

***Curriculum Vitae* of  
ANDREW N. IWANIUK  
July 2014**

**1. *Citizenship***

CANADIAN

**2. *Address***

Department of Neuroscience  
Canadian Centre for Behavioural Neuroscience  
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**3. *Education***

- 2004            Ph.D. (Zoology), School of Biological Sciences, Monash University, Clayton, Victoria, Australia.  
Thesis Title: "The evolution of brain size and structure in birds."  
Supervisors: Dr. John E. Nelson and Dr. Alan Lill
- 2000            MSc (Neuroscience), Department of Psychology and Neuroscience, University of Lethbridge, Lethbridge, Alberta, Canada.  
Thesis Title: "The evolution of skilled forelimb movements in carnivorans."  
Supervisors: Dr. Ian Q. Whishaw and Dr. Sergio M. Pellis
- 1997            BSc(Hons) (Zoology), Department of Ecology and Evolutionary Biology, Monash University, Clayton, Victoria, Australia.  
Thesis Title: "An analysis of skilled forelimb movements during feeding in members of Macropodoidea."  
Supervisor: Dr. John E. Nelson

**4. *Research Interests***

- Neuroecology of birds and mammals
- Evolutionary neurobiology
- Neurobehavioural effects of exposure to environmental contaminants

## **5. Employment History**

2012-	Associate Professor Department of Neuroscience, Canadian Centre for Behavioural Neuroscience, University of Lethbridge, Lethbridge, Alberta, Canada
2008-2012	Assistant Professor Department of Neuroscience, Canadian Centre for Behavioural Neuroscience, University of Lethbridge, Lethbridge, Alberta, Canada
2007-2008	Research Associate Department of Avian and Animal Sciences, University of Maryland, College Park, Maryland, U.S.A.
2007-2008	Research Fellow Division of Birds, Smithsonian Institution, National Museum of Natural History, Washington, D.C., U.S.A.
2003-2007	Post-doctoral Fellow Department of Psychology, University of Alberta, Edmonton, Alberta, Canada.

## **6. Honours, Awards and Fellowships**

2014	Member of the College of New Scholars, Artists and Scientists, Royal Society of Canada
2014	Tier 2 Canada Research Chair in Comparative Neuroanatomy (CA\$500,000)
2007	Smithsonian Institution Fellowship (US\$40,000)
2003	Alberta Ingenuity Fund Post-doctoral Fellowship (CA\$30,000)
2003	NSERC Post-Doctoral Fellowship (\$CA80,000)
2003	Monash University Postgraduate Publications Award (AUD\$4,900)
2002	Monash University Postgraduate Travel Grant Award (AUD\$1,185)
2002	Smithsonian Institution Postgraduate Student Fellowship (USD\$3,000)
2001	Australian Museum Trust Postgraduate Fellowship (AUD\$1,500)
2000	Monash University International Postgraduate Scholarship (AUD\$40,500)
2000	Monash University Graduate Scholarship (AUD\$52,500)
1998	University of Lethbridge Travel Scholarship (CA\$500)
1998	NSERC Post-Graduate Scholarship A (CA\$34,000)
1998	University of Lethbridge Graduate Studentship (CA\$3,000)

## **7. Scholarly and Professional Academic Activities**

### **Peer Reviewer**

Aggressive Behavior; The American Naturalist; The Anatomical Record; Anatomy Research International; Animal Behaviour; Animal Cognition; Annals of the New York Academy of Sciences; The Auk; Behavioral Ecology; Behaviour; Behavioural Brain Research; Behavioural Processes; Biological Journal of the Linnean Society; Biology Letters; Brain, Behavior and Evolution; Canadian Journal of Botany; Chronobiology International; Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology; Current Biology; Developmental Neurobiology; Evolutionary Biology; Frontiers in Neuroanatomy; Functional Ecology; Genome; Journal of Animal Ecology, Journal of Comparative Neurology; Journal of Comparative Psychology; Journal of Experimental Biology; Journal of Evolutionary Biology; Journal of Fish Biology; Neuroscience; Neuroscience and Biobehavioral Reviews; Open Biology Journal; PLoS One; Proceedings: Biological Sciences; Proceedings of the National Academy of Sciences, USA; Quarterly Review of Biology; Science; Toxicological Sciences

