 1994, Evaluating the applicability of sequence stratigraphic models for mixed systems: constraints from the Canning basin, Western Australia, *in* Johnson, S.D., ed., *High Resolution Sequence Stratigraphy: Innovations and Applications:* Liverpool, University of Liverpool, UK, Abstract Volume, p. 43-47.
- 4. Christie-Blick, N., 1995, Forced logic: Sequence-boundary development in ramp and shelf settings: Conference on Sedimentary Responses to Forced Regression: Recognition, Interpretation and Reservoir Potential: Geological Society of London, British Sedimentological Research Group, Abstracts, p. 9-11.
- 5. Christie-Blick, N., 2001, A personal perspective on sequence stratigraphic nomenclature: American Association of Petroleum Geologists, *Hedberg Research Conference (Sequence Stratigraphic and Allostratigraphic Principles and Concepts)*, Dallas, Texas, Program and Abstracts Volume, p. 20-21.
- 6. Berggren, W.A., Christie-Blick, N., Aubry, M.-P., Carter, R.M., Hallam, A., Miller, K.G., Owen, D.E., Van Couvering, J.A., and Watkins, J.S., 2001, A proposed bipartite sequence stratigraphic nomenclature: American Association of Petroleum Geologists, *Hedberg Research Conference* (Sequence Stratigraphic and Allostratigraphic Principles and Concepts), Dallas, Texas, Program and Abstracts Volume, p. 16-17.
- 7. Ghosh, A., Christie-Blick, N., Mountain, G.S., McHugh, C.M.G., and Pekar, S.F., 2003, Late Pleistocene sequence geometry beneath the Long Island shelf from chirp sonar data: *Geology of Long Island and Metropolitan New York*, State University of New York, Stony Brook, Abstracts.
- 8.  $^{13}$ Pekar, S.F., and Christie-Blick, N., 2007, Showing a strong link between climatic and  $pCO_2$  changes: resolving discrepancies between oceanographic and Antarctic climate records for the

published in a regular issue of Marine Geology (Christie-Blick, 1991).

20

This is an extended abstract of an article originally submitted to this special issue. When the special issue was transferred from Marine Geology to Sedimentary Geology, I requested that the full version of the paper be

Oligocene and early Miocene (34-16 Ma), *in* Cooper, A., Raymond, C., and the ISAES Editorial Team, eds., *Antarctica: A Keystone in a Changing World:* Online Proceedings for the 10<sup>th</sup> International Symposium on Antarctic Earth Sciences: U.S. Geological Survey Open-File Report 2007-1047, Extended Abstract 024, 4 p. http://pubs.usgs.gov/of/2007/1047/ea/of2007-1047ea024.pdf

9. Christie-Blick, N., Jiang Ganqing, and Madof, A.S., 2008, Sequence development in Neoproterozoic-Cambrian basins: *International Conference on Geology and Hydrocarbon Potential of Neoproterozoic-Cambrian Basins in India, Pakistan and Middle East:* Jammu, University of Jammu, Abstracts, p. 57-60.

# **ABSTRACTS**

- 1. Blick, N., 1976, Late Proterozoic glaciation: Evidence in the Sheeprock Mountains, Utah: *Geological Society of America, Abstracts with Programs*, v. 8, p. 783-784.
- 2. Blick, N., 1977, Diachronous upper Proterozoic glacial deposits, Idaho and Utah: *Geological Society of America, Abstracts with Programs*, v. 9, p. 901.
- 3. Knoll, A.H., Blick, N., and Awramik, S.M., 1978, Stratigraphic and ecologic implications of late Precambrian microfossils from Utah: *Geological Society of America, Abstracts with Programs*, v. 10, p. 436.
- 4. Christie-Blick, N., 1980, Glacial advance and retreat sequences, upper Proterozoic Mineral Fork Formation, northwestern Utah: *Geological Society of America, Abstracts with Programs*, v. 12, p. 269.
- 5. Christie-Blick, N., Link, P.K., Miller, J.M.G., Young, G.M., and Crowell, J.C., 1980, Regional geologic events inferred from upper Proterozoic rocks of the North American Cordillera: *Geological Society of America, Abstracts with Programs*, v. 12, p. 402.
- 6. Crittenden, M.D., Jr, and Christie-Blick, N, 1980, Proterozoic rocks of northern Utah Summary: *Geological Society of America, Abstracts with Programs*, v.12, p. 271.
- 7. Christie-Blick, N., 1983, Low-angle thrusts and extension faults in the Sheeprock Mountains: The Sevier foreland hinterland transition in west-central Utah: *Geological Society of America*, *Abstracts with Programs*, v. 15, p. 319.
- 8. Christie-Blick, N., and Link, P.K., 1983, Comparison of stratigraphically controlled low-angle extension faults in the Sheeprock Mountains, Utah, and the Bannock Range, Idaho: *Geological Society of America, Abstracts with Programs*, v. 15, p. 320.
- 9. Christie-Blick, N., 1984, Latest Proterozoic and Early Cambrian rifting in California, Nevada and Utah: Support for Early Cambrian continental separation: *Geological Society of America, Abstracts with Programs*, v. 16, p. 471.
- 10. Christie-Blick, N., and Biddle, K.T., 1984, Strike-slip deformation, basin formation, and sedimentation: A summary: *American Association of Petroleum Geologists Bulletin*, v. 68, p. 462.
- 11. Christie-Blick, N., Miller, K.G., Mountain, G.S., and Watts, A.B., 1984, Stratigraphic record of sealevel change: *EOS, Transactions, American Geophysical Union*, v. 65, No. 45, p. 947.
- 12. Harding, T.P., Vierbuchen, R.C., and Christie-Blick, N., 1984, Structural styles and plate-tectonic settings of divergent (transtensional) wrench faults: *American Association of Petroleum Geologists Bulletin*, v. 68, p. 484.
- 13. Christie-Blick, N., 1985, Depositional processes and environments inferred from glacial rocks: Interpretive ambiguity, observational inadequacy, inappropriate models and strategies for future research: *Geological Society of America, Abstracts with Programs*, v. 17, p. 283.

<sup>&</sup>lt;sup>13</sup> This is an extended abstract of an article by the same authors published in Palaeogeography, Palaeoclimatology, Palaeoecology in 2008.

