

Curriculum Vitae Hans Larsson

Born: 15 July 1971, Edmonton, Alberta CANADA
Citizenship: CANADA
Address: Redpath Museum, McGill University
859 Sherbrooke St. W., Montréal, Québec, H3A 2K6, Canada
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Academic positions:

1. McGill University, Department of Biology: 2004 – present.
Adjunct Professor
2. McGill University, Redpath Museum and Department of Biology: 2003 – present.
Assistant Professor and Curator of Vertebrate Palaeontology
3. University of Toronto, Zoology, and Yale University, Ecology and Evolution: 2000 – 2002. *NSERC Postdoctoral Fellow: Evolution and development of the avian manus.*

Education:

1. Doctor of Philosophy, June 2000, Organismal Biology and Anatomy, University of Chicago, IL
2. Bachelor of Science, November 1994, Evolutionary Biology, McGill University, QC

Awards, scholarships, and fellowships:

1. NSERC Postdoctoral Fellowship, 2000
2. Neirman Fund, University of Chicago, 1998
3. Eisenberg Foundation Fellowship, 1996
4. University of Chicago, Division of Biological Sciences Fellowship, 1994
5. Canada Research Chair, Tier II, 2004: Mesozoic terrestrial communities of the Canadian Arctic. \$500,000 CAD over 5 years.
6. “*One of the 10 Discoveries of the Year*” 2005 from Québec Science
7. Included in the FQRNT “Talbeau d’honneur de nos chercheurs” for 2005-2006

Research grants:

1. Jurassic Foundation, 2001: Endocranial anatomy of *Ornithomimus*. \$2,700 CAD over 1 year.
2. National Geographic Research and Exploration Grant, 2002: Permian vertebrate fauna of Niger. *With C. Sidor* (primary applicant). \$43,000 CAD over 1 year.
3. NSERC Discovery Grant, 2004: Mesenchymal skeletogenic condensations: evolution

and development. \$64,000 CAD over 4 years.

4. McGill University Internal Research Committee Awards, 2003: Graduate student support. \$20,000 over 2 years. This grant was awarded as part of my start-up package.
5. FQRNT equipment grant for new researchers, 2004: La condensation squelettique des vertèbres: Évolution et développement. \$35,363 over 1 year.
6. FQRNT student support grant for new researchers, 2004: La condensation squelettique des vertèbres: Évolution et développement. \$46,200 over 3 years.
7. NSERC Collaborative Research Opportunities Grant, 2004-2005: Canadian hadrosaurs. *With* R. Reisz, (primary applicant), R. Holmes, X.-C. Wu, and P. Currie. \$200,000 CAD over 2 years.
8. National Geographic Research and Exploration Grant, 2004: Mesozoic terrestrial vertebrates of the Canadian Arctic. \$25,000 CAD over 1 year.
9. Polar Continental Shelf Project, 2004: Mesozoic terrestrial vertebrates of the Canadian Arctic. *With* N. Rybczynski (primary applicant). \$64,000 CAD over 1 year.
10. Polar Continental Shelf Project, 2006: Mesozoic terrestrial vertebrates of the Canadian High Arctic. *With* N. Rybczynski (primary applicant). \$80,000 CAD over 1 year.
11. Polar Continental Shelf Project, 2007: Mesozoic terrestrial vertebrates of the Canadian High Arctic. *With* N. Rybczynski (primary applicant). \$80,000 CAD over 1 year.

Professional societies:

Geological Association of Canada (Division of Palaeontology), Canadian Society of Zoologists (Division of Comparative Morphology and Development and Division of Ecology, Ethnology, and Evolution), National Geographic Society, Society of Vertebrate Paleontology

Teaching at McGill:

1. Guest lecturer (only 1 lecture) for BIOL 327
~20 undergraduates. Fall 2005, 2006
2. Co-instructor for BIOL 334 (Applied Tropical Ecology)
21 undergraduates. Spring 2005 (Department of Biology)
3. Co-instructor for BIOL 305 (Animal Diversity)
88 undergraduates. Winter 2005
73 undergraduates. Winter 2006
72 undergraduates. Winter 2007
4. Creator, coordinator, and co-instructor for BIOL 569 (Developmental Evolution)
9 graduates and 8 undergraduates. Winter 2005
5 graduates and 17 undergraduates. Winter 2007
5. Creator, coordinator, and sole instructor for BIOL 573 (Vertebrate Palaeontology Field Course)
1 graduate and 5 undergraduates. Summer 2004
7 graduate and 2 undergraduates. Summer 2005
9 undergraduates. Summer 2006
6. Coordinator and sole instructor for BIOL 352 (Vertebrate Evolution)
11 undergraduates. Winter 2004
34 undergraduates. Winter 2006
7. Coordinator and sole instructor for BIOL 505 (Diversity and Systematics Seminars)
4 graduates and 6 undergraduates. Winter 2004
8. Co-instructor for BIOL 304 (Evolution)
~180 undergraduates. Fall 2003, 2004, 2005, 2006