### Grant Reviews

NSERC Discovery Grants; NSERC Strategic Grants; Canada Foundation for Innovation (CFI); National Science Foundation (NSF); Sigma Delta Epsilon/Graduate Women in Science; University of Missouri; Czech Science Foundation; National Research Foundation of South Africa; Chilean National Fund for Scientific and Technological Development (FONDECYT); University of Lethbridge Research Fund; Austrian Science Fund (FWF), UK Biotechnology and Biological Sciences Research Council (BBSRC)

### Editorial Board

Dataset Papers in Zoology, Editor (2012-)  
Brain, Behavior and Evolution, Editor (2011-)  
PLoS One, Academic Editor (2006-)  
The Open Zoology Journal, Editorial Advisory Board (2007-)

### Professional Memberships

American Ornithologists' Union (2000-)  
International Society for Neuroethology (2011-)  
J.B. Johnston Club for Comparative Neuroanatomy (2003-)  
Ruffed Grouse Society (2012-)  
Society for Neuroscience (2003-)

### Professional Activities

2009- J.B. Johnston Club for Comparative Neuroanatomy Foreign Subscription Committee  
2009 Scholarship Committee Chair, Society for Neuroscience – Lethbridge Chapter.  
2009 Host and co-chair, Karger Workshop: "Vision With an Eye to Ecology: A Tribute to Barrie Frost."  
2007-2009 J.B. Johnston Club for Comparative Neuroanatomy Program Committee

### Committees

2014- Steering Committee, Campus Alberta Neuroscience  
2013- Destination Place Technical Committee, University of Lethbridge  
2010- Education Committee, Campus Alberta Neuroscience  
2010- Graduate Studies Program Coordinator, Department of Neuroscience, University of Lethbridge.  
2010- Undergraduate Student Curriculum Committee, Department of Neuroscience, University of Lethbridge.  
2008- Graduate Student Curriculum Committee, Department of Neuroscience, University of Lethbridge.  
2001-2002 Jock Marshall Reserve Review Committee, School of Biological Sciences, Monash University.  
2000-2002 Animal Ethics Committee, School of Biological Sciences, Monash University.

### Continuing Education

2007 Neurostereology Workshop, Marine Biological Laboratory, Woods Hole, Massachusetts, USA.  
2004-2007 Developing Your Teaching Philosophy, University Teaching Services, University of Alberta.

### Professional Consultancy

2008 Stratus Consulting, Boulder, CO, USA.  
2007 National Geographic Magazine  
2001 Department of Natural Resources and Environment, Victoria, Australia.  
Project Title: "Assessing damage to orchard crops by vertebrate pests."

## 8. Undergraduate, Graduate and Post-Doc Supervision

Postdoctoral fellows:.....	2
Postgraduate students:.....	4
Undergraduate students:.....	18
Honours Students:.....	9
Total:.....	33

### Current Trainees

Nathan Grigg (summer student) Quantification of Purkinje cells in the cerebella of galliform birds.

Courtney Heuston (independent study student) Allometric scaling of the cerebellar cortex.

Lauren Williams (Honours student) The effects of developmental exposure to PCB126 on the neocortex of American mink (*Neovison vison*).

Danielle Burger (MSc student) Effects of embryonic exposure to PCB126 on the hippocampus.

Justin Krilow (MSc student) Wing and brain morphology of the ruffed grouse (*Bonasa umbellus*).

