

**A. Hope Jahren, Ph.D.**

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**BIRTHDATE**

Born September 27, 1969 in Austin, Minnesota

**EDUCATION**

Ph.D. in Soil Science, University of California at Berkeley, 1996  
B.A. *cum laude* in Geology, University of Minnesota at Minneapolis, 1991

**ACADEMIC EMPLOYMENT**

Full Professor with Tenure,  
School of Ocean and Earth Science and Technology, University of Hawaii, 07/08 – present  
Full Professor with Tenure, Geobiology, Johns Hopkins University, 07/06 – 06/08  
Associate Professor of Geobiology, Johns Hopkins University, 07/03 – 06/06  
Assistant Professor of Geobiology, Johns Hopkins University, 09/99 – 06/03  
Assistant Professor of Geochemistry, Georgia Tech, 09/96 -- 09/99  
Postdoctoral Researcher in Environmental Science, UC Berkeley, summer 1996

**HONORS AND AWARDS (top 5)**

2013 Best University Research Award, Department of Energy, Geosciences Division (DOE-BES)  
2005 Named one of the *Popular Science* “Brilliant 10”  
2005 James B. Macelwane Medal, American Geophysical Union  
2001 Donath Medal, Geological Society of America  
2010, 2003, 1992 Fulbright Awards in Arctic Science, Denmark and Norway (respectively)

**CITATIONS AND H-INDEX (Google Scholar, accessed 09/11/2013)**

1518 total number of citations  
988 citations since 2008  
20 h-index (all years)  
18 h-index (since 2008)

**PUBLICATIONS (2008 to present only)**

22 total number of publications in international peer-reviewed journals  
7 A.H. Jahren as first author  
9 A.H. Jahren as second author  
6 A.H. Jahren within “*et al.*”  
10 Jahren Lab student, postdoc or technician as first author

**SELECTED PUBLISHED WORKS\*** (2008 to present)

1. B.A. Schubert<sup>#</sup> and **A.H. Jahren**. 2013. Reconciliation of marine and terrestrial carbon isotope excursions based on changing atmospheric CO<sub>2</sub> levels. *Nature Communications*, 4:1653, DOI: 10.1038/ncomms2659.
2. **A.H. Jahren**, B.A. Schubert<sup>#</sup>, L. Marynowski and J.P. Wilson. The carbon isotope organic geochemistry of Early Ordovician rocks from the Annascaul Formation, County Kerry. *Irish Journal of Earth Sciences*, 31: 1-12; doi: 10.3318/IJES.2013.31.
3. B.A. Schubert<sup>#</sup> and **A.H. Jahren**. 2012. The effect of atmospheric CO<sub>2</sub> concentration on carbon isotope fractionation in C<sub>3</sub> land plants. *Geochimica et Cosmochimica Acta*, 96: 29-43.
4. D.C. King<sup>§</sup>, B.A. Schubert<sup>#</sup> and **A.H. Jahren**. 2012. Practical considerations for the use of pollen δ<sup>13</sup>C value as a paleoclimate indicator. *Rapid Communications in Mass Spectrometry*, 26: 2165-2172, doi: 10.1002/rcm.6333.

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\* denotes UH student author; <sup>#</sup> denotes post-doctoral author; <sup>§</sup> denotes lab technician author