Publications (books):

none

Publications (full journal papers):**2007**

Larsson, H.C.E., and H.-D. Sues. 2007. Cranial osteology and phylogenetic relationships of *Hamadasuchus rebouli* (Crocodyliformes: Mesoeucrocodylia) from the Cretaceous of Morocco. *Zoological Journal of the Linnaean Society*, 95 pp.

Maxwell, E. E., and H.C.E. Larsson. 2007. The osteology and myology of the wing of the Emu (*Dromaius novaehollandiae*), and its bearing on the evolution of vestigial structures. *Journal of Morphology*. 57 pp.

de Boef, M. , and H.C.E. Larsson. 2007. Bone microstructure: quantifying bone vascular orientation. *Canadian Journal of Zoology* 85:63-70.

2006

O’Keefe, F. R., C. A. Sidor, C. A., H. C. E. Larsson, A. Maga, O. Ide. 2006. Evolution and homology of the astragalus in early amniotes: new fossils, new perspectives. *Journal of Morphology* 267:415-425.

Steyer, J.S., Damiani, R., Sidor, C.A., O’Keefe, F.R., Larsson, H.C.E., Maga, A., and Ide, O. (in press). The vertebrate fauna of the Upper Permian of Niger. IV. *Nigerpeton ricqlési* (Temnospondyli: Cochleosauridae), and the edopoid colonization of Gondwana. *Journal of Vertebrate Paleontology* 26:18-28.

Damiani, R., C.A. Sidor, J.-S. Steyer, R.M.H. Smith, F.R. O’Keefe, **H.C.E. Larsson**, A. Maga, O. Ide. 2006. The vertebrate fauna of the Upper Permian of Niger—V, The primitive temnospondyl *Saharastega moradiensis*. *Journal of Vertebrate Paleontology* 26: 559-572.

2005

O’Keefe, F. R., C. A. Sidor, C. A., **H. C. E. Larsson**, A. Maga, O. Ide. 2005. Vertebrate fauna of the Upper Permian of Niger – III, morphology and ontogeny of the hindlimb of *Moradisaurus grandis* (Reptilia, Captorhinidae). *Journal of Vertebrate Paleontology* 25:309-319.

Sidor, C.A., F. R. O’Keefe, R. Damiani, J. S. Steyer, R. M. H. Smith, **H. C. E. Larsson**, P. C. Sereno, O. Ide, A. Maga. 2005. Permian tetrapods from the Sahara show climate-controlled endemism in Pangea. *Nature* 434: 886-889.

2003

Sereno, P.C., C. A. Sidor, **H. C. E. Larsson**, and B. Gado. 2003. A new notosuchian from the Early Cretaceous of Niger. *Journal of Vertebrate Paleontology* 23(2):477–482.

2002

Larsson, H.C.E. and G. P. Wagner. 2002. The pentadactyl ground state of the avian wing. *Journal of Experimental Zoology (Molecular and Developmental Evolution)* 294:146-151.

2001

Sereno, P.C., **H. C. E. Larsson**, C. A. Sidor, and B. Gado. 2001. The giant crocodyliform *Sarcosuchus* from the Cretaceous of Africa. *Science* 294:1516-1519.

2000

Larsson, H.C.E. and B. Gado. 2000. A new Early Cretaceous crocodyliform from Niger. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 214(1):131-141.

Larsson, H.C.E., P. C. Sereno, and J. A. Wilson. 2000. Forebrain enlargement among nonavian theropod dinosaurs. *Journal of Vertebrate Paleontology* 20(3):615-618.

1999

Larsson, H.C.E. and C. A. Sidor. 1999. Unusual crocodyliform teeth from the Late Cretaceous (Cenomanian) of southeastern Morocco. *Journal of Vertebrate Paleontology* 19(2):398-401.

Sereno, P.C., A. B. Beck, D. B. Dutheil, **H. C. E. Larsson**, G. H. Lyon, B. Moussa, R. W. Sadleir, C. A. Sidor, D. J. Varricchio, G. P. Wilson, and J. A. Wilson. 1999. Cretaceous sauropods from the Sahara and the uneven rate of skeletal evolution among dinosaurs. *Science* 286:1342-1347.

1998

Larsson, H.C.E. 1998. A new method for comparing ontogenetic and phylogenetic data and its application to the evolution of the crocodylian secondary palate. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 210(3):345-368.