## 9. Teaching Experience

2011-2013	Seminar in Behavioural Neuroscience (Graduate level) Lecturer (20 students)
2011	Advances in Neuroendocrinology (4 <sup>th</sup> year) Lecturer (20 students)
2010-	Functional Neuroanatomy (3 <sup>rd</sup> year) Lecturer (60 students)
2009	Behavioural Genetics (4 <sup>th</sup> year) Lecturer (10 students)
2008-2009	Fundamental Neurobiology (3 <sup>rd</sup> year) Lecturer (60 students)
2006	Behaviour in Relation to Genetics (3 <sup>rd</sup> year) Lecturer (80 students)
2005, 2007	Neuroanatomy of Perceptual Systems (4 <sup>th</sup> year) Sessional Lecturer (10 students)
2002	Vertebrate Form and Function (2 <sup>nd</sup> year) Sessional Lecturer and Teaching Assistant (200 students)
2001	Mammalian Biology (3 <sup>rd</sup> year) Teaching Assistant (80 students)
2000-2002	Animal Behaviour (3 <sup>rd</sup> year) Sessional Lecturer and Teaching Assistant (100 students)
1998-1999	Behavioural Neuroscience (4 <sup>th</sup> year) Teaching Assistant (20 students)

### Teaching Awards

2006	Teaching Evaluations Honour Roll, University of Alberta Psyc 372 (Behaviour in Relation to Genetics) Score = 4.4/5
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## 10. Research Grants

### Received

2014-2019	NSERC Discovery Grant: “The behavioural ecology of the brain: integrating evolution, behaviour and neuroscience.” (PI) <b>CA\$330,000</b>
2014-2017	NSERC Discovery Accelerator Supplement. (PI) <b>CA\$120,000</b>
2013	NSERC Research Technology and Infrastructure Grant: “MRI upgrades to enable rodent and human research.” (co-PI) <b>CA\$150,000</b>
2012	Canada Foundation for Innovation, Leaders Opportunity Fund: “Digital imaging of the brain’s anatomy: experimental and comparative approaches.” (PI) <b>CA\$329,062</b>
2011-2012	Smithsonian Institution, National Museum of Natural History Small Grants: “Do Ruddy Ducks employ electroreception in foraging?” (co-PI). <b>US\$4,800</b>
2010-2012	Natural Environment Research Council (UK): “Neurological adaptations for flight – correlating form and function in the avian cerebellar flocculus.” (co-PI) <b>UK£19,568</b>
2009-2014	NSERC Discovery Grant: “Dancing, drumming and singing: neural control of courtship behaviours.” (PI) <b>CA\$267,700</b>
2009-2012	Alberta Innovates-Technology Futures: “The role of thyroid hormone in the development of the avian brain and the effects of thyroid hormone disrupting chemicals.” (PI) <b>CA\$272,500</b>
2009-2012	NSERC Discovery Accelerator Supplement. (PI) <b>CA\$120,000</b>
2009-2011	National Evolutionary Synthesis Center (NESCent): “Evolutionary shifts in vertebrate visual ecology and visual system morphology.” (co-PI) <b>US\$60,000</b>
2009-2010	NSERC Research Technology and Infrastructure Grant: “Neural control of natural behaviours: comparative and experimental perspectives.” (PI) <b>CA\$78,173</b>
2007-2008	Smithsonian Office of Grants and Fellowships: “Inferring sensory abilities from cranial nerve morphology in extant and fossil birds.” (PI) <b>US\$1,800</b>
2003-2005	Alberta Ingenuity Fund: “Evolution of the visual system in birds.” (PI) <b>CA\$14,000</b>

## 11. Publications and Presentations

### Career Totals:

Peer-reviewed papers:.....	83
Book chapters:.....	2
Commentaries:.....	4
Non-refereed publications:.....	1
Conference presentations:.....	88
Invited conference presentations:.....	3
Invited presentations:.....	32
Symposia organization:.....	2
Citations (self citations removed):.....	953
Number of citing articles (self citations removed):.....	693
h-index (Web of Science):.....	21

### Papers in peer-reviewed journals (all trainees are underlined)

83. Corfield JR, Eisthen HL, **Iwaniuk AN**, Parsons S (in press) Anatomical specializations for enhanced olfactory sensitivity in kiwi, *Apteryx mantelli*. *Brain Behav Evol*
82. Burger DK, Gulbrandsen T, Saucier DM, **Iwaniuk AN** (2014) The effects of sex and season on dentate gyrus size and neurogenesis in a wild rodent, Richardson’s ground squirrel (*Urocitellus richardsonii*). *Neuroscience* 272: 240-251.
81. Pellis SM, Pellis VC, **Iwaniuk AN** (2014) Pattern in behavior: the characterization, origins and evolution of behavior patterns. *Adv Study Behav* 46: 127-189.