- 14. Christie-Blick, N., and Levy, M., 1985, A new approach to time correlation in Proterozoic rocks: Sequence boundaries in the Brigham Group, Utah: *Geological Society of America, Abstracts with Programs*, v. 17, p. 546.
- 15. Christie-Blick, N., and von der Borch, C.C., 1985, Sequence boundaries in Proterozoic successions: A comparison of the Brigham Group (Utah) and Wilpena Group (South Australia), with implications for sea-level change and global correlation: *Geological Society of America, Abstracts with Programs*, v. 17, p. 546.
- 16. Biddle, K.T., and Christie-Blick, N., 1985, Structural traps associated with wrench systems: *Offshore Technology Conference*.
- 17. Christie-Blick, N., Bond, G.C., and Kominz, M.A., 1986, Quantitative subsidence analysis and sequence stratigraphy: New approaches to the analysis of Proterozoic and Palaeozoic tectonics and sedimentation: 8<sup>th</sup> Australian Geological Convention, Abstracts, No. 15, p. 14-15.
- 18. Christie-Blick, N., Levy, M., and Howard, C., 1986, Sequence boundaries in Proterozoic successions: Examples from western United States: 12<sup>th</sup> International Sedimentological Congress, Canberra, Australia, International Association of Sedimentologists, Abstracts, p. 60.
- 19. Link, P.K., Christie-Blick, N., and Schneck, W., 1986, Use of stratigraphic sequence boundaries as correlation tools in Late Proterozoic-Cambrian strata of the Brigham and McCoy Creek Groups, Idaho, Nevada and Utah: 12<sup>th</sup> International Sedimentological Congress, Canberra, Australia, International Association of Sedimentologists, Abstracts, p. 185.
- von der Borch, C.C., Christie-Blick, N., and Grady, A.E., 1986, Concepts of seismic stratigraphic analysis applied to late Proterozoic Wilpena Group, Adelaide Geosyncline, South Australia: 8<sup>th</sup> Australian Geological Convention Abstracts, No. 15, p. 197.
- 21. Levy, M., and Christie-Blick, N., 1987, Tectonic subsidence analysis of the Paleozoic passive margin in eastern California and adjacent Nevada: *Geological Society of America, Abstracts with Programs*, v. 19, p. 745.
- 22. Christie-Blick, N., and Levy, M., 1988, Late Proterozoic and Early Cambrian paleogeographic evolution of Utah: Insights from sequence stratigraphy: *Geological Society of America, Abstracts with Programs*, v. 20, p. 150.
- 23. Christie-Blick, N., and Levy, M., 1988, Late Proterozoic and early Cambrian evolution of the western United States: *Geological Society of America, Abstracts with Programs*, v. 20, No. 7, p. 298.
- 24. Levy, M., and Christie-Blick, N., 1988, Palinspastic reconstruction of the eastern Great Basin: Crustal shortening and extension in a non-cylindrical orogen: *Geological Society of America, Abstracts with Programs*, v. 20, No. 7, p. 230.
- 25. Miller, K.G., Mountain, G.S., and Christie-Blick, N., 1988, Cenozoic eustatic fluctuations: Constraints from isotope and seismic stratigraphy: *EOS, Transactions, American Geophysical Union*, v. 69, No. 16, p. 300.
- 26. Christie-Blick, N., and Levy, M., 1989, In search of a Late Proterozoic eustatic curve: *Geological Association of Canada Program with Abstracts*, v. 14, p. A99.
- 27. Christie-Blick, N., and Levy, M., 1989, The origin and dispersal of siliciclastic sediments in Late Proterozoic to Early Cambrian epeiric basin of western United States: 28<sup>th</sup> International Geological Congress, Washington, D.C., Abstracts Volume 1, p. 1-292.
- 28. Christie-Blick, N., and Mountain, G.S., 1989, Sequence stratigraphy and the measurement of sealevel change: *Chapman Conference on Causes and Consequences of Long-Term Sea Level Change*, American Geophysical Union.
- 29. Christie-Blick, N., and Mountain, G.S., 1989, A model for development of unconformity-bounded depositional sequences, with implications for sequence-stratigraphic record of sea-level

- fluctuations: *28th International Geological Congress*, Washington, D.C., Abstracts Volume 1, p. 1-291 to 1-292.
- 30. Karner, G.D., Christie-Blick, N., and Driscoll, N.W., 1989, The break-up unconformity of passive continental margins: Testing the importance of in-plane stress variations during the rift/drift transition on the Grand Banks, Canada: *Chapman Conference on Causes and Consequences of Long-Term Sea Level Change*, American Geophysical Union.
- 31. Link, P.K., Miller, J.M.G., and Christie-Blick, N., 1989, Glaciogenic facies in an extensional tectonic setting: Late Proterozoic glaciation of western North America: 28<sup>th</sup> International Geological Congress, Washington, D.C., Abstracts Volume 2, p. 2-303 to 2-304.
- 32. Miller, K.G., Mountain, G.S., and Christie-Blick, N., 1989, The U.S. Middle Atlantic margin as a monitor of sea-level changes during the ice house and doubt house worlds: *Chapman Conference on Causes and Consequences of Long-Term Sea Level Change*, American Geophysical Union.
- 33. von der Borch, C.C., DiBona, P., and Christie-Blick, N., 1989, Implications of kilometer-scale base-level changes, Late Proterozoic Adelaide Geosyncline, South Australia: 28<sup>th</sup> International Geological Congress, Washington, D.C., Abstracts Volume 3, p. 3-309 to 3-310.
- 34. Christie-Blick, N., 1990, Tectonic and eustatic controls on sedimentary successions at passive continental margins: *American Association of Petroleum Geologists Bulletin*, v. 74, p. 628.
- 35. Driscoll, N.W., Karner, G.D., and Christie-Blick, N., 1990, Stratigraphic evidence from Jeanne d'Arc basin for the timing of break-up between Grand Banks and Iberia: *EOS, Transactions, American Geophysical Union*, v. 71, p. 1563.
- 36. Christie-Blick, N., 1991, Global events in a sequence stratigraphic context: *Program with Abstracts, Event Markers in Earth History*, joint meeting of IGCP Projects 216, 293 and 303, Calgary, Alberta, Canada, p. 30.
- 37. Christie-Blick, N., 1991, Layer-parallel faulting in the Flinders Ranges, Australia: A reinterpretation of Patsy Springs Canyon (Neoproterozoic): *Geological Society of America, Abstracts with Programs*, v. 23, p. A60.
- 38. Levy, M., and Christie-Blick, N., 1991, Late Proterozoic paleogeography of the eastern Great Basin: *American Association of Petroleum Geologists, Pacific Section Meeting,* Bakersfield, California, Abstracts, p. 38-39.
- 39. Levy, M., Christie-Blick, N., and Link, P.K., 1991, Late Proterozoic incised valleys of the eastern Great Basin: Fluvial response to relative falls in sea level: *Geological Society of America, Abstracts with Programs*, v. 23, p. A242.
- 40. Miller, K.G., Mountain, G.S., Christie-Blick, N., Wright, J.D., Peterson, L.C., and Swart, P.K., 1991, Oligocene–Recent glacioeustasy and the Mid-Atlantic Transect: *Geological Society of America, Abstracts with Programs*, v. 23, p. A182.
- 41. Mountain, G.S., Miller, K.G., Christie-Blick, N., Greenlee, S.M., and Devlin, W.J., 1991, High resolution MCS stratigraphy of Oligocene–Recent sequences, mid-Atlantic continental shelf and slope: *Geological Society of America, Abstracts with Programs*, v. 23, p. A182.
- 42. O'Brien, P.E., Lindsay, J.F., Jackson, M.J., Kennard, J.M., Southgate, P.N., Christie-Blick, N., and Holmes, A.E., 1991, Late Palaeozoic glacial succession of the Fitzroy trough, Canning basin, Western Australia: 8<sup>th</sup> International Symposium on Gondwana, Hobart, Australia, Abstracts, p. 63.
- 43. Southgate, P.N., Jackson, J., Kennard, J.M., O'Brien, P.E., Passmore, V.L., Lindsay, J.F., Holmes, A.E., and Christie-Blick, N., 1991, Subsurface sequence stratigraphy of Devonian carbonates, Canning basin, Western Australia: *American Association of Petroleum Geologists Bulletin*, v. 75, p. 674-675.
- 44. Christie-Blick, N., 1992, Sequence stratigraphy: Implications for correlation in Neoproterozoic successions: 29<sup>th</sup> International Geological Congress, Kyoto, Japan, Abstracts Volume 1, p. 239.

