DR. NEIL JOHN TABOR

Education: B.S. Geology (May 1996) University of Nebraska, Lincoln, NE
M.S. Geology (June 1999) University of California, Davis, CA
Thesis: Permo-Pennsylvanian alluvial paleosols (north-central Texas): High-resolution proxy records of the evolution of early Pangean paleoclimate: Adviser: Isabel P. Montañez

Ph.D. Geology (June, 2002) University of California, Davis, CA
Dissertation: Paleoclimate isotopic proxies derived from Paleozoic, Mesozoic, and Cenozoic paleosols, and modern soils; Adviser: Isabel P. Montañez

Employment:

Department of Geological Sciences Southern Methodist University *Assistant Professor*	Aug. 2004 to present
Department of Geosciences Southern Methodist University *Post-Doctoral Researcher*	Aug. 2002 to July, 2004
Department of Geology University of California, Davis *Research and Teaching Assistant*	Sept. 1997 to Aug. 2002
Bureau of Economic Geology University of Texas, Austin *Research Assistant* (*adviser on sabbatical at UT Austin*)	Jan. 1997 to Sept. 1997
Department of Earth Sciences University of California, Riverside *Teaching Assistant* (*adviser at UC Riverside*)	Sept. 1996 to Dec. 1996
United States Department of Agriculture Soil Conservation Service *Soil Petrographer*	May 1996 to Sept. 1996

HONORS, AWARDS & FUNDING

- National Science Foundation Research Grant NSF-EAR0545654 ($151,350) 2006
- National Science Foundation Research Grant NSF-EAR0447381 ($84,996) 2005
- University Council For Research ($5000) 2005
- Presidential Partner's Grant Award ($1200) 2005
- Downey Family Award for Faculty Excellence ($5000) 2004
- National Science Foundation – Graduate Student Fellowship 1999-2001
  Integrative Graduate Education and Research Traineeship Program (IGERT)

- Grants in Aid - Geological Society of America 1999, 2001
- Grants in Aid – Paul Wiemer Award, SEPM 1999
- Grants in Aid – University of California Durrell Fund 1998 through 2001
- Grants in Aid – University of California Humanities 1999, 2000
- Grants in Aid – American Association of Petroleum Geologists 1999
- Grants in Aid – Sigma Xi 1999

SERVICE

- Geological Society of America Topical Session Co-Chair October, 2002
- Geology Department Seminar Coordinator 2001 to 2002
- Graduate Student Representative to the Faculty – Geology Department 2001 to 2002

PUBLICATIONS

Ekart, D.D., Cerling, T.E., Montañez, I.P., and Tabor, N.J., 1999, A 400 million year carbon isotope record of pedogenic carbonate: Implications for paleoatmospheric carbon dioxide: **American Journal of Science**, v. 299, p. 805-827.

Nelson, W.J., Hook, R.W., Tabor, N., 2001, Clear Fork Group (Leonardian, Lower Permian) of North-Central Texas: **Oklahoma Geological Survey Circular**, v. 104, p. 167-169.

Tabor, N.J., Montañez, I.P., and Southard, R. J., 2002, Mineralogical and stable isotopic analysis of pedogenic proxies in Permo-Pennsylvanian paleosols: Implications for paleoclimate and paleoatmospheric circulation: **Geochimica et Cosmochimica Acta**, v. 66, p. 3093-3107.

Tabor, N.J., Montañez, I.P., 2002, Shifts in Late Paleozoic Atmospheric Circulation over Western Equatorial Pangea: Insights from Pedogenic Mineral $\delta^{18}O$ Compositions: **Geology** v. 30, p. 1127-1130.

Royer, D. L., Berner, R.A., Montañez, I.P., Tabor, N.J., and Beerling, D.J., 2004, CO_2 as a Primary Driver of Phanerozoic Climate, **Geological Society of America Today**, v. 14, no. 3.

Tabor, N.J., Yapp, C.J., and Montañez, I.P., 2004, Goethite, Calcite, and Organic Matter from Permian and Triassic Soils: Carbon Isotopes and CO_2 Concentrations: **Geochimica et Cosmochimica Acta** v 68, p. 1503-1517.

Tabor, N.J., Montañez, I.P., and Zierenberg, R.B., 2004, Mineralogical, chemical, and stable isotope analyses of a pedogenically altered basalt: Implications for climate in the Late Triassic Ischigualasto Basin, northwestern Argentina, **Geological Society of America Bulletin**, v. 114, p. 1280-1293.

