***C U R R I C U L U M V I T A E***

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# *EDUCATION*

Ph.D. Department of Earth Sciences, Montana State University, 2007. Advisor: David J. Varricchio. Dissertation Title: *Titanosaur Reproductive Biology: Comparison of the Auca Mahuevo Titanosaur Nesting Locality (Argentina), to the Pinyes Nesting Locality (Spain)*

B. A. Geography, University of Montana 1992, Honors.

# *PROFESSIONAL EXPERIENCE*

2007 – presentDepartment of Earth Sciences, Montana State University. Assistant Research Professor**,** paleontology (Adjunct instructor: 2003 – 2007).

2003 – 2014 Masters of Science in Science Education (MSSE), taught paleontology field classes and *Historical Geology* (on-line)

2010 – 2012 Research Faculty, National Science Foundation grant to D. J. Varricchio.

 Title: *Evolution of Modern Avian Reproduction: From Nonavian Dinosaurs to*

 *to Birds*

2008 – 2009 Big Sky Carbon Sequestration Partnership, geologist (half time). Field and

 laboratory research.

2006 – 2012 Big Sky Science Partnership, Math and Science Resource Center,

 Montana State University. Associate Research Scientist; taught earth

 sciences to teachers on the Crow and Northern Cheyenne Reservations;

 on-line format, with monthly meetings on the reservations

2003 – 2014 Electronic-Mentoring for Student Success (eMSS). Science content

 specialist/on-line facilitator for new science teachers in 16 states;

 New Teacher Center, Santa Cruz, CA.

*GRANTS AND AWARDS*

*Chinese National Natural Science Foundation*, People’s Republic of China, Dr. Xingsheng Jin, Zhejiang Natural History Museum; senior scientist

National Science Foundation, International Research Experience for Students. *Dinosaur Eggs*

 *and Education: a student research experience in China*, 2009. $146,488

National Geographic Society: *Tracking Dinosaur Nesting Grounds in the Cretaceous of Zhejiang, China*. Co-PI, 2010. $18,440.

Outstanding Graduate Achievement Award, 2007. $500

Donald Smith Memorial Scholarship, Department of Earth Sciences, 2006, $5500.

College of Letter and Science Award 2006; thesis field work in Spain. $2938.

College of Letter and Science Award 2006; field work in the Wayan Formation, Idaho. $1000.

Geological Society of America; thesis field work in Argentina. $2170.

Association of Applied Paleontological Sciences; museum research in China, 2005. $2000

Evolving Earth Foundation; *The Origins of Avian Reproductive Traits,* 2005. $2530

Jurassic Foundation, field work in Spain, 2005. $2100.

College of Letter and Science Award, 2004. $2500.

College of Letters and Sciences, Graduate Enhancement Award, 2004. $13,000

# *PUBLICATIONS*

**Articles:**(\*indicates student)

Ferguson\*, A. L., Varricchio, D. J., Pina, C. I., **Jackson F. D**. *in press*. From eggs to hatchlings: nest

 site taphonomy of American crocodile *(crocodylus acutus)* and broad-snouted caiman *(Caiman*

 *latirostris).* Palios.

Schmitt, J.G., Fisher, J. W., Pac, D. F., **Jackson**, **F. D**., Patterson, S. J. Ashchoff, J. L.,

Challender, S. *in press*. Geoecology of the Marias River Canyon, Montana, USA: Landscape Influence on Human Use and Preservation of Late Holocene Archaeological and Vertebrate Remains. Geological Society of America Special Paper.

Lawver\*, D. and **Jackson, F. D**. 2017. An accumulation of turtle eggs with embryos from the

 Campanian (Upper Cretaceous) Judith River Formation of Montana. Cretaceous Research

 69:90-99.

Varricchio, D. J. and **Jackson, F.D**. 2016. Reproduction in Mesozoic birds and evolution of the

 modern avian reproductive mode. The Auk 133(4) 654-684

Lawver\*, D., Jin, X., **Jackson, F.D.**, Wang, Q. 2016. An avian egg from the Lower Cretaceous

 (Albian) Liangtoutang Formation of Zhejiang Province, China. DOI: 10.1080/02724634.2016.1100631

Lawver\*, D., and **Jackson, F.D.** 2016. A fossil egg clutch from the stem turtle *Meiolania*

 *platyceps*: implications for the evolution of turtle reproductive biology. Journal of

 Vertebrate Paleontology. DOI: 10.1080/02724634.2016.1223685.