1996

Sereno, P.C., Beck, A.L., Dutheil, D.B., Gado, B., **Larsson, H.C.E.**, Lyon, G.H., Marcot, J.D., Rauhut, O.W.M., Sadleir, R.W., Sidor, C.A., Varricchio, D.D., Wilson, G.P., and Wilson, J.A. 1998. A long-snouted predatory dinosaur from Africa and the evolution of spinosaurids. *Science* 282:1298-1302.

Sereno, P.C., D. B. Duthiel, M. Iarochene, **H. C. E. Larsson**, G. H. Lyon, P. M. Magwene, C. A. Sidor, D. J. Varricchio, and J. A. Wilson. 1996. Predatory dinosaurs from the Sahara and Late Cretaceous faunal differentiation. *Science* 272:986-991.

1994

Sereno, P.C., J. A. Wilson, **H. C. E. Larsson**, D. B. Duthiel, and H.-D. Sues. 1994. Early Cretaceous dinosaurs from the Sahara. *Science* 266:267-271.

Publications (thesis, comments, responses, and reviews):

1. **Larsson, H.C.E.** 2005. Hatching of an accountable science. *Science* 307:520. [book review]
2. **Larsson, H. C. E.** and G. P. Wagner. 2003. Old morphologies misinterpreted. *Trends in Ecology and Evolution* 18(1): 10. [comment]
3. Wagner, G.P., and **H.C.E. Larsson**. 2003. What is the promise of developmental evolution? III. The crucible of developmental evolution. *Journal of Experimental Zoology (Molecular Biology and Evolution)* 300B:1-4.
4. **Larsson, H.C.E.** 2000. Ontogeny and Phylogeny of the Archosauriform Skeleton. Ph.D. Thesis, University of Chicago, 500pp.

Publications (refereed book chapters):

1. **Larsson, H.C.E.** 2007. MODES of Developmental Evolution: origin and definition of the autopodium; 57pp. *in* J.S. Anderson and H.-D. Sues (eds.), *Major Transitions in Vertebrate Evolution*. Indiana University Press.
2. Wagner, G. P., and **H.C.E. Larsson**. 2007. Fins/Limbs in the Study of Evolutionary Novelties; 28pp. *in* B.K. Hall (ed.), *The Vertebrate Appendicular Skeleton*, University of Chicago Press.
3. **Larsson, H.C.E.** 2001. The endocranial anatomy of *Carcharodontosaurus saharicus* (Theropoda: Allosauroidea) and its implications for theropod brain evolution; pp. 19-33 *in* D. Tanke and K. Carpenter (eds.), *Mesozoic Vertebrate Life*. Indiana University Press.

Publications (magazine articles):

1. **Larsson, H. C. E.** 2003. Jurassic Spark : Philip Currie. *Time*, November 3: 52-53.

Current research:

1. Bone microstructure: a new measurement theory and application to modern, archaeological, and palaeontological bones. *Collaborators:* J. Seville (McGill Univ., Dept. of Anthropology) and M. de Boef (McGill Univ. – *student*).
2. Mesozoic Canadian Arctic terrestrial community evolution. *Collaborators:* N. Ryzbczynski (Canadian Museum of Nature), M. Vavrek (McGill Univ.– *student*).
3. Avian digit evolution and development. *Collaborators:* G. P. Wagner (Yale Univ.), A. Heppleston (McGill Univ. – *student*).

4. Permian terrestrial fauna of Niger. *Collaborators*: C. Sidor (New York College of Osteopathic Medicine), F. R. O’Keefe (New York College of Osteopathic Medicine), J. S. Steyer (Paris Museum of Natural History).
5. Cretaceous terrestrial fauna of Niger. *Collaborators*: P. C. Sereno (Univ. of Chicago), J. A. Wilson (Univ. of Michigan), C. A. Sidor (New York College of Osteopathic Medicine).
6. Vertebrate appendicular evolution and development. *Collaborators*: G. P. Wagner (Yale Univ.), A. Heppleston (McGill – *student*), S. Tissandier (McGill Univ. – *student*), S. Hapke (McGill Univ.– *student*), A. Michel (McGill Univ.– *student*), S. Morison (McGill Univ.– *student*).
7. Quantifying ecological disturbance during invasions using nested phylogenetic statistics. *Collaborator*: T. Ricciardi (McGill Univ.)
8. 3-dimensional reconstruction of theropod dinosaur endocrania and cranial kinesis. *Collaborators*: P. Currie (Royal Tyrrell Museum of Palaeontology), P. Larson (Black Hills Institute of Paleontology).