Tabor, N.J., and Montañez, I.P., 2004, Permo-Pennsylvanian alluvial paleosols (north-central Texas): High-resolution proxy records of the evolution of early Pangean paleoclimate, **Sedimentology,** v. 51, p. 851-884.

Tabor, N.J. and Yapp, C.J., 2005, Incremental vacuum dehydration-decarbonation experiments on a natural gibbsite (α-$Al(OH)_3$): CO_2 abundance and $\delta^{13}C$ values, **Geochimica et Cosmochimica Acta,** v. 69, p. 519-527.

Currie, B.S., Rowley, D. and Tabor, N.J., 2005, Mid-Miocene paleoaltimetry of southern Tibet: Implications for the role of mantle thickening and delamination in the Himalayan orogen, **Geology,** v. 117, No. 3 (March).

Tabor, N.J., and Montañez, I.P., 2005, Oxygen and hydrogen isotope compositions of pedogenic phyllosilicates: Development of modern surface domain arrays and implications for paleotemperature reconstructions, **Palaeogeography, Palaeoclimatology, Palaeoecology**. v. 223, p. 127-146.

Jacobs, B.F., Tabor, N., Feseha, M., Pan, A., Kappelman, J., Rasmussen, T., Sanders, W., Wiemann, M., Crabaugh, J., and Garcia Massini, J.L., 2005, Oligocene Terrestrial Strata of Northwestern Ethiopia: A Preliminary Report on Paleoenvironments and Paleontology. **Paleontologica Electronica**. Palaeonhttp://palaeo-electronica.org/paleo/2005_1/jacobs25/issue1_05.htm.

Tabor, N.J., and Yapp, C.J., 2005, Juxtaposed Permian and Pleistocene isotopic archives: Surficial environments recorded in calcite and goethite from the Wichita Mountains, Oklahoma. In Mora, G. and Surge, D., eds. Isotopic and Elemental Tracers of Cenozoic Climate Change. **Geological Society of America Special Publication No. 395,** p 55-70.

DiMichele, W.A., Tabor, N.J., Chaney, D.S., 2005, Outcrop-scale Environmental Heterogeneity and Vegetational complexity in the Permo-Carboniferous Markley Formation of North Central Texas; In Lucas, S.G., and Ziegler, K.E. (ed.), **The Nonmarine Permian,** New Mexico Museum of Natural History and Science Bulletin No. 30, p. 60-66.

Tabor, N.J. and Yapp, C.J., 2005, Coexisting goethite and gibbsite from a high-paleolatitude (55°N) Late Paleocene laterite: Concentration and $^{13}C/^{12}C$ ratios of occluded CO_2 and associated organic matter. **Geochimica et Cosmochimica Acta,** v. 69, p. 5495-5510.

Tabor, N.J. Montanez, I.P., Kelso, K.A., Currie, B.S., Shippman, T.A., in press, A Late Triassic Soil Catena: Landscape Controls on Paleosol Morphology Across the Carnian-Age Ischigualasto-Villa Union Basin, Northwestern Argentina: **Geological Society of America Special Publication**.

DiMichele, W.A., Tabor, N.J. and Chaney, D.S., in press, From wetlands to wetspots: the fate and significance of Carboniferous elements in Early Permian coastal plain floras of north central Texas, invited paper to **Geological Society of America Memoir**.

Garcia-Massini, J.L., Jacobs, B.F., Pan, A. and Tabor, N.J., in revision, The occurrence of the fern Acrostichum in successional volcanic and fluvio-lacustrine strata in the Oligocene of the northwestern Ethiopian Plateau, **International Journal of Plant Sciences**.

Currie, B.S., Tabor, N.J., Montanez, I.P. and Shippman, T., in revision, Tectonics, climate and landscape: Controls on fluvio-alluvial architecture within the Late Triassic Ischigualasto Formation, Ischigualasto Basin, NW Argentina, submitted to **Geological Society of America Bulletin**.

Tabor, N.J., Montanez, I.P., Steiner, M., and Schwindt, D., submitted, The $\delta^{13}C$ values of Permo-Triassic carbonates from South Africa reflect a stinking, sulfurous swamp, not atmospheric conditions: submitted to **Palaeogeography, Palaeoclimatology, Palaeoecology**.

Currie, B.S., Colombi, C.E., Tabor, N.J., Shipman, T.C., and Montañez, I.P., submitted, Stratigraphy and architecture of the Upper Triassic Ischigualasto Formation, Ischigualasto Provincial Park, San Juan, Argentina: **Journal of South American Earth Sciences**.