- 45. Christie-Blick, N., 1992, IGCP Project 320: A global reference for Neoproterozoic sequence stratigraphy in Australia: *Geological Society of America, Abstracts with Programs*, v. 24, p. A112-113.
- 46. Christie-Blick, N., and Holmes, A.E., 1992, Upper Devonian sequence stratigraphy of the Canning basin, Australia: A comparison with coeval carbonates in southwestern Alberta: *American Association of Petroleum Geologists*, Annual Convention, Abstracts, p. 19-20.
- 47. Christie-Blick, N., Miller, K.G., Mountain, G.S., Driscoll, N.W., Reynolds, D.J., and Steckler, M.S., 1992, Sequence stratigraphy and sea-level change: Examples from the Atlantic margins of the U.S. and Canada: *Geological Society of London, Marine Studies Group (The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region)*, meeting in Edinburgh, UK.
- 48. Driscoll, N.W., Christie-Blick, N., and Karner, G.D., 1992, Extensional tectonics in the Jeanne d'Arc basin, offshore Newfoundland: Implications for the timing of break-up between Grand Banks and Iberia: *Geological Association of Canada*, Annual Meeting, Wolfville, Nova Scotia.
- 49. Holmes, A.E., and Christie-Blick, N., 1992, New perspectives on Ordovician sequences in the Canning basin, Western Australia: *American Association of Petroleum Geologists Bulletin*, v. 76, p. 1108.
- 50. Driscoll, N.W., Karner, G.D., Christie-Blick, N., Hogg, J.R., 1992, Inversion of the Jeanne d'Arc basin and implications for the formation of the Hibernia and Flying Foam structures: *American Association of Petroleum Geologists, Annual Convention*, Abstracts, p. 32.
- 51. Miller, K.G., Mountain, G.S., Christie-Blick, N., Wright, J.D., Peterson, L.C., and Swart, P.K., 1992, Icehouse sea-level changes, depositional sequences, and the New Jersey margin: 4<sup>th</sup> *International Conference on Paleoceanography*, Kiel, Germany, p. 200-201.
- 52. Reynolds, D.J., Steckler, M.S., Christie-Blick, N., Mountain, G.S., Miller, K.G., and Coakley, B.J., 1992, Modeling unconformity-bound sequences at passive continental margins: Implications for the measurement of Cenozoic sea-level change: 4<sup>th</sup> International Conference on Paleoceanography, Kiel, Germany, p. 238-239.
- 53. Christie-Blick, N., 1993, High-resolution sequence stratigraphy of the Wonoka canyons (Neoproterozoic), South Australia: *Geological Society of America, Abstracts with Programs*, v. 25, p. A67.
- 54. Driscoll, N.W., Hogg, J.R., Karner, G.D., Christie-Blick, N., and Jenkins, W.A.M., 1993, Stratigraphic response to extensional deformation: The Jeanne d'arc basin, offshore Newfoundland: *Hydrocarbon Habitat in Rift Basins Conference, Bath, UK,* organized by The Petroleum Group, Program with Abstracts, p. 15-17.
- 55. Christie-Blick, N., 1994, Neoproterozoic and Cambrian sequence stratigraphy in the Great Basin: A perspective on pitfalls and opportunities: *Geological Society of America, Abstracts with Programs*, v. 26, p. 44.
- 56. Christie-Blick, N., and Driscoll, N.W., 1994, Relative sea-level change and the origin of sequence boundaries in tectonically active settings: *American Association of Petroleum Geologists*, Annual Convention, Abstracts, p. 121.
- 57. Driscoll, N.W., Christie-Blick, N., and Hogg, J.R., 1994, Stratigraphic response to basin formation: Jeanne d'Arc basin, offshore Newfoundland: *American Association of Petroleum Geologists*, Annual Convention, Abstracts, p. 139.
- 58. Holmes, A.E., and Christie-Blick, N., 1994, Late Devonian sequence stratigraphy of the Canning basin, Western Australia: *American Association of Petroleum Geologists*, Annual Convention, Abstracts, p. 173.
- 59. Anders, M.H., Christie-Blick, N., Wills, S., and Gregory, K.M., 1995, Brittle deformation near upper crustal normal faults: Implications for interpreting seismic reflections from the Sevier Desert of west central Utah: *Geological Society of America, Abstracts with Programs*, v. 27, p. A 69.

- 60. Sohl, L.E., and Christie-Blick, N., 1995, Equatorial glaciation in the Neoproterozoic: New evidence from the Marinoan glacial succession of Australia: *Geological Society of America, Abstracts with Programs*, v. 27, p. A204.
- 61. Christie-Blick, N., 1996, New insights from the sequence stratigraphy of the Wonoka canyons (terminal Proterozoic), South Australia: *Geological Society of London, British Sedimentological Research Group*, meeting in Dublin, Ireland.
- 62. Holmes, A.E., Christie-Blick, N., and Kominz, M.A., 1996, Subsurface constraints on the evolution of the Paleozoic Canning basin, Western Australia: *Geological Society of America, Abstracts with Programs*, v. 28, p. A366.
- 63. Austin, J.A., Jr., Mountain, G.S., Christie-Blick, N., and Miller, K.G., 1996, Deciphering the sealevel history of the icehouse: Continuation of the New Jersey Transect: *EOS, Transactions, American Geophysical Union*, v. 77, No. 46, Fall Meeting, Abstract OG41B-07.
- 64. Kennedy, M.J., Derry, L.A., and Christie-Blick, N., 1996, Deglaciation, massive carbonate precipitation, and dramatic excursions in the carbon isotopic record: The peculiar inorganic carbon cycle of the Late Precambrian: *Geological Society of America, Abstracts with Programs*, v. 28, p. A219-220.
- 65. Mountain, G.S., Miller, K.G., Christie-Blick, N., and Austin, J.A., Jr., 1996, Ages and architecture of Neogene sequences, New Jersey shelf and slope: ODP Legs 150 and 174A: *EOS, Transactions, American Geophysical Union*, v. 77, No. 17, Spring Meeting, Abstract O41B-01.
- 66. Steckler, M.S., Mountain, G., Miller, K.G., and Christie-Blick, N., 1996, Reconstructing the geometry of Tertiary sequences on the New Jersey passive margin by 2-D backstripping: The interplay of sedimentation, eustasy and tectonics: *Geological Society of America, Abstracts with Programs*, v. 28, p. A63.
  - Steckler, M.S., Mountain, G., Christie-Blick, N., and Miller, K.G., 1996, Reconstructing the geometry of Tertiary sequences on the New Jersey passive margin by 2-D backstripping: The interplay of sedimentation, eustasy and tectonics: *EOS, Transactions, American Geophysical Union*, v. 77, No. 46, Fall Meeting, Abstract OG72B-13. [Text identical to that of GSA abstract.]
- 67. Christie-Blick, N., 1997, Messinian-style drawdown model supported by new results from the Wonoka canyons (terminal Proterozoic), South Australia: *Geological Society of America, Abstracts with Programs*, v. 29, p. A197.
- 68. Austin, J.A., Christie-Blick, N., and Malone, M., 1997, Exploring the timing, amplitudes, and causes of Neogene global sea-level fluctuations: the Ocean Drilling Program's inaugural expedition to the New Jersey continental shelf: 5<sup>th</sup> International Congress of the Brazilian Geophysical Society.
- 69. Jiang Ganqing, Christie-Blick, N., and Kaufman, A.J., 1997, Sequence stratigraphy and significance of the Krol Formation (terminal Proterozoic), Lesser Himalaya, India: *Geological Society of America, Abstracts with Programs*, v. 29, p. A197.
- 70. Wills, S., Anders, M.H., and Christie-Blick, N., 1997, How to make a hole in west-central Utah: alternative working hypotheses for the Sevier Desert basin: *Geological Society of America*, *Abstracts with Programs*, v. 29, p. A350.
- 71. Fang, J., Karner, G., Mutter, J., and Christie-Blick, N., 1997, Tectonic development of the western Woodlark basin, eastern Papua-New Guinea: Consequences of subduction and active rift propagation: *EOS, Transactions, American Geophysical Union*, v. 78, No. 46, Fall Meeting, Abstract T12B-11.
- 72. Dickens, G., Malone, M., Claypool, G., and ODP Leg 174A Science Party, 1997, Glacial-interglacial oscillations in activity of marine subsurface bacteria: Pore-water chemistry of rapidly accumulating sediment on the New Jersey slope: *EOS, Transactions, American Geophysical Union*, v. 78, No. 46, Fall Meeting, Abstract OS51A-08.