Symposia organized:

1. Ontogeny and Paleontology, Fifty-seventh Annual Meeting of the Society of Vertebrate Paleontology, Chicago, IL, October 1997 (organized with M. Caldwell)
2. Vertebrate Paleontology, Development and Evolution, Sixty-sixth Annual Meeting of the Society of Vertebrate Paleontology, Ottawa, ON, 18 October 2006 (organized with K. Sears)
3. Evolutionary Transformation and Developmental Biology, Canadian Society of Zoology annual meeting, Montreal 21 May 2007

Seminars:

Scientific

1. Sigma-Xi (McGill-Montreal Chapter) 23 Oct 2006: *Hunting Dinosaurs and other fossils in the Canadian High Arctic: what ancient climate change may tell us.*
2. University of Toronto at Mississauga, Department of Biology, 2005: *Testing Urpflanze † (fish fins(hands & feet(buffalo wings)))*.
3. The Royal Society of Canada “The Cutting Edge” lecture series, 2004: *Evolution in Deep Time.*
4. University of Quebec at Rimouski, Department of Biology, 2004: *Testing Urpflanze † (fish fins(hands & feet(buffalo wings)))*.
5. McGill University, Department of Biology, 2004: *Testing Urpflanze † (fish*

fins(hands & feet(buffalo wings))).

6. Smithsonian Museum of Natural History, 2003: *Dinosaurs in the lens of developmental evolution*.
7. McGill University, Department of Earth and Planetary Sciences, 2003: .
8. McGill University, Department of Biology, 2002: *Evolutionary Developmental Morphology*.
9. Royal Tyrrell Museum of Palaeontology, Drumheller, 2002: *Fossil safari - West African dinosaur and crocodile evolution and biogeography*.
10. Yale University, Department of Ecology and Evolutionary Biology, New Haven, 2001: *Testability of evo-devo: fish fins and chicken fingers*.
11. University of Chicago, Evolutionary Morphology seminar series, Chicago, 2000: *Ontogeny and phylogeny of the archosauriform skeleton*.

Public

1. Redpath Museum, McGill University, Annual Christmas Lecture, 4 Dec 2006: *Frozen treasures: fossil marine reptiles in the Canadian High Arctic*.
2. Beavers and Scouts of Ottawa, 20 Nov 2006: *Hunting Dinosaurs in Africa and the Arctic*.
3. McGill Faculty of Science, Soup and Science, 1 Nov 2006: *Macroevolution in the Larsson Lab*.
4. The McGill Alumni Association of Southern Alberta, 4 Oct 2006: *Hunting Dinosaurs in the Canadian High Arctic: what the fossils tell us about climate change*.
5. T. rex Discovery Centre, Eastend SK, 12 May 2006: *Hunting Dinosaurs in Africa and the Arctic*.
6. T. rex Discovery Centre, Eastend SK, 12 May 2006: *Biomechanics of Tyrannosaurus rex skulls*.
7. Montreal Science Centre, 23 Apr 2006: *Climate and faunal change in Canada during the last glaciation melts*.
8. Redpath Museum, Darwin Day presentation 12 Feb 2006: *Evolutionary Tales*.
9. Catherine Trail Naturalists Club, Nov 2005: *Searching for dinosaurs in Canada's High Arctic*.
10. Redpath Museum Student Club, Nov 2005: *What the Redpath Museum's vertebrate palaeontology collections have to say*.
11. Province of Quebec Society for the Protection of Birds, 2004: *The origin of birds*.
12. Montreal Field Naturalists Society, 2004: *Searching for Dinosaurs in the Canadian arctic*.
13. Redpath Museum, McGill University, Annual Christmas Lecture, 14 Dec 2003: *Hunting for dinosaurs: from Africa to the Arctic*.

14. Redpath Museum, McGill University, Life Through Time seminar series, 2003: *The rise, fall, and flight of dinosaurs*.
15. Field Museum of Natural History, Chicago, New Volunteer Training Program, Dept. of Education, 2000: *Evolution of crocodiles, Evolution of dinosaurs, and Evolution of carnivorous dinosaurs*.

Papers presented at national and international meetings:

Plenary

Larsson, H.C.E., and G.P. Wagner. New evidence of the evolution and development of bird wing digits. Society of Vertebrate Paleontology, Norman, OK, Oct. 2002

Invited

Larsson, H.C.E. *Evolutionary innovation of the autopodium: testing developmental mechanisms of the fin-limb transition*. Society of Vertebrate Paleontology, St. Paul, MN, Oct. 2003

Larsson, H.C.E. *Development and evolution of dinosaurs: new opportunities for ancient bones*. American Association for the Advancement of Science, St. Louis MI, Feb. 2006. Program book p. 68.