Montañez, I.P., Tabor, N.J., Niemeier, D., DiMichele, W.A., Frank, T.D., Fielding, C.R. and Isbell, J.L., submitted, Evidence for a Strong CO_2-Climate-Glaciation Link During the Late Paleozoic Icehouse-Greenhouse Transition. Submitted to **Science,** Dec. 4, 2005

PUBLICATIONS IN PREPARATION

Tabor, N.J., and Rasmussen, C., in prep., Chemical indicies of soil weathering on volcanic parent materials: potential for paleoclimate reconstruction from the chemistry of paleosols: to be submitted to **Geology**.

Tabor, N.J., Montañez, I.P., and Rasmussen, C., in prep., Pedogenic mineral $\delta^{18}O$ proxies of meteoric precipitation oxygen isotope lapse rates in the California Sierra Nevada, USA: to be submitted to **Science**.

Tabor, N.J., and Montañez, I.P., in prep., A heirarchy of climate change associated with Late Paleozoic aridification over western Pangea: to be submitted to **Geology**.

DiMichele, W.A., Tabor, N.J., Paustian, M.E., Chaney, D.S, Nelson, W. J., and Hook, R. W., in prep., Floristic heterogeneity in an Early Permian coastal landscape, the Lueders Formation from North Central Texas, to be submitted to **Palaios**.

Tabor, N.J., in prep, Oxygen isotope paleothermometry of coexisting Permo-Pennsylvanian pedogenic hematites and phyllosilicates: to be submitted to **Sedimentology**.

Tabor, N.J., in prep., The distribution of Late Carboniferous and Early Permian paleosol morphologies in the southwestern United States and its relationship to regional climate across western equatorial Pangea: to be submitted to **Journal of Geology**.

ABSTRACTS

Tabor, N.J., and Montañez, I.P., 1999, Paleosols as indicators of Permo-Pennsylvanian climatic change in equatorial western Pangea and development of megamonsonal circulation, American Association of Petroleum Geologists annual convention, San Antonio, v. 8, p. A137.

Tabor, N.J., and Montañez, I.P., 1999, Early Permian atmospheric pCO_2 reconstructed from paleosol carbonate: Implications for Late Paleozoic deglaciation, 11th Bathurst Meeting, Cambridge, UK.

Tabor, N.J., and Montañez, I.P., 1999, The search for quantitative indicators of paleoclimate and paleoenvironment from Late Paleozoic terrestrial paleosols, Geological Society of America annual convention, Denver, v. 31, p. A418.

Scwindt, D.M., Tabor, N.J., Steiner, M.B., and Rampino, M.R., 1999, Isotopic reconstruction of paleoenvironment and magnetic stratigraphy of Permian-Triassic boundary sections in the Karoo, Geological Society of America annual convention, Denver, v. 31, p. A225.

Montañez, I.P., Tabor, N.J., Ekart, D.D., and Collister, J.W., 1999, Evolution of Permian atmospheric pCO_2 as derived from latest Carboniferous through Permian paleosol carbonates, Midland and Paradox Basins, U.S.A., and northern Italian Alps, Geological Society of America annual convention, Denver, v. 31, p. A326.

Tabor, N.J., and Montañez, I.P., 2000, Paleoenvironmental reconstruction from Late Pennsylvanian and early Permian paleosols of north Texas: clay mineralogy and stable isotope geochemistry, 37th annual meeting of the Clay Minerals Society, p. 117.

Tabor, N.J., Ekart, D.D., and Montañez, I.P., 2000, Late Pennsylvanian and Early Permian Paleoenvironmental reconstruction from the stable isotopic composition of paleosol carbonate, Geological Society of America annual convention, Reno, v. 32, p. A300.

Montañez, I.P., Tabor, N. J., Ekart, D.D., and Collister, J.W., 2000, Evolution of latest Paleozoic through early Mesozoic Atmospheric pCO_2 derived from mineral and organic matter proxies in paleosols, Geological Society of America annual convention, Reno, v. 32, p. A524.

Tabor, N.J., Montañez, I.P., Ekart, D.D., Zierenberg, R., and Chaney, D.S., 2001, Stable isotope paleoclimate reconstruction from Permo-Pennsylvanian paleosols of the southwestern United States, Earth Systems Processes, Edinburgh, Scotland, p. 71.