- 73. Oda, H., and ODP Leg 174A Shipboard Scientific Party, 1997, Paleomagnetic results from ODP Leg 174A, New Jersey continental margin: *Society of Geomagnetism and Earth, Planetary and Space Sciences (Japan), Abstracts*, v. 102.
- 74. Christie-Blick, N., 1998, Messinian-style drawdown model supported by new stratigraphic data from the Wonoka canyons (terminal Proterozoic), South Australia: 15th International Sedimentological Congress, Alicante, Spain, *International Association of Sedimentologists*, *Abstracts*, p. 254-255.
- 75. Christie-Blick, N., Austin, J.A., Jr., and ODP Leg 174A Shipboard Scientific Party, 1998, Unexpected facies architecture in sequences of late Miocene to Pleistocene age at the New Jersey outer continental shelf: *Geological Society of America, Abstracts with Programs*, v. 30, p. A266-A267.
- 76. Christie-Blick, N., Kennedy, M.J., and Sohl, L.E., 1998, Proposed location of a terminal Proterozoic GSSP: Nuccaleena Formation, Flinders Ranges, South Australia: *Sprigg Symposium*, Adelaide, Australia.
- 77. Austin, J.A., Jr., Christie-Blick, N., and ODP Leg 174A Shipboard Scientific Party, 1998, Continuation of the Mid-Atlantic Sea Level Transect: Results from ODP Leg 174A: *EOS*, *Transactions, American Geophysical Union*, v. 79, No. 45, Fall Meeting, Abstract OS41C-08.
- 78. Austin, J.A., Jr., Christie-Blick, N., Malone, M., and Leg 174A Shipboard Party, 1998, Understanding the sedimentary response to relative sea-level change: the Ocean Drilling Program (ODP)'s Mid-Atlantic Transect: *American Association of Petroleum Geologists*, convention in Rio de Janeiro, Brazil.
- 79. Austin, J.A., Jr., Christie-Blick, N., Malone, M., and Leg 174A Shipboard Party, 1998, Exploring the timing, amplitudes, and causes of Neogene global sea-level fluctuations: the Ocean Drilling Program's inaugural expedition to the New Jersey continental shelf: *SEPM-IAS Research Conference (Strata and Sequences on Shelves and Slopes)*, Catania, Sicily, Italy.
- 80. Kennedy, M.J., and Christie-Blick, N., 1998, Sequence stratigraphy of late Neoproterozoic glacial to post-glacial transition: Implications for the timing of δ<sup>13</sup>C excursions: *SEPM-IAS Research Conference (Strata and Sequences on Shelves and Slopes)*, Catania, Sicily, Italy.
- 81. Jiang Ganqing, Christie-Blick, N., and Kaufman, A.J., 1998, Neoproterozoic stratigraphic comparison of the Lesser Himalaya, India, and south China: Possible tectonic implications: *Geological Society of America, Abstracts with Programs*, v. 30, p. A144.
- 82. Anders, M.H., Walsh, J.J., and Christie-Blick, N., 1998, Fluidization events in detachment zones: evidence for catastrophic emplacement of large slide blocks: *Geological Society of America, Abstracts with Programs*, v. 30, No. 5, p. 3.
- 83. Kaufman, A.J., Jiang Ganqing, and Christie-Blick, N., 1998, Varanger ice ages in India revealed by integrated sequence and carbon isotope stratigraphy: *American Association of Petroleum Geologists*, Annual Convention, Abstracts.
- 84. Steckler, M.S., Mountain, G.S., Christie-Blick, N., and Miller, K.G., 1998, Controls of the architecture of prograding sequences on the New Jersey continental margin: Results from numerical modeling: *EOS, Transactions, American Geophysical Union*, v. 79, No. 45, Fall Meeting, Abstract OS22D-08.
- 85. McCarthy, F.M.G., Gostlin, K.E., and ODP Leg 174A Scientific Party, 1998, Palynomorphs as ideal tools for sequence stratigraphic studies an example from the New Jersey margin: 6<sup>th</sup> International Conference on Modern and Fossil Dinoflagellates, Program and Abstracts.
- 86. Metzger, J.M., Flemings, P.B., and ODP Leg 174A Shipboard Scientific Party, 1998, Comparison of middle Miocene and late Miocene/Pliocene sequence architecture, offshore New Jersey: *Geological Society of America, Abstracts with Programs*, v. 30, p. A268.

- 87. Mountain, G.S., Flemings, P.B., Pirmez, C., and Leg 174A Scientific Shipboard Party, 1998, Pleistocene slope deposition at ODP Site 1073 based on core-log-seismic integration: *SEPM-IAS Research Conference (Strata and Sequences on Shelves and Slopes)*, Sicily, Italy.
- 88. Christie-Blick, N., Karner, G.D., Saurborn, M.J., and Plint, A.G., 1999, Unconformity development in tectonically active settings: *Geological Society of America, Abstracts with Programs*, v. 31, p. A182.
- 89. Stewart, J.H., Gehrels, G.E., Barth, A.P., Link, P.K., Christie-Blick, N., and Wrucke, C.T., 1999, U-Pb isotopic dating indicates crystalline-basement and supracrustal-volcanic sources of detrital zircons in Proterozoic and Cambrian arenites, western United States: *Geological Society of America, Abstracts with Programs*, v. 31, p. A373.
- 90. Christie-Blick, N., 2000, Cenozoic sequence architecture at the New Jersey margin: Whither the "slug" model?: *Geological Society of America, Abstracts with Programs*, v. 32, No. 1, p. A10.
- 91. Bender, A.A., Christie-Blick, N., and Karner, G., 2000, Mechanism of intracratonic basin formation: Insights from the Canning Basin, NW Australia: *31<sup>st</sup> International Geological Congress*, Rio de Janeiro, Brazil, Abstracts, CD-ROM.
- 92. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2000, Destabilization of methane hydrates: Physical and geochemical evidence in Neoproterozoic cap carbonates: *Geological Society of America, Abstracts with Programs*, v. 32, p. A156.
- 93. Pekar, S.F., Christie-Blick, N., Kominz, M. A., and Miller, K. G., 2000, Establishing the stratigraphic response to eustasy from Oligocene strata in New Jersey: *EOS, Transactions, American Geophysical Union*, v. 81, No. 48, Fall Meeting Supplement, Abstract OS71A-01.
- 94. Kaufman, A.J., Jiang Ganqing, Christie-Blick, N., Banerjee, D.M., and Rai, V., 2000, A terminal Proterozoic history of sea-level change and biogeochemical anomalies, Lesser Himalaya, India: *Geological Society of America, Abstracts with Programs*, v. 32, p. A94.
- 95. Saurborn, M.J., Karner, G.D., Christie-Blick, N., Plint, A.G., and Scholz, C.H., 2000, Accommodation changes in Upper Cretaceous sediments of the Alberta foreland basin: Implications for the role of changes in in-plane force on unconformity development: *Geological Society of America, Abstracts with Programs*, v. 32, p. A102.
- 96. Miller, K.G., Mountain, G.S., Sugarman, P.J., and the Scientific Parties of ODP Legs 174A and 174AX, 2000, Eustasy, sequences, and the New Jersey Sea-Level Transect: Past, present and future drilling: *Geological Society of America, Abstracts with Programs*, v. 32, No. 1, p. A59-A60.
- 97. Christie-Blick, N., 2001, Sequence development in tectonically active basins: Implications for the Paleozoic of eastern Laurentia: *Geological Society of America, Abstracts with Programs*, v. 33, No. 6, p. A98.
- 98. Christie-Blick, N., Pekar, S.F., and Mountain, G.S., 2001, Origin of sequences and sequence boundaries: The Atlantic margin as a stratigraphic frontier: *Geological Society of America*, *Abstracts with Programs*, v. 33, No. 6, p. A98.
- 99. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2001, Carbon isotopic evidence that favors a gas hydrate versus atmospheric origin for Neoproterozoic cap carbonate formation: *EOS, Transactions, American Geophysical Union*, v. 82, No. 20, Spring Meeting, Abstract U22A-06.
- 100. Kennedy, M.J., Christie-Blick, N., and Sohl, L.E., 2001, The Snowball Earth: Myth or methane?: *Earth System Processes*, meeting of Geological Society of America in Edinburgh, UK.
- 101. Pekar, S.F., Christie-Blick, N., and Mountain, G.S., 2001, Quantitative constraints on the factors that control stratigraphic architecture at passive continental margins: Oligocene sedimentation in New Jersey: *Geological Society of America, Abstracts with Programs*, v. 33, No. 6, p. A98.
- 102. Steckler, M.S., Christie-Blick, N., Mountain, G.S., Pekar, S.F., Monteverde, D.H, and Miller, K.G., 2001, Variability of sequence geometry and depositional morphology during late Eocene to Pleistocene progadation at the New Jersey margin: Results of serial 2-D backstripping: *Chapman*