80. Franklin DC, Garnett ST, Luck GW, Gutiérrez-Ibanez C, **Iwaniuk AN** (2014) Relative brain size in Australian birds. *Emu* 114: 160-170.
79. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Corfield JR, Krillow JM, Fernandez-Juricic E, Moore BA, Wylie DR (2014) Mosaic and concerted evolution of visual nuclei in birds. *PLoS One* 9: e90102.
78. Cunningham SJ, Corfield JR, **Iwaniuk AN**, Castro I, Alley MR, Birkhead T, Parsons S (2013) The anatomy of the beak tip of kiwi and associated somatosensory regions of the brain: comparisons with shorebirds. *PLoS One* 8: e80036.
77. Lisney TJ, Stecyk K, Kolominsky J, Graves GR, Wylie DR, **Iwaniuk AN** (2013) Comparison of eye morphology and retinal topography in two species of New World vulture (Aves: Cathartidae). *Anat Rec* 296: 1954-1970.
76. Wylie DR, Jensen M, Gutiérrez-Ibanez C, Graham DJ, **Iwaniuk AN** (2013) Heterogeneity of calretinin expression in the cerebellar cortex of pigeons and relationship with zebrin II. *J Chem Neuroanat* 52: 95-103.
75. Corfield JR, Krillow JM, Vande Ligt M, **Iwaniuk AN** (2013) A quantitative morphological analysis of the inner ear of galliform birds. *Hear Res* 304: 111-127.
74. Walsh SA, **Iwaniuk AN**, Knoll MA, Bourdon E, Barrett PM, Milner AC, Nudds R, Abel RL, Dello Sterpaio P (2013) The avian cerebellar floccular fossa as a proxy for flying ability in extinct birds. *PLoS ONE* 8: e67176.
73. Corfield JR, Birkhead T, Spottiswoode CN, **Iwaniuk AN**, Boogert NJ, Gutiérrez-Ibáñez C, Overington SE, Wylie DR, Lefebvre L (2013) Brain size and morphology of the brood parasitic and cerophagous honeyguides (Aves: Piciformes). *Brain Behav Evol* 81: 170-186. **[top 10 downloaded paper Dec 2013]**
72. Lisney TJ, Stecyk K, Kolominsky J, Schmidt BK, Corfield JR, **Iwaniuk AN**, Wylie DR (2013) Ecomorphology of eye shape and retinal topography in waterfowl (Aves: Anseriformes) with different feeding modes. *J Comp Physiol A* 199: 385-402.
71. García-Peña GC, Sol D, **Iwaniuk AN**, Szekely T (2013) Sexual selection on brain size in shorebirds (Charadriiformes). *J Evol Biol* 26: 878-888.
70. Faunes M, Fernandez S, Gutiérrez-Ibáñez C, **Iwaniuk AN**, Wylie DR, Mpodozis J, Karten HJ, Marin G (2013) Laminar segregation of GABAergic neurons in the avian nucleus isthmi pars magnocellularis: A retrograde tracer and comparative study. *J Comp Neurol* 521: 1727-1747.
69. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Lisney TJ, Wylie DR (2013) Comparative study of visual pathways in owls (Strigiformes). *Brain Behav Evol* 81: 27-39.
68. Corfield JR, Harada N, **Iwaniuk AN** (2013) Aromatase expression in the brain of the Ruffed Grouse (*Bonasa umbellus*) and comparisons with other galliform birds (Aves, Galliformes). *J Chem Neuroanat* 47: 15-27.
67. Chee S-SA, Espinoza WA, **Iwaniuk AN**, Pakan JMP, Gutiérrez-Ibáñez C, Wylie DR, Hurd PL (2013) Social status, breeding state and GnRH soma size in convict cichlids (*Cryptocheros nigrofasciatus*). *Behav Brain Res* 237: 318-324.
66. Burger DK, Saucier JM, **Iwaniuk AN**, Saucier DM (2013) Seasonal and sex differences in the hippocampus of a wild rodent. *Behav Brain Res* 236: 131-138.
65. Lisney TJ, **Iwaniuk AN**, Kolominsky J, Bandet MV, Corfield JR, Wylie DR (2012) Interspecific variation in eye shape and retinal topography in seven species of galliform birds (Aves: Galliformes: Phasianidae). *J Comp Physiol A* 198: 717-731.
64. Garcia M, Charrier IC, **Iwaniuk AN** (2012) Directionality of the Ruffed Grouse (*Bonasa umbellus*) drumming display. *Condor* 114: 500-506.
63. Ward BJ, Day LB, Wilkening SR, Wylie DR, Saucier DM, **Iwaniuk AN** (2012) Hummingbirds have a greatly enlarged hippocampal formation. *Biol Lett* 8: 657-659.
62. Lisney TJ, Bandet MV, **Iwaniuk AN**, Wylie DR (2012) Eye shape and retinal topography in owls (Aves: Strigiformes): Interspecific variation in relation to activity pattern and habitat. *Brain Behav Evol* 79: 218-236.
61. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Lisney TJ, Faunes M, Marin GJ, Wylie DR (2012) Functional implications of species differences in the size and morphology of the isthmo optic nucleus (ION) in birds. *PLoS ONE* 7: e37816.