Presented

2006

Larsson, H.C.E., Morison, S., and Bure, L. 2006. Developmental mechanisms of avian tail reduction. Canadian Society of Zoologists annual meeting Edmonton, AB (abstract volume p.15-16)

Larsson, H.C.E., A. Ebn-Al-Nassir, S. Morison, and L. Bure. 2006. Developmental mechanisms implicated in the evolution of theropod-avian tail reduction. Society of Vertebrate Paleontology annual meeting, Ottawa ON, Oct 2006 (Journal of Vertebrate Paleontology 26:89A)

2005

Larsson, H.C.E. 2005. Modules of developmental evolution: what really lies at the intersection of paleontology and developmental biology? Society of Vertebrate Paleontology annual meeting Mesa, AZ (Journal of Vertebrate Paleontology 25: 82A)

Larsson, H.C.E. Pentadactyl ground state of the Alligator limb. Canadian Society of Zoologists Conference, Queens University, Kingston, ON, May 2005 (abstract volume p. T116)

Larsson, H.C.E. and E.E. Maxwell. Evolution of theropod endocrania and brains. Dinosaur Park Symposium, Royal Tyrrell Museum, Drumheller, Alberta 24-25 Sep 2006 (abstract volume p.55)

2003

Larsson, H.C.E. *Evolutionary innovation of the autopodium: testing developmental mechanisms of the fin-limb transition*. Canada Palaeontology Conference, Huntsman Marine Station, NB, Aug. 2003

2002

Larsson, H.C.E., and G.P. Wagner. New evidence concerning avian digit homology. *Evolution*, Urbana-Champaign, IL, June 2002 (abstract volume p. 20)

2001

Larsson, H.C.E. The burden of homoplasy: evolution and development of morphological plasticity. *Evolution*, Knoxville, TN, June 2001 (abstract volume p. 74)

Larsson, H.C.E. The burden of morphological change: using paleontological data to examine a theory of evolutionary developmental biology. Society of Vertebrate Paleontology, Bozeman, MT, Oct. 2001

1999

Larsson, H.C.E. Ontogeny and phylogeny of the crocodylian limb skeleton. *Evolution* Madison, WI, June 1999

Larsson, H.C.E. Limb character associations in archosauromorphs: models of compartmentalization, integration, and morphogenetic trees. Society of Vertebrate Paleontology, Denver, CO, Oct. 1999

1998

Larsson, H.C.E. A new comparative method for integrating ontogenetic and phylogenetic data: an application to the evolution of the crocodylian secondary palate. *Evolution*, Vancouver, BC, June 1998

Larsson, H.C.E. A new basal crocodyloid (Crocodylia: Brevirostres) from the Early Cretaceous of the Ténéré Desert, Niger Republic. Society of Vertebrate Paleontology, Snowbird, UT, Oct. 1998

1997

Larsson, H.C.E. Ontogeny and phylogeny from an alligator's perspective. American Society of Ichthyologists and Herpetologists, Seattle, WA, June 1997

Larsson, H.C.E. Ontogenetic and phylogenetic character correlation: cladistics and von Baer from and alligator's perspective. Society of Vertebrate Paleontology, Chicago, IL, Oct. 1997

1996

Larsson, H.C.E. Cranial morphology of the African theropod, *Carcharodontosaurus saharicus* (Allosauroidea). Society of Vertebrate Paleontology, New York, NY, Oct. 1996

Larsson, H.C.E. Phylogenetic analysis of extant alligatorids. American Society of Ichthyologists and Herpetologists, New Orleans, LA, June 1996

Contributed

2007

2006

de Boef, M. and Larsson, H.C.E. 2006. Using longbone microstructure to determine age and growth rates in the ringed seal (*Pusa hispida*). Canadian Society of Zoologists annual meeting Edmonton, AB (abstract volume p.129)

Dececchi, T.A., and Larsson, H.C.E. 2006. Forelimb evolution in theropods (Dinosauria) and its implication for avian origins. Canadian Society of Zoologists annual meeting Edmonton, AB (abstract volume p.36)

Tissandier, S.C., and Larsson, H.C.E. 2006. Modular disparity in actinopterygian pectoral fins. Canadian Society of Zoologists annual meeting Edmonton, AB (abstract volume p.128)

Dececchi, T.A., and H.C.E. Larsson. 2006. Evolutionary trends in theropod forelimb evolution. Society of Vertebrate Paleontology annual meeting, Ottawa ON, Oct 2006 (Journal of Vertebrate Paleontology 26:55A)