- Conference on Formation of Sedimentary Strata on Continental Margins, American Geophysical Union.
- 103. Machlus, M., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2001, High-resolution physical stratigraphy of the lacustrine and evaporitic Green River Formation, Wyoming: Implications for correlation, cyclicity and paleoenvironments: *Geological Society of America, Abstracts with Programs*, v. 33, No. 6, p. A405.
- 104. Machlus, M., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2001, Milankovitch cyclicity in the Eocene Green River Formation of Colorado and Wyoming: *EOS, Transactions, American Geophysical Union*, v. 82, No. 47, Fall Meeting Supplement, Abstract U12A-0005.
- 105. Christie-Blick, N., Mountain, G.S., Ghosh, A., McHugh, C.M.G., Pekar, S.F., and Schock, S.G., 2002, New insights on late Pleistocene sedimentation at the New Jersey margin based on Chirp sonar profiles and vibracores: *EOS, Transactions, American Geophysical Union*, v. 83, No. 47, Fall Meeting Supplement, Abstract OS71C-0298.
- 106. Jiang Ganqing, Christie-Blick, N., and Kaufman, A.J., 2002, A first order evaluation of Neoproterozoic carbon isotope data within a physical stratigraphic context: *Geological Society of America, Abstracts with Programs*, v. 34, No. 6, p. 355.
- 107. Kennedy, M.J., and Christie-Blick, N., 2002, Isotopic and sequence stratigraphic constraints on the duration of Neoproterozoic cap carbonate deposition: *Goldschmidt Conference, Abstracts*, p. A374.
- 108. Machlus, M., Hemming, S.R., Olsen, P.E., and Christie-Blick, N., 2002, <sup>40</sup>Ar/<sup>39</sup>Ar ages of selected tuffs of the Green River Formation: Implications for interbasin and intrabasin correlations: *Geological Society of America, Abstracts with Programs*, v. 34, No. 6, p. 558.
- 109. Pekar, S.F., McHugh, C.M., Lynch-Stieglitz, J., and Christie-Blick, N., 2002, Stratigraphic expression of the turbidity maximum and evidence for short-term climate change from estimates of paleosalinity in the Hudson Estuary between 6 and 2 ka: *EOS, Transactions, American Geophysical Union*, v. 83, No. 47, Fall Meeting Supplement, Abstract OS22B-0249.
- 110. Christie-Blick, N., Jiang Ganqing, Sohl, L.E., and Kennedy, M.J., 2003, Stratigraphic constraints on the character and frequency of extreme climate change during the Neoproterozoic: *Geological Society of America, Abstracts with Programs*, v. 35, No. 6, p. 518.
- 111. Karner, G.D., Christie-Blick, N., and Bedregal, R.P., 2003, Late syn-rift regional subsidence across the West African and Brazilian continental margins: The role of lower plate ductile extension: 6<sup>th</sup> Petroleum Geology Conference, North West Europe and Global Perspectives, London, England.
- 112. Lyon, B., and Christie-Blick, N., 2003, Water demand, climate variability and increasing sensitivity to drought an example in the northeast US: *North American Drought Monitor Forum,* Asheville, North Carolina.
- 113. Pekar, S.F., and Christie-Blick, N., 2003, Estimates of Oligocene sea-level amplitudes and icevolume changes at Milankovitch time scales: *EOS, Transactions, American Geophysical Union*, v. 84, No. 46, Fall Meeting Supplement, Abstract PP32D-03.
- 114. Pekar, S.F., Christie-Blick, N., Miller, K.G., and Kominz, M.A., 2003, Calibrating Oligocene eustasy to oxygen isotope data: eustatic estimates from two-dimensional flexural backstripping from the New Jersey continental margin (USA): *European Geophysical Society, Geophysical Research Abstracts*, v. 5, Abstract 13,654.
- 115. Jiang Ganqing, Kennedy, M.J., and Christie-Blick, N., 2003, Testing the methane hydrate hypothesis: Evidence from the Neoproterozoic Doushantuo cap carbonate in South China: *Geological Society of America, Abstracts with Programs*, v. 35, No. 6, p. 508.
- 116. Machlus, M., Olsen, P.E., and Christie-Blick, N., 2003, Lacustrine facies typology in the Triassic-Jurassic rifts of eastern North America and Greenland compared to that of the Eocene Green River Formation of Wyoming: *Geological Society of America, Abstracts with Programs*, v. 35, No. 3, p. 11.

- 117. Machlus, M., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2003, Milankovitch cyclicity in the Eocene Green River Formation of Colorado and Wyoming: 3<sup>rd</sup> International Limnogeology Congress.
- 118. Machlus, M., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2003, Oil-shale yield in the Green River Formation as a proxy for relative lake-depth: *American Association of Petroleum Geologists, Abstracts*.
- 119. Christie-Blick, N., Anders, M.H., Wills, S., Walker, C.D., and Renik, B., 2004, Observations from the Basin and Range Province pertinent to the interpretation of regional detachment faults: *InterMARGINS Workshop, Modeling the Extensional Deformation of the Lithosphere (IMEDL)*, Pontresina (Swiss Alps), Abstracts, p. 6.
- 120. Owen, D.E., and Christie-Blick, N., 2004, Bipartite sequence-stratigraphic classification and correlative conformities: 32<sup>nd</sup> International Geological Congress, Florence, Italy, Abstracts Volume.
- 121. Pekar, S.F., and Christie-Blick, N., 2004, An orbital origin for large oxygen isotopic shifts and sealevel changes during the Oligocene: *EOS, Transactions, American Geophysical Union*, v. 85, No. 47, Fall Meeting Supplement, Abstract PP11A-0555.
- 122. Renik, B., and Christie-Blick, N., 2004, Re-evaluation of Miocene evidence for extreme crustal extension across the Death Valley region, California: *American Association of Petroleum Geologists, Abstracts*.
- 123. Renik, B., and Christie-Blick, N., 2004, Reevaluation of Eagle Mountain Formation and implications for extreme extension across Death Valley region, CA: *Geological Society of America, Abstracts with Programs*, v. 36, No. 5, p. 23.
- 124. Anders, M.H., Walker, C.D., and Christie-Blick, N., 2004, Fault deformation studies of rootless detachments: Implications for assessing regional extension: *American Association of Petroleum Geologists, Abstracts*.
- 125. Anders, M.H., Walker, C.D., and Christie-Blick, N., 2004, Fault zone deformation: The key to what is a rooted detachment and what is not: *Geological Society of America, Abstracts with Programs*, v. 36, No. 5, p. 548.
- 126. Jiang Ganqing, Kennedy, M.J., Christie-Blick, N., Mrofka, D. Wu Huaichun, and Zhang Shihong, 2004, Platform to basin δ<sup>13</sup>C variations of the Doushantuo Formation of South China: Isotopic gradient or diagenesis: *Geological Society of America, Abstracts with Programs*, v. 36, No. 5, p. 477.
- 127. McHugh, C.M.G., Mountain, G.S., Christie-Blick, N., Pekar, S., Gould, H., Gurung, D., and Hartin, C., 2004, Evidence for the latest Pleistocene-Holocene shoreline along the New York-New Jersey continental margin: 32<sup>nd</sup> International Geological Congress, Florence, Italy, Abstracts Volume.
- 128. Walker, C.D., Anders, M.H., and Christie-Blick, N., 2004, Re-examination of field evidence for extreme crustal extension in the Mormon Mountains, southeastern Nevada: *American Association of Petroleum Geologists, Abstracts*.
- 129. Walker, C.D., Anders, M.H., Nagel, T., and Christie-Blick, N., 2004, Using field evidence to distinguish between rooted and rootless detachment faults in the Mormon Mountains, southeastern Nevada: *Geological Society of America, Abstracts with Programs*, v. 36, No. 5, p. 548.
- 130. Gould, H.M., McHugh, C.M.G., Mountain, G.S., Christie-Blick, N., Pekar, S., Gurung, D., and Hartin, C., 2004, Evidence for the latest Pleistocene-Holocene shoreline along the New York-New Jersey continental margin: *Geological Society of America, Abstracts with Programs*, v. 36, No. 2, p. 70.
- 131. Christie-Blick, N., 2005, Marinoan glacial to post-glacial transition at the Ediacaran GSSP, South Australia: *Geological Society of America, Abstracts with Programs*, v. 37, p. 43.