5. B.A. Schubert<sup>#</sup>, **A.H. Jahren**, J.J. Eberle, L.S.L. Sternberg, and D.A. Eberth. 2012. A summertime rainy season in the Arctic forests of the Eocene. *Geology*, 40(6): 523–526, doi: 10.1130/G32856.1.
6. I. Yakovlev, C.G. Fossdal, T. Skrøppa, J.E. Olsen **A.H. Jahren** and Ø. Johnsen. 2012. An adaptive epigenic memory in conifers with important implications for seed production. *Seed Science Research*, accepted and in-press.
7. B.A. Schubert<sup>#</sup> and **A.H. Jahren**. 2011. Fertilization trajectory of the root crop *Raphanus sativus* across atmospheric pCO<sub>2</sub> estimates of the next 300 years. *Agriculture, Ecosystems, and Environment*, 140(1-2) 174-181, doi: 10.1016/j.agee.2010.11.024.
8. B.A. Schubert<sup>#</sup> and **A.H. Jahren**. 2011. Quantifying seasonal precipitation using high-resolution carbon isotope analyses in evergreen wood. *Geochimica et Cosmochimica Acta*, 75(22), 7291-7303; doi: 10.1016/j.gca. 2011.08.002.
9. R.J. Panetta<sup>#</sup>, **A.H. Jahren**. 2011. Single-step transesterification with simultaneous concentration and stable isotope analysis of fatty acid methyl esters by gas chromatography-combustion-isotope ratio mass spectrometry. *Rapid Communications in Mass Spectrometry*, 25(10) 1372-1381.
10. B.M. Davy, **A.H. Jahren**, V.E. Hendrick, D.L. Comber. 2011. Association of δ<sup>13</sup>C in fingerstick blood with added-sugar and sugar-sweetened beverage intake. *Journal of the American Dietetic Association*, 111(6) 874-878.
11. L. Marynowski, M. Rakocinski, E. Borcuch, B. Kremer, B.A. Schubert<sup>#</sup>, **A.H. Jahren**. 2011. Molecular and petrographic indicators of redox conditions and bacterial communities after the F/F mass extinction (Kowala, Holy Cross Mountains, Poland). *Palaeogeography Palaeoclimatology Palaeoecology*, 306, 1-14.
12. **A.H. Jahren** and B.A. Schubert<sup>#</sup>. 2010. Corn content of French fry oil from national chain vs. small business restaurants. *Proceedings of the National Academy of Sciences*, 107(5), 2099–2101, doi: 2010.1073/pnas.0914437107.
13. G.B. Hunsinger<sup>#</sup>, W.M. Hagopian<sup>§</sup>, **A.H. Jahren**. 2010. Offline Oxygen Isotope Analysis of Organic Compounds with High N:O, *Rapid Communications in Mass Spectrometry*, 24, 3182-3186.
14. E.H. Yeung, C.D. Saudek, **A.H. Jahren**, W.M.L. Kao, M. Islas, R. Kraft\*, J. Coresh, and C.A. Anderson. 2010. Evaluation of a novel isotope biomarker for dietary consumption of sweets. *American Journal of Epidemiology*, doi: 10.1093/aje/kwq247.
15. W.M. Hagopian<sup>§</sup>, and **A.H. Jahren**. 2010. Minimization of Sample Requirements for δ<sup>18</sup>O in Benzoic Acid, *Rapid Communications in Mass Spectrometry*, 24, 2542-2546; doi 10.1002/rcm.4669.
16. **A.H. Jahren** and N.C. Arens. 2009. Prediction of atmospheric δ<sup>13</sup>CO<sub>2</sub> using plant cuticle isolated from fluvial sediment: tests across a gradient in salt content. *Palaios*, 24, 394-401. doi: 10.2110/palo.2008.p08-069r.
17. **A.H. Jahren**, M.C. Byrne, H.V. Graham, R.A. Summons and L.S.L. Sternberg. 2009. The environmental water of the Middle Eocene Arctic: Evidence from δD and δ<sup>18</sup>O within specific compounds. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 271(1-2), 96-103. doi: 10.1016/j.palaeo.2008.09.016.
18. **A.H. Jahren**, R.A. Kraft\*. 2008. Carbon and nitrogen stable isotopes in fastfood: Signatures of corn and confinement. *Proceedings of the National Academy of Sciences*, 105(46), 17855-17860. doi: 10.1073/pnas.0809870105.
19. R.A. Kraft\*, **A.H. Jahren** and C.D. Saudek. 2008. Clinical-scale investigation of stable isotopes in human blood: δ<sup>13</sup>C and δ<sup>15</sup>N from 406 patients at the Johns Hopkins Medical Institutions. *Rapid Communications in Mass Spectrometry*, 22(22), 3683-369.
20. G.J. Retallack and **A.H. Jahren**. 2008. Methane release from igneous intrusion of coal during Late Permian extinction events. *Journal of Geology*, 116, 1-20.

21. **A.H. Jahren** and L.S.L. Sternberg. 2008. Annual patterns within tree rings of the Arctic middle Eocene (~45 Ma): Isotopic signatures of precipitation, relative humidity and deciduousness. *Geology*, 36(2), 99-102.
22. **A.H. Jahren**, N.C. Arens and S.A. Harbeson. 2008 (*Invited*). Prediction of atmospheric  $\delta^{13}\text{CO}_2$  using fossil plant tissues. *Reviews of Geophysics*, 46/2006RG0002.

**MAJOR FUNDING** (2008 to present only)

**\$ 3.16 M** in total external funds to A.H. Jahren

FUNDING AGENCIES: The Department of Energy (DOE), The National Science Foundation (NSF), The National Institutes of Health (NIH)

**MAJOR FUNDING** (2008 to present)

DOE Division of Geosciences (BES): "Development of the Carbon Isotope Signature of Terrestrial *n*-alkanes as a Potential Proxy for Palaeo-pCO<sub>2</sub>" 2013-2016 (no Co-P.I.) **\$405,000** to Jahren

NSF (GEO/EAR): "Paleoclimate Analysis of a Miocene Arctic Forest from the Kolyma River Basin, Northeastern Russia" 2013-2015 (no Co-P.I.) **\$150,000** to Jahren