60. Garcia M, Charrier IC, Rendall D, **Iwaniuk AN** (2012) Temporal and spectral analyses reveal individual variation in a non-vocal acoustic display: the drumming display of the Ruffed Grouse (*Bonasa umbellus*, L.). *Ethology* 118: 292-301.
59. Wylie DR, Pakan JMP, Huynh H, **Iwaniuk AN** (2012) The distribution of zebrin immunoreactive Purkinje cell terminals in the cerebellar and vestibular nuclei of birds. *J Comp Neurol* 520: 1532-1546.
58. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Wylie DR (2011) Relative size of auditory pathways in symmetrically and asymmetrically eared owls (Strigiformes). *Brain Behav Evol* 78: 286-301.
57. Corfield J, Gsell A, Brunton D, Heesy CP, Hall MI, Acosta ML **Iwaniuk AN** (2011) Anatomical specializations for nocturnality in a critically endangered parrot, the Kakapo (*Strigops habroptilus*). *PLoS ONE* 6: e22945.
56. Wylie DR, Gutiérrez-Ibáñez C, Graham DJ, Kreuzer MB, Pakan JMP, **Iwaniuk AN** (2011) Heterogeneity of parvalbumin expression in the avian cerebellar cortex and comparisons with zebrin II. *Neuroscience* 185: 73-84.
55. **Iwaniuk AN** (2011) The importance of scientific collecting and natural history museums to comparative neuroanatomy. *Ann NY Acad Sci* 1225(S1): E1-E19.
54. **Iwaniuk AN**, Heesy CP, Hall MI (2010) The morphometrics of the eyes and orbits of the nocturnal Swallow-tailed Gull (*Creagrus furcatus*). *Can J Zool* 88: 855-865.
53. **Iwaniuk AN**, Gutiérrez-Ibáñez C, Pakan JMP, Wylie DR (2010) Allometric scaling of the tectofugal pathway in birds. *Brain Behav Evol* 75: 122-137.
52. Sol D, Garcia N, **Iwaniuk A**, Davis K, Meade A, Boyle A, Szekely T (2010) Evolutionary divergence in brain size between migratory and resident birds. *PLoS ONE* 5: e9613.
51. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Wylie DR (2009) The independent evolution of the enlargement of the principal sensory nucleus of the trigeminal nerve (PrV) in three different groups of birds. *Brain Behav Evol* 74: 280-294. **[top 10 downloaded paper Apr-Jun 2010]**
50. Wylie DR, Gutiérrez-Ibáñez C, Pakan JMP, **Iwaniuk AN** (2009) The optic tectum of birds: Mapping our way to understanding visual processing. *Can J Exp Psychol* 63: 328-338.
49. **Iwaniuk AN**, Olson SL, James HF (2009) Extraordinary cranial specialization in a new genus of extinct duck (Aves: Anseriformes) from Kauai, Hawaiian Islands. *Zootaxa* 2296: 47-67.
48. Hall MI, Gutiérrez-Ibáñez C, **Iwaniuk AN** (2009) The morphology of the optic foramen and activity pattern in birds. *Anat Rec* 292: 1827-1845.
47. **Iwaniuk AN**, Gutiérrez-Ibáñez C, Pakan JMP, Wylie DR (2009) Expression of calcium binding proteins in cerebellar- and inferior olivary-projecting neurons in the nucleus lentiformis mesencephali of pigeons. *Vis Neurosci* 26: 341-347.
46. **Iwaniuk AN**, Lefebvre L, Wylie DRW (2009) The comparative approach and brain-behaviour relationships: A tool for understanding tool use. *Can J Exp Psychol* 63: 50-59.
45. Guay P-J, **Iwaniuk AN** (2009) Inter-specific variation in relative brain size is not correlated with intensity of sexual selection in waterfowl (Anseriformes). *Austr J Zool* 56: 311-321.
44. **Iwaniuk AN**, Marzban H, Hawkes R, Pakan JMP, Watanabe M, Wylie DRW (2009) Compartmentation of the cerebellar cortex of hummingbirds (Aves: Trochilidae) revealed by the expression of zebrin II and phospholipase cb4. *J Chem Neuroanat* 37: 55-63.
43. Wylie DRW, Pakan JMP, Gutiérrez-Ibáñez C, **Iwaniuk AN** (2008) Expression of calcium binding proteins in pathways from the nucleus of the basal optic root to the cerebellum in pigeons. *Vis Neurosci* 25: 701-707.
42. Guay P-J, **Iwaniuk AN** (2008) Captive breeding reduces brain volume in waterfowl (Anseriformes). *Condor* 110: 276-284.
41. Pakan JMP, Graham DJ, **Iwaniuk AN**, Wylie DRW (2008) Differential projections from the vestibular nuclei to the flocculus and uvula-nodulus in pigeons (*Columba livia*). *J Comp Neurol* 508: 402-417.
40. **Iwaniuk AN**, Heesy CP, Hall MI, Wylie DRW (2008) Relative Wulst volume is correlated with orbit orientation and binocular visual field in birds. *J Comp Physiol A* 194: 267-282.