- 132. Pekar, S.F., Christie-Blick, N., and DeConto, R.M., 2005, Reconstructing the early icehouse world (34-16 Ma): High-resolution constraints on ice-volume changes in Antarctica and global sea-level amplitudes: *Geoitalia 2005, Quinto Forum Italiano di Scienze della Terra*, v. 1, p. 17.
- 133. Jiang Ganqing, Kennedy, M.J., Christie-Blick, N., and Mrofka, D.D., 2005, Stable isotopic variability of the late Neoproterozoic Doushantuo cap carbonate in South China: Processes and implications: *Geological Society of America, Earth System Processes 2, Abstracts with Programs*, p. 44.
- 134. Kennedy, M.J., Jiang Ganqing, and Christie-Blick, N., 2005, Methane destabilization, deglaciation and oceanic anoxia, and biological innovation in the late Neoproterozoic: *Geological Society of America, Earth System Processes 2, Abstracts with Programs*, p. 32.
- 135. Machlus, M., Olsen, P.E., Christie-Blick, N., and Hemming, S.R., 2005, New physical stratigraphy for the lower Laney Member (Green River Formation, Wyoming): Implications for ancient lake classification: *Geological Society of America, Abstracts with Programs*, v. 37, No. 7, p. 65.
- 136. Miller, K.G., Kominz, M.A., Browning, J.V., Wright, J.D., Mountain, G.S., Katz, M.E., Sugarman, P.J., Cramer, B.S., Christie-Blick, N., and Pekar, S.F., 2005, The Phanerozoic record of global sealevel change: *Geological Society of America, Abstracts with Programs*, v. 37, No. 7, p. 402.
- 137. Christie-Blick, N., Anders, M.H., Renik, B., Walker, C.D., and Schon, S.C., 2006, Insights on the low-angle normal fault paradox from the Basin and Range Province, western United States: *Geological Society of New Zealand Miscellaneous Publication 122A, Programme and Abstracts*, p. 9.
- 138. Pekar, S.F., and Christie-Blick, N., 2006, Linking *p*CO<sub>2</sub> estimates and oceanographic and Antarctic climate records for the early icehouse world (34-16 Ma): *Geological Society of America, Abstracts with Programs*, v. 38, No. 7, p. 50.
- 139. Pekar, S.F., and Christie-Blick, N., 2006, Resolving a climatic conundrum: Linking *p*CO<sub>2</sub> estimates to oceanographic and Antarctic climate records for the early icehouse world (34-16 Ma): *EOS*, *Transactions, American Geophysical Union*, v. 87, No. 52, Fall Meeting Supplement, Abstract PP23E-05.
- 140. Schon, S.C, and Christie-Blick, N., 2006, Re-evaluation of extensional fault geometry and kinematics at Azure Ridge in the South Virgin Mountains, Nevada: *Geological Society of America, Abstracts with Programs*, v. 38, No. 2, p. 67.
- 141. Dolby, G.A., Pekar, S.F., Mountain, G.S., and Christie-Blick, N., 2006, A comparison of stratal geometry in the greenhouse and icehouse worlds from multichannel seismic reflection and chirp sonar data from New York Bight: *Geological Society of America, Abstracts with Programs*, v. 38, No. 7, p. 227.
- 142. Christie-Blick, N., and Wernicke, B.P., 2007, Testing the extensional detachment paradigm: A borehole observatory in the Sevier Desert basin, Utah: *EOS, Transactions, American Geophysical Union*, v. 88, No. 52, Fall Meeting Supplement, Abstract T31C-0576.
- 143. Christie-Blick, N., Anders, M.H., Dresen, G., Lister, G.S., Manatschal, G., and Wernicke, B.P., 2007, Testing the extensional detachment paradigm: Scientific drilling in the Sevier Desert basin, western United States: *Geological Society of America, Abstracts with Programs*, v. 39, No. 6, p. 226.
- 144. Madof, A.S., and Christie-Blick, N., 2007, The role of gravity-driven sedimentation in the evolution of salt withdrawal intraslope minibasins: insights from north-central Green Canyon, Gulf of Mexico: *Geological Society of America, Abstracts with Programs*, v. 39, No. 6, p. 149-150.
- 145. Machlus, M., Ramezani, J., Bowring, S.A., Hemming, S.R., Christie-Blick, N., and Olsen, P.E. 2007, Spectral analysis and U-Pb dating of the Eocene Wilkins Peak Member, Green River Formation, Wyoming: Support for Milankovitch cyclicity: *Geological Society of America, Abstracts with Programs*, v. 39, No. 6, p. 305-306.