**Jackson, F**., and D.J. Varricchio. 2016. Egg and eggshells from the Upper Cretaceous Hell

 Creek Formation, Montana. Journal of Vertebrate Paleontology. DOI:

10.1080/02724634.2016.1185432

Varricchio, D. J., Jin, X., **Jackson, F**. 2015. Lay, brood, repeat: nest reuse and site fidelity in

 ecologic time for two Cretaceous troodontid dinosaurs. Journal of Vertebrate

 Paleontology, DOI:10.1080/02724634.2014.932797

**Jackson, F.D**., R. Schaff\*, D.J. Varricchio, J.G. Schmitt. 2015. A theropod nesting trace with

eggs from the Upper Cretaceous (Campanian) Two Medicine Formation of Montana.

PALAIOS, 30(5):362-372.

**Jackson, F.D**., D.J. Varricchio, R.A. Jackson, A. Walde, G. Bishop. 2015. Taphonomy of extant

 desert tortoise and loggerhead sea turtle nesting sites: implications for interpreting the

 fossil. Palaios. 30: 207–223.

Lawver\*, D.R., and **Jackson, F.D.** 2014. A review of the fossil record of turtle reproduction: eggs, embryos, nests and copulating pairs. Bulletin of the Peabody Museum of Natural History 55(2):215–236

**Jackson, F**., Schmitt, J.G., S. Oser\*. 2013. Influence of Vertisol development on sauropod egg taphonomy and distribution at the Auca Mahuevo locality, Patagonia, Argentina. Palaeogeography, Palaeoclimatology, Palaeoecology. 386, 300–307.

Oser\*, S., and **Jackson, F.** 2013. Sediment and eggshell interactions: using abrasion to assess transport in fossil eggshell accumulations. Historical Biology; published on-line 4 July.

Wang\*, P.L., **Jackson**, **F.D**., and Varricchio, D.J. 2013. Nest taphonomy of common terns (*Sterna hirundo*) on Poplar Island, Chesapeake Bay, Maryland. Historical Biology 26(2):155-64.

Barta\*, D., Brundridge\*, K.M., Croghan\*, J.A., **Jackson**, **F**., Varricchio, D.J., Jin, X., Poust\*, A.W.

 2013. Eggs and clutches of the Spheroolithidae from the Cretaceous Tiantai basin, Zhejiang

 Province, China. Historical Biology 26(2):183-194.

Wilson\*, H.A., Heck\*, C., Varricchio, D.J., **Jackson**, **F. D**., Jin, X. 2013. Evaluating

 deformation in *Spheroolithus* dinosaur eggs from Zhejiang, China. Historical Biology

 26(2):173-182.

**Jackson**, **F.D**., Varricchio, D.J., Corsini, J.A. 2013. Avian eggs from the Eocene Willwood and

Chadron formations of Wyoming and Nebraska. Journal of Vertebrate Paleontology

33(5):1190-1201.

Varricchio, D.J., **F. D**. **Jackson**, R.A Jackson, D. Zelenitsky. 2013. Porosity and water vapor conductance of two *Troodon formosus* eggs: an assessment of incubation strategy in a maniraptoran dinosaur. Paleobiology 39(2):278-296.

Knell\*, J.J., **Jackson**,**F.D**., Titus, A.L., Albright, L.B. 2010. A gravid fossil turtle from the Upper Cretaceous (Campanian) Kaiparowits Formation, southern Utah. Historical Biology 23:57-62.

Varricchio, D.J., **Jackson, F.D**. 2010. Welcome to papers from the 4th International Symposium on Dinosaur Eggs and Babies. Historical Biology. Historical Biology 23(1):1-3.

Vila\*, B., **Jackson, F**., Fortuny\*, J., Sellés\*, A.G., Galobart, A. 2010. 3-D modeling of megaloolithid clutches: insights about nest construction and reproductive behavior. PLoS ONE 5(5):1-13.