39. Wylie DRW, Pakan JMP, Elliot CA, Graham DJ, **Iwaniuk AN** (2007) Projections of the nucleus of the basal optic root in pigeons (*Columba livia*): A comparison of the morphology and distribution of neurons with different efferent projections. *Vis Neurosci* 24: 691-707.
38. Kark S, **Iwaniuk AN**, Schalimtzek A, Banker E (2007) Living in the city: Can anyone become an "urban exploiter"? *J Biogeo* 34: 638-651.
37. Pakan JMP, **Iwaniuk AN**, Wylie DRW, Hawkes R, Marzban H (2007) Purkinje cell compartmentation as revealed by zebrin II expression in the cerebellar cortex of pigeons (*Columba livia*). *J Comp Neurol* 501: 619-630.
36. **Iwaniuk AN**, Hurd PL, Wylie DRW (2007) Comparative morphology of the avian cerebellum: II. Relative size of folia. *Brain Behav Evol* 69: 196-219. **[cover article]**
35. **Iwaniuk AN**, Wylie DRW (2007) A neural specialization for hovering in hummingbirds: hypertrophy of the pretectal nucleus lentiformis mesencephali. *J Comp Neurol* 500: 211-221. **[cover article]**
34. **Iwaniuk AN**, Wylie DRW (2006) The evolution of stereopsis and the Wulst in caprimulgidiform birds: A comparative analysis. *J Comp Physiol A* 192: 1313-1326.
33. **Iwaniuk AN**, Koperski DT, Cheng KM, Elliott JE, Smith LK, Wilson LK, Wylie DRW (2006) The effects of environmental exposure to DDT on the brain of a songbird: changes in structures associated with mating and song. *Behav Brain Res* 173: 1-10.
32. **Iwaniuk AN**, Hurd PL, Wylie DRW (2006) Comparative morphology of the avian cerebellum: I. Degree of foliation. *Brain Behav Evol* 68: 45-62.
31. **Iwaniuk AN**, Clayton DH, Wylie DRW (2006) Echolocation, vocal learning, auditory localization and the evolution of the avian inferior colliculus (MLd). *Behav Brain Res* 167: 305-317.
30. **Iwaniuk AN**, Hurd PL, Wylie DRW (2006) The comparative morphology of the cerebellum in caprimulgidiform birds: evolutionary and functional implications. *Brain Behav Evol* 67: 53-68.
29. **Iwaniuk AN**, Hurd PL (2005) The evolution of cerebrotypes in birds. *Brain Behav Evol* 65: 215-230. **[top 10 downloaded paper Jan 2006-Feb 2007]**
28. **Iwaniuk AN**, Dean KM, Nelson JE (2005) Interspecific allometry of the brain and brain regions in parrots (Psittaciformes): comparisons with other birds and primates. *Brain Behav Evol* 65: 40-59.
27. **Iwaniuk AN**, James HF, Nelson JE, Olson SL (2004) A comparative test of the correlated evolution of flightlessness and relative brain size in birds. *J Zool, Lond* 263: 317-327.