- 146. <sup>14</sup>Christie-Blick, N., Madof, A.S., and Pekar, S.F., 2008, Sequence stratigraphy: Interpretation versus classification: *33<sup>rd</sup> International Geological Congress*, Oslo, Norway, Abstract HPS12322P.
- 147. Christie-Blick, N., Schon, S.C., and Spiegelman, M., 2008, A re-evaluation of the Million Hills Wash fault, South Virgin Mountains, Nevada: *Geological Society of America, Abstracts with Programs*, v. 40, No. 6, p. 313.
- 148. Madof, A.S., Christie-Blick, N., and Anders, M.H., 2008, Stratigraphic architecture of a salt-withdrawal minibasin, north-central Green Canyon, Gulf of Mexico: Implications for misinterpreting sea level change: *American Association of Petroleum Geologists*, Search and Discovery Article #90078©2008. http://www.searchanddiscovery.net/abstracts/html/2008/annual/abstracts/413153.htm
- 149. Pekar, S.F., and Christie-Blick, N., 2008, Resolving apparent conflicts between oceanographic and Antarctic climate records and evidence for a decrease in *p*CO<sub>2</sub> during the Oligocene through early Miocene (34-16 Ma): 33<sup>rd</sup> International Geological Congress, Oslo, Norway, Abstract HPS08705L.
- 150. Renik, B., and Christie-Blick, N., 2008, The role of the Sheephead fault zone in bounding Neogene extension and magmatism in the Death Valley area, California: *Geological Society of America, Abstracts with Programs*, v. 40, No. 6, p. 311-312.
- 151. Christie-Blick, N., 2009, Testing the extensional detachment paradigm: A borehole observatory in the Sevier Desert basin: *Rupturing of the Continental Lithosphere Workshop*, NSF MARGINS Program, Charleston, South Carolina, abstracts.
- 152. Sasnett, P., Goehring, B.M., Christie-Blick, N., and Schaefer, J.M., 2009, Surface exposure dating of phreatic eruptions at Ubehebe Crater, Death Valley, California: *Geological Society of America, Abstracts with Programs*, v. 41, No. 7, p. 649.
- 153. El-Barkooky, A., Hamdan, M., Hassan, S.M., Christie-Blick, N., Goldstein, S., and Cai, Y., 2009, Sequence stratigraphy of the lower Miocene Moghra Formation in the Qattara Depression, Northwestern Desert, Egypt: *American Association of Petroleum Geologists*, Search and Discovery Article #90090©2009. http://www.searchanddiscovery.net/abstracts/html/2009/annual/abstracts/el-barkooky.htm
- 154. Tremblay, M.M., Renik, B., Hemming, S.R., and Christie-Blick, N., 2009, <sup>40</sup>Ar/<sup>39</sup>Ar geochronology at Sheephead Mountain, California, with implications for the long-term slip rate of the right-lateral Sheephead fault: *Geological Society of America, Abstracts with Programs*, v. 41, No. 7, p. 137.
- 155. Neiswanger, L., Cai, M.Y., Almeida, R., Hemming, S.R., and Christie-Blick, N., 2009, Lead isotope constraints on a tectonic reconstruction of southern Nevada: *Geological Society of America, Abstracts with Programs*, v. 41, No. 7, p. 663.
- 156. Almeida, R., Cochran, J.R., Christie-Blick, N., Foster, A.E., and Lloyd, A.S., 2010, Gravity data inconsistent with an asymmetrical basin above the Castle Cliff detachment, Utah and Nevada: *Geological Society of America, Abstracts with Programs*, v. 42, No. 5, p. 471.
- 157. Aubry, M.-P., Van Couvering, J.A., Christie-Blick, N., Ferrusquía, I.-V., Landing, E., Owen, D.E., and Pratt, B.R., 2010, Datum and duration: A clarification: *Geological Society of America, Abstracts with Programs*, v. 42, No. 5, p. 234.
- 158. Tremblay, M.M., Christie-Blick, N., and Hemming, S.R., 2011, Late Miocene tilting of the Resting Spring Range, California: *Geological Society of America, Abstracts with Programs*, v. 43, No. 5, p. 276.
- 159. Vankeuren, M.A., and Christie-Blick, N., 2011, New constraints on the interpretation of low-angle normal faults in southeastern Idaho: *Geological Society of America, Abstracts with Programs*, v. 43, No. 5, p. 276.

\_

<sup>&</sup>lt;sup>14</sup> Presented orally in workshop WSS-11, New developments in stratigraphic classification.

- 160. Christie-Blick, N., 2012, Taking stock of the Snowball Earth hypothesis: *34<sup>th</sup> International Geological Congress*, Brisbane, Australia, Abstracts, CD-ROM.
- 161. Christie-Blick, N., Mountain, G.S., and Madof, A.S., 2012, Do stratigraphic sequences exist in deep-water settings? Does it matter?: *Geological Society of America, Abstracts with Programs*, v. 44, No. 7, p. 486-487.
- 162. Hassan, S.M., Christie-Blick, N., Steel, R., El Barkooky, A., and Hamdan, M., 2012, Lower Miocene sequence development in northwestern Egypt and the U.S. mid-Atlantic continental margin: *American Association of Petroleum Geologists*, AAPG Search and Discovery Article #90142©2012. http://www.searchanddiscovery.com/abstracts/html/2012/90142ace/abstracts/hass.htm
- 163. Tremblay, M.M., Christie-Blick, N., Hemming, S.R., and Anders, M.H., 2012, Late Miocene tilting of the Resting Spring Range, California, with implications for mechanisms of crustal extension: *American Geophysical Union, Fall Meeting*, Abstract T51B-2586.
- 164. George, S.W.M., Christie-Blick, N., Hemming, S.R., Anders, M.H., Tremblay, M.M., and Renik, B., 2013, Post-9.5 Ma tilting of the Dublin Hills: mechanisms of crustal extension in the Death Valley region, eastern California: *Geological Society of America, Abstracts with Programs*, v. 45, No. 7, p. 822.
- 165. Christie-Blick, N., 2014, Coming of age in Death Valley, California: *Geological Society of America, Abstracts with Programs*, v. 46, No. 5, p. 29.
- 166. Christie-Blick, N., Almeida, R.V., Vankeuren, M.A., Tremblay, M.M., Anders, M.H., Cochran, J.R., Hemming, S.R., Walker, C.D., and Renik, B., 2016, Mechanisms of crustal extension in the Basin and Range Province, western United States: 35<sup>th</sup> International Geological Congress, Cape Town, South Africa, Abstracts.
- 167. Madof, A., Christie-Blick, N., and Anders, M., 2016, Tectonically controlled nearshore deposition: Cozzette Sandstone, Book Cliffs, Colorado, USA: American Association of Petroleum Geologists, Calgary meeting. http://www.searchanddiscovery.com/abstracts/html/2016/90259ace/abstracts/2378329.html
- 168. Madof, A., Christie-Blick, N., Anders, M., and Febo, L., 2016, Unreciprocated sedimentation: how differential accumulation decoupled the shelf and slope of offshore Louisiana, Gulf of Mexico, USA: American Association of Petroleum Geologists, Calgary meeting. http://www.searchanddiscovery.com/abstracts/html/2016/90259ace/abstracts/2378334.html
- 169. Yuan, X.P., and Christie-Blick, N., 2016, Mechanical properties of the Sevier Desert detachment: an application of Critical Coulomb Wedge theory: *American Geophysical Union, Fall Meeting*, Abstract T21A-2799. https://agu.confex.com/agu/fm16/meetingapp.cgi/Paper/139602
- 170. Anders, M.H., Templeton, J.A., Christie-Blick, N., and Hemming, S., 2016, The Old Red Sandstone of Scotland: Evidence for a Ganges-sized river draining the Caledonian highlands of Norway: *Geological Society of America, Abstracts with Programs*, v. 48, No. 7, doi: 10.1130/abs/2016AM-282537.

### OTHER CONTRIBUTIONS TO FIELD EXCURSION GUIDES

- 1. Christie-Blick, N., 1980, Field guide to the geology of Little Mountain, *in Precambrian rocks of the northern Wasatch*: Geological Society of America, Rocky Mountain Section Meeting, Ogden, Utah, Field Trip No. 6, 8 p.
- 2. Christie-Blick, N., Mount, J.F., Levy, M., Signor, P.W., and Link, P.K., 1989, The following contributions *in* Christie-Blick, N., and Levy, M., eds., *Late Proterozoic and Cambrian Tectonics, Sedimentation, and Record of Metazoan Radiation in the Western United States:* 28th International Geological Congress Field Trip Guidebook T331, American Geophysical Union, 113 p.: Overview of excursion, p. 1-6; Description of stops, p. 55-100.
- 3. Christie-Blick, N., 1993, The following contributions *in* Jenkins, R.J.F., Lindsay, J.F., and Walter, M.R., eds., *Field Guide to the Adelaide Geosyncline and Amadeus Basin, Australia:* Australian Geological Survey Organisation, Record No. 1993/35, 133 p.: Overview of Neoproterozoic sequence stratigraphy in the Adelaide Geosyncline, p. 5-6; Day 4, Stop 4.2, Billy Springs Formation, possible glacials (?), p. 28-29; Day 5. Wonoka canyons, Umberatana syncline, p. 29-31.
- 4. Christie-Blick, N., Kennedy, M.J., and Sohl, L.E., 1998, Contributions to materials compiled in connection with an excursion of the Working Group on the Terminal Proterozoic System to examine Global Stratotype candidates in the central Flinders Ranges, Australia, June, 1998.

#### **NEWSPAPER ARTICLES**

- 1. Christie-Blick, N., and Lyon, B., 2003, Drought and Rockland's water supply: West Nyack, New York, *The Journal News, Community View,* Thursday, May 22.
- 2. Christie-Blick, N., and Lyon, B., 2003, What Rockland must do about water: West Nyack, New York, *The Journal News, Community View*, Friday, May 23.
- 3. Christie-Blick, N., and Lyon, B., 2004, Drought dangers multiplying: Poughkeepsie, New York, *Poughkeepsie Journal, Our Environment*, Sunday, February 8.
- 4. Christie-Blick, N., 2005, Another kind of water woe: West Nyack, New York, *The Journal News, Community View,* Thursday, November 3.
- 5. Christie-Blick, N., 2012, Desalination plant raises costs, harm in long run: West Nyack, New York, *The Journal News, Community View,* Sunday, January 15.