**Jackson**, **F**., Varricchio, D.J., 2010. Fossil eggs and eggshell from the lowermost Two Medicine Formation of western Montana, Sevenmile Hill locality. Journal of Vertebrate Paleontology 30 (4)1142-1156.

Villa\*, B., **Jackson F.**, Galobart, A. 2010. First data on dinosaur eggs and clutches from Pinyes locality (Upper Cretaceous, Southern Pyrenees). Ameghiniana (Argentina) 47(1): 79-87.

Jin, X., **Jackson, F.,** Varricchio, D. J., Azuma Y., He, T. 2010. The first *Dictyoolithus* egg clutches from the Lishui basin of Zhejian Province, China. Journal of Vertebrate Paleontology 30 (1): 1-9.

**Jackson, F**., Horner, J.R., Varricchio, D.J. 2010. A study of a *Troodon* egg containing embryonic remains using epifluorescence microscopy and other techniques Cretaceous Research 32:255- 262.

**Jackson, F**., Jin, X., Schmitt, J.G. 2009. Fungi in an Early Cretaceous turtle egg from China:

 evidence of ecological interactions. Palaios 24:840-845.

Varricchio, D.J., Moore, J., Erickson, G., Norell, M., **Jackson, F**., Borkowski, J. 2008. Avian

 parental care has dinosaur origin. Science 322: 1826-1828.

Weishampel, D., Fastovsky, D., Watabe M., Varricchio D., **Jackson,** **F**., Tsogtbataar K.,

 Barsbold, R. 2008. New oviraptorid embryos from Bugin-tsav, Nemegt Formation (Late

 Cretaceous), Mongolia, with insights into their habitat and growth. Journal of Vertebrate

 Paleontology 28(4):1110-1119.

**Jackson, F**., Varricchio, D., Jackson, R., Vila\*, B., Chiappe L. 2008. Comparison of water

 vapor conductance of a titanosaur egg from, Argentina, with a *Megaloolithus siruguei*

 egg from Spain. Paleobiology 34(2):229-246.

**Jackson**, **F**., Jin, X, Varricchio, D., Azuma, Y., Jiang, Y. 2008. The first in situ turtle clutch

 from the Cretaceous Tiantai Basin, Zhejiang Province China. Journal of Vertebrate

 Paleontology 28(2):319-325.

**Jackson**, **F**., Schmitt J.G. 2008. Criteria for the recognition of abnormalities in Late

 Cretaceous vertebrate eggs. Cretaceous Research 29:27-39.

Sander, P.M., Peitz\*, C., **Jackson F.**, Chiappe L. 2008. Upper Cretaceous titanosaur nesting sites and their implication for sauropod dinosaur reproductive biology. Palaeontographica Abt. A 284:69- 107.

Jin, X., Azuma,Y., **Jackson** **F.D**., Varricchio D.J., 2007. Giant dinosaur eggs from the Tiantai

 basin, Zhejiang Province, China. Canadian Journal of Earth Sciences 44(1):81-88.

Varricchio, D.J., **Jackson F.** 2005. Origins of avian reproduction: answers and questions

 from dinosaurs. Palaeovertebrata, Montpellier 32 (2-4).

Varricchio, D.J., **Jackson, F**. 2004. A phylogenetic assessment of prismatic dinosaur eggs

from the Cretaceous Two Medicine Formation of western Montana. Journal of

Vertebrate Paleontology 24 (4):931-937.

**Jackson, F.,** Garrido, A., Schmitt J.G., Chiappe, L.M., Dingus L., Loope, D. 2004. Abnormal,

 multilayered titanosaur eggs from in situ clutches (Dinosauria: Sauropoda) eggs from in

 situ clutches at the Auca Mahuevo locality, Neuquén Province, Argentina. Journal of

 Vertebrate Paleontology 24(4):913-922.

Chiappe, L., Schmitt, J., **Jackson, F.,** Garrido, A., Dingus, L., Grellet-Tinner, G. 2004. Nest structures for sauropods: sedimentary criteria for recognition of dinosaur nesting traces. Palaios 19:89-95.