NIH (NIDDK): "SIPsmarter" 2011-2016 (subcontracted to VaTech P.I. J. Zoellner) **\$230,402** to Jahren

DOE Division of Geosciences (BES): "Development of the Carbon Isotope Signature of Terrestrial *n*-alkanes as a Potential Proxy for Palaeo-pCO<sub>2</sub>" 2010-2013 (no Co-P.I.) **\$599,338** to Jahren

NSF (OS/MRI): "Acquisition of IRMS Instruments for Stable Isotope Analyses of New Geobiological Substrates" 2010-2013 (Co-P.I. B. Popp) **\$716,368** to Jahren

NSF Division of Arctic Sciences (ARC): "Collaborative Research: Transarctic Paleoclimate of the Eocene" 2008-2012 (Co-P.I.s J. Eberle, L. Sternberg and R. Summons) **\$350,677** to Jahren

NSF (EXE): "Method Development for Stable Isotope Characterization of High Explosives" 2007-2010 (no Co-P.I.) **\$397,198** to Jahren

DOE Division of Geosciences (BES): "Development of New Biomarkers for Surficial Earth Processes" 2006-2009 (no Co-P.I.) **\$313,595** to Jahren

**TEACHING** (2008 to present)

GG102 "Introduction to Global Change" (3 credits) Fall 2013 (5 students) (*new course*)

GG711 "Terrestrial Geobiology" (3 credits) Spring 2011 (8 students) and Spring 2012 (4 students)

GG410 (8 students); GG610 (5 students) Fall 2011

GG101L "Introduction to Geology Laboratory" (1 credit) Fall 2011 (80+ students)

GG101 "Introduction to Geology" (3 credits) Fall 2009 (80 students) and Spring 2010 (80 students)

Average score (out of a possible 5) for "Instructor's Overall Performance" (all courses): 4.033

**ADVISING** (2008 to present, all supported by Jahren Lab funding)

Post-doctoral Scholars (7): German Mora, Tara Greaver, Robert Panetta, Glendon Hunsinger, Brian Schubert, Erik Gulbranson, Abby Othman-Wilson

Graduate Students (3): Lori Cabena (MS 1999), Scott Werts (PhD 2006), Ben Czeck (expected 2013)

Technicians (6): William Hagopian, Josh Bostic, Caleb King, Nancy Parker, Olivia Schubert, Stephanie Salisbury

Undergraduate Students: (25+) current: Sherilyn Palafox (junior)

**FIELD EXPEDITIONS** (2008 to present)

2011 to present (co-Director) Elevated pCO<sub>2</sub> Experiments at Magoon Research Facility (CTHAR/UH)  
2008 to present (Director) ongoing research within the Lyon Arboretum (UH)  
2013 (Director) NSF-Funded Fieldwork Campaign to Northwestern Siberia  
2010, 2011, 2012 (co-Director) NSF-Funded Fieldwork Campaigns to the Canadian Arctic and Alaska  
2010 and 2011 (Director) Fieldwork in Southwestern Ireland (2 week excursions)  
2011 (Director) Soils Fieldwork in Arizona (1 week excursion)

**SERVICE** (2008 to present)

**DEPARTMENTAL**

Committees: Graduate Student Evaluation (2 years); Bullard Fellowship; Curriculum Committee  
Committee Chair: Curriculum Committee (current)

**UNIVERSITY-WIDE**

Tenure and Promotion (TPRC) (2009-2012)  
Director, Distinguished Lecture Program (OVRCE)

**NATIONAL AND INTERNATIONAL**

2013-2014 Organizer, Goldschmidt Conference (Biogeochemistry Theme)  
2013 Selection Committee, AGU Union Medals and Awards  
2010-2012 Secretary, Biogeosciences Section, American Geophysical Union  
2010 Invited participant, NSF Deep Time Earth-Life Observatories Workshop  
2008-2011 Selection Committee, AGU Fellows (Section B)  
2006-2008 Selection Committee, Student Research Grant, Geological Society of America  
2008 Invited participant, National Academy of Sciences Kavli Frontiers Conference

**EDITING**

2011-2014 Science Editor, *Geological Society of America Bulletin*  
2008-2011 Associate Editor, *Geological Society of America Bulletin*  
2005-2009 Editorial Board, *Geochemical Transactions*

**PUBLIC ENGAGEMENT**

2012 Guest Speaker, Lutheran Church of Honolulu, "The Science of Evolution"  
2011 Guest Speaker, *Science Café*, "Fossils in Arctic Canada"  
2009 Guest Lecture, Science (1-3 grade), "Fossils" Mid-Pac Institute, Manoa, HI  
2008 Guest Lecture, Preschool, "Rocks" The Early School, Honolulu, HI