Harrison, L., and H.C.E. Larsson. 2006. Evolution of amniote ossification patterns: a novel approach to inferring ancestral developmental sequences. Society of Vertebrate Paleontology annual meeting, Ottawa ON, Oct 2006 (Journal of Vertebrate Paleontology 26:72A)

Maxwell, E.E., A. Michel, H.C.E. Larsson, and A. Heppleston. 2006. The anatomy of the Emu wing: and example of primary digital reduction in archosaurs. Society of Vertebrate Paleontology annual meeting, Ottawa ON, Oct 2006 (Journal of Vertebrate Paleontology 26:97A)

Vavrek, M.J., and H.C.E. Larsson. 2006. Analysis of dinosaur diversity and provinciality in Late Cretaceous North America. Society of Vertebrate Paleontology annual meeting, Ottawa ON, Oct 2006 (Journal of Vertebrate Paleontology 26:135A)

2005

O'Keefe, F.R., Sidor, C.A., Larsson, H.C.E. 2005. Evolutionary development of the amniote astragalus: new fossils, new perspectives. Society of Vertebrate Paleontology annual meeting Mesa, AZ (Journal of Vertebrate Paleontology 25: 98A)

Sidor, C.A., Larsson, H.C.E., O'Keefe, F.R., Blackburn, D., Smith, R.M.H. 2005. Upper Permian captorhinid and pareiasaur reptiles from Niger: new data and interpretation. Society of Vertebrate Paleontology annual meeting Mesa, AZ (Journal of Vertebrate Paleontology 25: 115A)

Steyer, J.S., Daminani, R.B, Sidor, C.A., Smith, R.M.H., O'Keefe, F.R., and Larsson, H.C.E. 2005. Permian temnospondyls from the Sahara show edopoid colonization of Africa. Society of Vertebrate Paleontology annual meeting Mesa, AZ (Journal of Vertebrate Paleontology 25: 118A)

Tissandier, S., and Larsson, H.C.E. 2005. Insights from modular disparity of actinopterygian pectoral fins. Society of Vertebrate Paleontology annual meeting Mesa, AZ (Journal of Vertebrate Paleontology 25: 122A)

Heppleston, A., and H.C.E. Larsson. 2005. Limb bud perturbations fail to support the digital arch model. Canadian Society of Zoologists Conference, Queens University, Kingston, ON, May 2005 (abstract volume p. T7)

De Boef, M., and H.C.E. Larsson. 2005. New metrics for quantifying bone microstructure. Canadian Society of Zoologists Conference, Queens University, Kingston, ON, May 2005 (abstract volume p. T59)

E.E. Maxwell, and H.C.E. Larsson. Endocast of *Ornithomimus*. Dinosaur Park Symposium, Royal Tyrrell Museum, Drumheller, Alberta 24-25 Sep 2006 (abstract volume p.59)

2004

Sidor, C.A., R. Damiani, H.C.E. Larsson, F.R. O'Keefe, R.M.H. Smith, J.-S. Steyer. 2004. Late Permian tetrapod biogeography: new insights from West Africa. Society of Vertebrate Paleontology, Denver, CO, Oct. 2004 (Journal of Vertebrate Paleontology 24:113A)

O'Keefe, F.R., C.A. Sidor, H.C.E. Larsson. 2004. Morphology and ontogeny of the hindlimb of the large captorhinid *Moradisaurus grandis*. Society of Vertebrate Paleontology, Denver, CO, Oct. 2004 (Journal of Vertebrate Paleontology 24: 99A)

2003

Late Permian tetrapods from the Sahara. Society of Vertebrate Paleontology, St. Paul, MN, Oct. 2003

Takahashi, K. C.-h. Chiu, C. Amemiya, F. Ruddle, H.C.E. Larsson, and G.P. Wagner. Sequence evolution of Hoxa-11 and Hoxa-13 suggests an early origin of the autopodial

field early origin of the autopodial field. Society of Integrative and Comparative Biology, Toronto, Ontario. Jan. 2003.

2002

Sues, H.-D., and H.C.E. Larsson. Cranial structure and phylogenetic relationships of the enigmatic crocodyliform *Hamadasuchus rebouli* from the Cretaceous of Morocco. Society of Vertebrate Paleontology, Norman OK, Oct. 2002

2000

Smith, J., Andersen, A., and H.C.E. Larsson. Results of a high resolution CT-scan of *Coelophysis bauri* (Upper Triassic Chinle Formation, New Mexico). Society of Vertebrate Paleontology, Mexico City, Mexico, Oct. 2000

1999

A new sauropod from the Early Cretaceous of the Niger Republic. Society of Vertebrate Paleontology, Denver, CO, Oct. 1999