Gottfried, M., O’Connor, P., **Jackson F.,** Roberts, E. 2004. Dinosaur eggshell from Red Sandstone

 Group of Tanzania. Journal of Vertebrate Paleontology 24 (2):494-497.

Chiappe, L.M., Coria, R., **Jackson, F**., Dingus L. 2003. The Late Cretaceous nesting site of

 Auca Mahuevo (Patagonia, Argentina): eggs, nests, and embryos of titanosaurian

 sauropods. Palaeovertebrata, Montpellier 32 (2-4).

**Jackson, F.D.**, Varricchio D. 2003. Ovum in ovo in *Coturnix japonica* eggs (Japanese

 quail): implications for dinosaur reproductive anatomy. Journal of Vertebrate

 Paleontology 23(3):699-702.

**Jackson**, **F.D**., Schweitzer, M. Schmitt J. 2002. The study of dinosaur eggshell using scanning electron microscopy. Scanning 24:217-223

Varricchio, D.J., Horner, J., **Jackson, F.** 2002. *Troodon* Embryos and Eggs. Journal of

 Vertebrate Paleontology 22 (3):564-576.

Schweitzer, M., **Jackson, F.D**., Chiappe, L., Schmitt, J., Calvo, J., Rubilar, D. 2002. Avian eggs and embryos from the Late Cretaceous of Patagonia, Argentina. Journal of Vertebrate Paleontology 22(1) 191-195.

Varricchio, D.J., **Jackson, F.**, Trueman, C. 1999. A nesting trace with eggs for the Cretaceous theropod dinosaur *Troodon formosus*. Journal of Vertebrate Paleontology 19(1):91-99.

Chiappe, L.M., Coria, R.A., Dingus, L., **Jackson, F.**, Chinsamy, A., and Fox M. 1998. Sauorpod Dinosaur Embryos from the Late Cretaceous of Patagonia. Nature396:258-261.

Varricchio, D. J., **Jackson, F.D.,** Borkowski, J., Horner, J. 1997. Nests and egg clutches of the dinosaur *Troodon formosus* and the evolution of avian reproductive traits. Nature 385:247-250.

**Book Chapters**

Lawver\*, D. R**.**, and **F. D. Jackson**. *In press*. A review of the fossil record of turtle reproduction: eggs,

 embryos, nests and copulating pairs. Special publication of the Peabody Museum of Natural

 History.

Schmitt, J., Jackson, F., Hanna, R. 2014. Debris flow origin of an unusual Late Cretaceous hadrosaur bone bed in the Two Medicine Formation of western Montana. Hadrosaurs: D.A. Eberth and D.

 C. Evans, eds. Hadrosaurs, Indiana University Press, Bloomington.

Chiappe, L., Jackson F., Coria, R., Dingus, L. 2005. Nesting titanosaurs from Auca Mahuevo

 and adjacent site (Late Cretaceous; Patagonia, Argentina): understanding sauropod

 reproductive behavior *in* K. Curry Rogers and J. A. Wilson (eds), The Sauropods:

 Evolution and Paleobiology. University of California Press, Berkeley, California, p. 348.

Varricchio, D. J., **Jackson F**. 2004.Two eggs sunny-side up: reproductive physiology in the dinosaur *Troodon formosus in* P.J. Currie, E.B. Koppelhus, M.A. Shugar, J.L. Wright (eds.). Feathered Dragons: studies on the transition from dinosaurs to birds. Indiana University Press, Bloomington.

**On-line Public Education**

Wilson\*, L., Chin, K. **Jackson F**. 2010. *The Study of Fossil Eggs and Eggshells*; Berkeley Museum on-line exhibit ([http://www.ucmp.berkeley.edu/science/eggshell/index.php](https://webmail.montana.edu/owa/redir.aspx?C=6b95d82e8e8d4af6bdeae20558885975&URL=http%3a%2f%2fwww.ucmp.berkeley.edu%2fscience%2feggshell%2findex.php)).

**Conference Volumes**

Bonde, J.W**.**, Hilton, R.P., **Jackson, F.D**., and Druschke, P.A., 2015, Fauna of the Newark

Canyon Formation (Lower Cretaceous), east-central Nevada, in Pennell, W. and Garside, L. eds., 2015 Geological Society of Nevada Symposium Volume, p. 139-150.