Montañez, I.P., Tabor, N.J., Ekart, D.D., Chaney, D., and Collister, J.W., 2001, Were changes in Early Permian Atmospheric pCO_2 levels and collapse of Gondwanan glaciation linked?, Earth Systems Processes, Edinburgh, Scotland, p. 71.

Ekart, D.D., Montañez, I.P., Tabor, N.J., Chaney, D.S., and Collister, J.W., 2001, Stable isotope analyses of fossil teeth and charcoals indicate a heavy carbon lower Permian world, Earth Systems Processes, Edinburgh, Scotland, p. 78.

Tabor, N.J., Montañez, I.P., 2001, Stable isotope compositions of Authigenic phyllosilicates, iron oxides, and carbonate: insighhts to Late Paleozoic atmospheric circulation, Geological Society of America annual convention, Boston, v. 33, p. A367.

Currie, B.S., Tabor, N.J., Shipman, T.C., Montañez, I.P., and Moore, K., 2001, Stratigraphic architecture of the Upper Triassic Ischigualasto Formation, Ischigualasto provincial park, Northwestern Argentina, Geological Society of America annual convention, Boston, v. 33, p. A75.

Moore, K.A., Tabor, N. J., Montañez, I.P., Currie, B. S., and Shipman, T., 2001, Paleoclimate reconstruction from the $\delta^{13}C$ carbonate proxies in Triassic paleosols and sediments, Ischigualasto Basin Argentina: American Geophysical Union Abstracts with Programs, San Francisco, p. 237.

Tabor, N.J., Yapp, C.J., and Montañez, I.P., 2002, Goethite, Calcite, and Organic Matter from Permian and Triassic Soils: Carbon Isotopes and CO_2 Concentrations: Geological Society of America annual convention, Denver, v. 34, p. A

Chaney, D.S, DiMichelle, W.A., Tabor, N.J., and Hook, R.W., 2002. From wetlands to wet spots: the fate and significance of Carboniferous elements in Early Permian coastal plain floras of north central Texas, Geological Society of America annual convention, Denver, v. 34, p.

Shipman, T.C., Tabor, N.J., Currie, B.S., Moore, K.A., and Montañez, I.P., 2002, Links between sediment accumulation rates and thedevelopment of alluvial architecture: Triassic Ischihualasto Formation, Northwestern Argentina, Geological Society of America annual convention, Denver, v. 34, p. A

Tabor, N.J., and Montañez, I.P., 2002, Oxygen and hydrogen isotope compositions of pedogenic phyllosilicates and iron oxyhydroxides: Development of modern surface domain arrays and implications for paleotemperature reconstructions, American Geophysical Union abstracts with programs, San Francisco, p.

Tabor, N.J., and Yapp, C.J., 2003, Implications for Late Paleocene atmospheric CO_2 from light stable carbon isotope measurements of $Fe(CO_3)OH$ in solid solution with in goethite from a laterite in Northern Ireland, Geological Society of America annual convention, Seattle, v. 35, p. A585.

Tabor, N.J. and Yapp, C.J., 2004, Carbon isotope measurements of Fe(III) Carbonate in goethite from a Late Palaeocene Laterite at 55°N, Geological Society of America annual convention, Denver, v. 36, p. A33.

Montañez, I.P., and Tabor, N.J., 2004, Evidence for a robust CO_2-climate link during the Late Paleozoic Gondwanan ice age, Geological Society of America annual convention, Denver, v. 36, p. A32.

Jacobs, B.F., Pan, A., and Tabor, N.J., 2005, Paleoclimate and paleoecology of Oligocene strata at Chilga, Northwestern Ethiopian Plateau, Geological Society of America annual convention, Denver, v. 37, p. 528.

Tabor, N.J., Montanez, I.P., DiMichele, W.A., 2005, Stable isotope temperature reconstructions from Permo-Pennsylvanian pedogenic minerals: insight into terrestrial climate during meltdown of the Late Paleozoic Icehouse, Geological Society of America annual convention, Denver, v. 37, p. 483.

DiMichele, W.A., Looy, C., Montañez, I.P. and Tabor, N.J., 2005, The dynamics of tropical vegetational change during the final stage of the Late Paleozoic ice age and subsequent deglaciation, Geological Society of America annual convention, Denver, v. 37, p. 484.

Montañez, I.P., Tabor, N.J., Fielding, C.R., Frank, T.D., and Isbell, J.P., 2005, Permo-Carboniferous atmospheri PCO_2, climate and Gondwanan Glaciation History, Geological Society of America annual convention, Denver, v. 37, p. 255.