Animation of 3-D digital data: the walking Triceratops. Society of Vertebrate Paleontology, Denver, CO, Oct. 1999

1998

Sereno et al. New theropods from the Middle Cretaceous deposits of the Ténéré Desert, Niger Republic. Society of Vertebrate Paleontology, Snowbird, UT, Oct. 1998

Andersen, A., and H.C.E. Larsson. Digital scanning, archiving, and scaled modeling of fossil specimens. Society of Vertebrate Paleontology, Snowbird, UT, Oct. 1998

Sereno et al. A Late Cretaceous carcharodontosaurid (Theropoda: Allosauroidea) from Argentina. Society of Vertebrate Paleontology, Snowbird, UT, Oct. 1998

1997

Sidor, C.A., and H.C.E. Larsson. Unusual crocodylomorph teeth from the Kem Kem beds (Late Cretaceous: Cenomanian) of southeastern Morocco. Society of Vertebrate Paleontology, Chicago, IL, Oct. 1997

Andersen, A., and H.C.E. Larsson. Digital techniques for fossil specimens. Society of Vertebrate Paleontology, Chicago, IL, Oct. 1997

1994

Sereno et al. Dinosaur evolution on southern continents: new evidence from Cretaceous deposits in the Sahara. Society of Vertebrate Paleontology, Seattle, WA, Oct. 1994

Additional research experience:

1. Fieldwork Experience

- 1989 *Pachyrhinosaurus* bonebed (Upper Cretaceous), Grand Prairie, Alberta, CANADA
- 1990 Milk River and Dinosaur Park Formations (Upper Cretaceous), Alberta, CANADA
- 1991 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 1992 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 1993 Tiouraren Formation (Lower Cretaceous), NIGER
- 1993 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 1994 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 1995 Kem Kem Formation (Upper Cretaceous), MOROCCO
- 1995 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 1996 Sao Francisco and Itepicuru Formations (Lower Cretaceous), BRAZIL
- 1996 Rio Colorado Formation (Upper Cretaceous), ARGENTINA
- 1997 Tiouraren & Elhraz Formations (Lower Cretaceous), NIGER
- 1998 Dinosaur Park Formation (Upper Cretaceous), Alberta, CANADA
- 2000 Tiouraren & Elhraz Formations (Lower Cretaceous), NIGER
- 2003 Arlit Formation (Late Permian), NIGER – *co-organized and led*
- 2003 Kanguk Formation (Late Cretaceous), Nunavut, CANADA – *organized and led*
- 2004 Kanguk Formation (Late Cretaceous), Nunavut, CANADA – *co-organized and led*
- 2004 Horseshoe Canyon and Scollard Formations, Alberta, CANADA – *organized and led*
- 2005 Horseshoe Canyon and Scollard Formations, Alberta, CANADA – *organized and led*
- 2006 Frenchman Formation, Saskatchewan, CANADA – *organized and led*
- 2006 Kanguk, Awingak, and Bjiorn Formations, Nunavut, CANADA – *organized and led*

2. Non-McGill committees

Vice-Chair (2) for the Comparative Morphology and Development division of the Canadian Society of Zoology, 2006 – present

Vice-chair (3) for the Canadian Palaeontology division of the Geological Association of Canada, 2006 – present

External director board member of the *T. rex* Discovery Centre, Eastend SK, 2006 – present

3. Advisory Boards

Billings Medal (highest award offered from the Geological Association of Canada, Canadian Palaeontology Division), 2005
McGill Reporter, 2004 – present

4. Scientific Advisor

National Geographic Television: SuperCroc, 2001
Picturing T. rex: Selections from the Lanzendorf Collection, Field Museum of Natural History, Chicago, 2000
Virtual Surfaces Inc., 2000 – present

Reviewing:

National Geographic Society, Netherlands Organisation for Scientific Research (NWO), NSERC, Canadian Journal of Earth Sciences, Evolution and Development, Journal of Experimental Zoology (Molecular and Developmental, Evolution), Journal of Paleontology, Journal of Systematic Biology, Journal of Vertebrate Paleontology

Editorial work

Associate editor for the Zoological Journal of the Linnaean Society, 2005 – present

Postdoc/student supervision:

Postdoctoral fellows

Martin Kundrát, Fall 2006 – present. *Mechanisms of avian tail development.*

Graduate

Rui Tahara (M.Sc.), McGill Univ., Winter 2007 – present. *Cranial pneumatic anatomy of *Struthiomimus*.*

Thomas Dececchi (M.Sc.), McGill Univ., Fall 2005 – present. *Evolutionary patterns of the forelimb skeleton of theropod dinosaurs.*