## Stoller, H.M., Rowland, S.M., Jackson F.D. 2013. Dinosaur and arthropod tracks in the Aztec Sandstone of Valley of Fire State Park, Nevada, in R.E. Reynolds (ed.), Raising questions in the central Mojave Desert. The 2013 Desert Symposium Field Guide and Proceedings. California State University Desert Studies Consortium

Chiappe, L.M., Dingus, L., **Jackson, F.**, Grellet-Tinner, G., Coria, R., Loope, D., Clarke, J., and Garrido, A. 1999. Sauropod eggs and embryos from the Upper Cretaceous of Patagonia. 1st International Congress on Dinosaur Eggs and Babies. Isona, Catalonia, Spain: 15-16.

**Field Trip Leader & Guide Books**

## Bonde, J. , Varricchio D., Jackson, F. 2011. *Mesozoic Vertebrate Paleontology of Valley of Fire State Park, Southern Nevada*. 71st Society of Vertebrate Paleontology meeting, Las Vegas, NV.

Varricchio, D., **Jackson, F**., Horner, J. 2009. The Willow Creek Anticline, Two Medicine Formation. 4th International Symposium on Dinosaur Eggs and Babies, Bozeman, MT.

Bonde, J., Varricchio, D.J., **Jackson, F**., Loope, D., Shirk, A. 2008 *Dinosaurs and Dunes! Paleontology and Sedimentology of the Mesozoic in the Valley of Fire State Park, Nevada.*  Geological Society of America, Las Vegas, Nevada.

Horner, J. R., Schmitt, J.G., **Jackson, F**., Hanna, R. 2001. Bones and rocks of the Upper Cretaceous Two Medicine-Judith River clastic wedge complex, Montana; pp. 3-13 *in* C.L. Hill (ed), Guidebook for the Field Trips, Society of Vertebrate Paleontology 61st Annual Meeting. Museum of the Rockies Occasional Paper No. 3, Bozeman, MT.

**Volume Editor**

 *Historical Biology*. 2012. 5th International Symposium on Dinosaur Eggs and Babies, Hangzhou, China.

*Historical Biology.*  2010. 4th International Symposium on Dinosaur Eggs and Babies. Bozeman, MT.

# *INVITED TALKS*

University of Montana-Western. *The Origin of Avian Reproduction*, Dillion, MT, Spring 2017

Flathead Valley Community College. *The Study of Dinosaur Biology,* Kalispell*, MT, 2011*

Chief Dull Knife College. *The Study of Dinosaur Reproductive Biology*. Lame Deer, Montana, 2010

University of Montana Seminar Series. *The Study of Dinosaur Reproductive Biology.* Missoula, Montana, 2011, 2010.

American Congress of Veterinary Pathology. *Pathological Conditions in Fossil Eggs*.

Austin, 2008.

Montana Science Olympiad. *The Reproductive Biology of Dinosaurs*. Bozeman, MT, 2009.

University of Nevada. *The Reproductive Biology of Theropod Dinosaurs*. Las Vegas, 2008.

University of Montana-Dillon; Western Research Symposium. *Sauropod Reproductive*

 *Biology*. 2007.

Conference on Sauropod Biology. *Titanosaur Reproductive Biology*. The Sauriermuseum,

 Aathal, Switzerland 2005.

Scanning Electron Microscopy Conference, New York. *The Study of Fossil Eggs*. 2002.

Natural History Museum of Los Angeles lecture series. *Titanosaur Reproductive Biology*. 2000.

# *INTERNATIONAL RESEARCH*

Natural History Museum, Hangzhou, Zhejiang Province, China, Dr. X. Jin; 2005 – present.

Southern Pyrenees, Pinyes fossil egg locality; grant to Dr. Àngel Galobart Lorente, Barcelona, Spain 2005-2011.

Natural History Museum of Los Angeles County, Dr. Luis Chiappe; Auca Mahuevo fossil locality, Patagonia, Argentina, 1999 – 2002; Junggar Basin, western China 2001.