### **BOOK REVIEWS**

- 1. Christie-Blick, N., 1984, Review of Dynamic Stratigraphy: An Introduction to Sedimentation and Stratigraphy (second edition), by R.K. Matthews, 1984, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 489 p.: *Journal of Sedimentary Petrology*, v. 54, p. 1034-1035.
- 2. Christie-Blick, N., 1987, Review of Sedimentary Environments and Facies (2nd edition), edited by H.G. Reading, 1986, Blackwell Scientific Publications, Palo Alto, California, 615 p.: *Journal of Sedimentary Petrology*, v. 57, p. 583.
- 3. Christie-Blick, N., 1987, Review of Extensional Tectonics of the Southwestern United States: A Perspective on Processes and Kinematics, edited by L. Mayer, 1986, Geological Society of America Special Paper 208, 122 p.: *Journal of Sedimentary Petrology*, v. 57, p.1079-1080.
- 4. Christie-Blick, N., 1988, Review of Cenozoic Basin Development of Coastal California, Rubey Volume VI, edited by R.V. Ingersoll and W.G. Ernst, 1987, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 496 p.: *Journal of Sedimentary Petrology*, v. 58, p. 1052-1053.
- 5. Christie-Blick, N., 1989, Review of Palaeogeographic Atlas of Australia. Volume 1. Cambrian, group leader Peter J. Cook, 1988, Australian Government Publishing Service, Canberra, Australia: *Journal of Sedimentary Petrology*, v. 59, p. 510-511

6. Christie-Blick, N., 1990, Review of Sea Surface Studies. A Global View, edited by R.J.N. Devoy, 1987, Croom Helm Ltd, London: *Pure and Applied Geophysics*, v. 133, p. 563-564.

# MISCELLANEOUS OTHER PUBLICATIONS AND TITLES

- 1. Christie-Blick, N., and Biddle, K.T., 1989, Deformation and basin formation along strike-slip faults, in Foster, N.H., and Beaumont, E.A., eds., Structural Concepts and Techniques II: Basement-Involved Deformation: American Association of Petroleum Geologists, Treatise of Petroleum Geology Reprint Series (reprinted from Biddle, K.T., and Christie-Blick, N., eds., Strike-Slip Deformation, Basin Formation, and Sedimentation: SEPM Special Publication No. 37, p. 1-34).
- 2. Biddle, K.T., and Christie-Blick, N., 1989, Glossary Strike-slip deformation, basin formation, and sedimentation, *in* Foster, N.H., and Beaumont, E.A., eds., *Structural Concepts and Techniques II: Basement-Involved Deformation:* American Association of Petroleum Geologists, Treatise of Petroleum Geology Reprint Series (reprinted from Biddle, K.T., and Christie-Blick, N., eds., *Strike-Slip Deformation, Basin Formation, and Sedimentation:* SEPM Special Publication No. 37, p. 375-386).
- 3. Levy, M., and Christie-Blick, N, 1993, Pre-Mesozoic palinspastic reconstruction of the eastern Great Basin, western United States, *in* Reed, J.C., Bickford, M.E., Houston, R.S., Link, P.K., Rankin, D.W., Sims, P.K., and Van Schmus, W.R. eds., *Precambrian: Conterminous U.S.*: Boulder, Colorado, Geological Society of America, The Geology of North America, Volume C-2, plate in pocket (first published in *Science*, v. 245, p. 1454-1462).
- 4. Link, P.K., Christie-Blick, N., Stewart, J.H., Miller, J.M.G., Devlin, W.J., and Levy, M., 1993, Late Proterozoic strata of the United States Cordillera, *in* Reed, J.C., Bickford, M.E., Houston, R.S., Link, P.K., Rankin, D.W., Sims, P.K., and Van Schmus, W.R. eds., *Precambrian: Conterminous U.S.*: Boulder, Colorado, Geological Society of America, The Geology of North America, Volume C-2, p. 536-595 (a subchapter of Link et al., 1993).
- 5. Shipboard Scientific Party, 1998, Explanatory notes, *in* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., Proceedings of the Ocean Drilling Program, Initial Reports, v. 174A, Continuing the New Jersey Mid-Atlantic Sea-Level Transect: College Station, Texas, Ocean Drilling Program, p. 17-34.
- 6. Christie-Blick, N., and Mountain, G.S., 2006, Deciphering the sea-level signal, *in* Imaging Earth History Beneath the Ocean Floor. *Three Decades of Major Scientific Accomplishment:* Lamont-Doherty Earth Observatory, booklet edited and designed by Geosciences Professional Services, Inc., with support of a grant from the National Science Foundation.
- 7. Christie-Blick, N., 2009, *Conventions and symbols for geological time:* Forum for Discussion of GSA Time Unit Conventions, Geological Society of America. <a href="http://www.geosociety.org/TimeUnits/">http://www.geosociety.org/TimeUnits/</a>
- 8. Christie-Blick, N, 2012, A conversation with Christian Chapman: A discussion of science, the theory of evolution and fundamentalist faith.

  <a href="http://www.ldeo.columbia.edu/~ncb/Selected\_Articles\_all\_files/Addendum\_Chapman\_Conversation\_2012.pdf">http://www.ldeo.columbia.edu/~ncb/Selected\_Articles\_all\_files/Addendum\_Chapman\_Conversation\_2012.pdf</a>
- 9. Earth Institute (with Kim Martineau), 2014, *Pulling Death Valley apart:* Video featuring the Spring, 2014 Geological Excursion to Death Valley, California. <a href="https://vimeo.com/102055931">https://vimeo.com/102055931</a>

#### **PUBLISHED REPORTS**

- 1. Sedimentary and Geochemical Processes Panel, 1990, White paper: *JOIDES Journal*, v. 16, No. 2, p. 45-60.
- 2. Loutit, T.S., ed., 1992, Sea Level Working Group report: JOIDES Journal, v. 18, No. 3, p. 28-36.
- 3. National Research Council (U.S.). Committee on the Status and Research Opportunities in the Solid-Earth Sciences, 1993, *Solid-Earth Sciences and Society:* Washington, D.C., National Academy Press, 346 p. (contributor as a member of the Sedimentary Basins and Basin Analysis Panel).
- 4. Austin, J.A., Jr., Christie-Blick, N., Malone, M., et al., 1997, Continuing the New Jersey Mid-Atlantic Sea-Level Transect: College Station, Texas, *Proceedings of Ocean Drilling Program*, Leg 174A Preliminary Report.
- 5. Christie-Blick, N., 2007, Contribution on the Department of Earth and Environmental Sciences for the *LDEO Biennial Report*, 2004-2006.
  - Contributions to 4 annual reports for IGCP Project 320 (Neoproterozoic Events and Resources), published in Geological Correlation, v. 20-23, 1992-1995.

# UNPUBLISHED REPORTS, MAPS AND CIRCULARS

Eight unpublished proprietary reports and maps completed for Exxon Production Research Company, 1981-1983.

Annual contributions to Circular for IGCP Project 320 (Neoproterozoic Events and Resources) and the Working Group on the Terminal Proterozoic System, 1992-1996.

Contribution to Physical Properties of Earth Materials Newsletter (Anders, M.H., Christie-Blick, N., and Chester, F.M., Update on the Sevier Desert Drilling Project), 1996.

Knoll, A.H., Walter, M., Narbonne, G., and Christie-Blick, N. The Ediacaran Period: A new addition to the geologic time scale: International Commission on Stratigraphy, 2003.