Sylvie Tissandier (M.Sc.), McGill Univ., Fall 2004 – Winter 2007. *Evolution of fish paired fin disparity.*

Maria de Boef (M.Sc.), McGill Univ., Fall 2004 – present. *Bone microstructure measurement and association to differing life histories.*

Matthew Vavrek (Ph.D.), McGill Univ., Fall 2004 – present. *Canadian Mesozoic terrestrial community evolution.*

Audrey Heppleston (Ph.D.), McGill Univ., Fall 2004 – present. *Developmental control of avian digit identity, reduction, and evolution.*

Nadia Stöker (Ph.D.), McGill Univ., Fall 2003 – present. [co-supervised with R. Carroll]. *Apadeon and the origin of salamanders.*

Erin Maxwell (Ph.D.), McGill Univ., Fall 2003 – present. *Ontogeny and phylogeny of the avian skeleton.*

Undergraduate

2006-2007

Heather Bell (Undergraduate Independent Studies), McGill Univ., Fall 2006. *Description of plant macrofossils from the Frenchman Formation, Saskatchewan.*

Diane Liu (Undergraduate Independent Studies), McGill Univ., Fall 2005 – Winter 2006. *Possible role of the vasculature in shaping the early bone structure of the developing embryonic chicken wing.*

Ardeshir Ebn Alnassir (Undergraduate Independent Studies), McGill Univ., Fall 2006 – Winter 2007. *On the embryonic development of the avian tail.*

Michael Cournoyea (Undergraduate Biology Honours project), McGill Univ. Fall 2006 – Winter 2007. *Justification of Homology and Modularity.*

JP Begly (REDM 396). Winter 2007. *Assembly and analysis of a database of Late Triassic Chinese plants.*

Elia Malka REDM 396. Summer 2007. *Modularity of fish fins.*

Chase Moser (Undergraduate Independent Studies), McGill Univ., Fall 2006 – Winter 2007. *Bone microstructure of arctic seals.*

Ben Wilhelm (Undergraduate Independent Studies), McGill Univ., Fall 2006 – Winter 2007. *Description of a complete paleoniscoid fossil fish from Nova Scotia.*

2005-2006

Kenny Arulanantham (Undergraduate Independent Studies), McGill Univ., Fall 2005 – Winter 2006. *Possible role of the vasculature in shaping the early bone structure of the developing embryonic chicken wing.*

Lionel Bure (Undergraduate Independent Studies), McGill Univ., Fall 2005- Winter 2006. *Early skeletal patterning of bird tail development.*

Rebeka Church (Undergraduate Independent Studies), McGill Univ., Fall 2005. *Phytogeography of the Triassic.*

Ardeshir Ebn Alnassir (Undergraduate Independent Studies), McGill Univ., Winter 2005. *On the embryonic development of the avian tail.*

Paul Grinvalds (Undergraduate Independent Studies), McGill Univ., Winter 2006. *Development of the vertebrate tail.*

Luke Harrison (Undergraduate Honours Thesis), McGill Univ., Fall 2005 – Winter 2006. *A novel approach to inferring ancestral developmental sequences on a phylogeny.*

Michael Konviser (Undergraduate Independent Studies), McGill Univ., Fall 2005 – Winter 2006. *Dynamics of limb bud development in chicken (*Gallus gallus*): vasculature patterning.*

Justyn Lutfy-Lapierre (Undergraduate Independent Studies), McGill Univ., Winter 2005.

Three-dimensional modeling of the infant temporal bone, external, middle and inner ear, tympanic membrane, and ossicles using clinical CT scans.

Stuart Wershof (Undergraduate Independent Studies), McGill Univ., Winter 2005.

Cranial kinematics of Tyrannosaurus rex.

2004-2005

Maria de Boef (Undergraduate Independent Studies), McGill Univ., Fall 2004 – Winter 2005. *Bone Histology: sampling techniques, quantitative measurements and examination of a growth series of Phocidae humeri.*

Sam Hapke (Undergraduate Independent Studies), McGill Univ., Fall 2004. *Skeletogenic patterning in Alligator limbs.*

Adam Michel (Undergraduate Independent Studies), McGill Univ., Winter 2005.

Mesenchymal skeletogenic condensations of Emu wings and legs.

Stephen Morison (Undergraduate Independent Studies), McGill Univ., Winter 2005.

Mesenchymal skeletogenic condensations of the avian tail.

2003-2004

Martin Brazeau (NSERC USRA), McGill Univ., Summer 2004. *Mesenchymal skeletogenic condensations of the paddlefish fins.*

Maryves Guévremont (NSERC USRA), McGill Univ., Summer 2004. *Mesenchymal skeletogenic condensations of the chick hindlimb.*