26. **Iwaniuk AN** (2004) Brood parasitism and brain size in cuckoos: A cautionary tale of the use of modern comparative methods. *Int J Comp Psychol* 17: 17-33.
25. Pellis SM, **Iwaniuk AN** (2004) Evolving a playful brain: A levels of control approach. *Int J Comp Psychol* 17: 72-90.
24. **Iwaniuk AN**, Arnold KE (2004) Is cooperative breeding associated with bigger brains? A comparative test in the Corvida (Passeriformes). *Ethology* 110: 203-220.
23. **Iwaniuk AN**, Dean KM, Nelson JE (2004) A mosaic pattern characterizes the evolution of the avian brain. *Proc R Soc Lond, Ser B* 271: S148-S151.
22. **Iwaniuk AN**, Nelson JE (2003) Developmental differences are correlated with relative brain size in birds: A comparative analysis. *Can J Zool* 81: 1913-1928.
21. **Iwaniuk AN**, Nelson JE (2002) Can endocranial volume be used as an estimate of brain size in birds? *Can J Zool* 80: 16-23.
20. Pellis SM, **Iwaniuk AN** (2002) Brain system size and adult-adult play in primates: A comparative analysis of the non-visual neocortex and the amygdala. *Behav Brain Res* 134: 31-39.
19. **Iwaniuk AN** (2001) Interspecific variation in sexual dimorphism in brain size in Nearctic ground squirrels (*Spermophilus* spp.). *Can J Zool* 79: 759-765.
18. **Iwaniuk AN**, Blankstein WG, Whishaw IQ (2001) Observations of the feeding behaviour of fishing cats (*Prionailurus viverrinus*). *Mammalia* 65: 89-91.
17. **Iwaniuk AN**, Nelson JE (2001) A comparative analysis of relative brain size in waterfowl (Anseriformes). *Brain Behav Evol* 57: 87-97.
16. **Iwaniuk AN**, Nelson JE, Pellis SM (2001) Do big-brained animals play more? Comparative analyses of play and relative brain size in mammals. *J Comp Psychol* 115: 29-41.
15. **Iwaniuk AN**, Pellis SM, Whishaw IQ (2001) Are long digits correlated with high dexterity? A comparative analysis in terrestrial carnivorans (Carnivora). *Can J Zool* 79: 900-906.



14. Michener GR, **Iwaniuk AN** (2001) Killing technique of North American badgers preying on Richardson's ground squirrels. *Can J Zool* 79: 2109-2113.
13. **Iwaniuk AN**, Nelson JE, Whishaw IQ (2000) The relationships between brain regions and forelimb dexterity in marsupials (Marsupialia): A comparative test of the principle of proper mass. *Austr J Zool* 48: 99-110.
12. **Iwaniuk AN**, Pellis SM, Whishaw IQ (2000) Body size, phylogeny, locomotion and diet and the evolution of forelimb dexterity in fissiped carnivores (Carnivora). *Can J Zool* 78: 1110-1125.
11. **Iwaniuk AN**, Whishaw IQ (2000) On the origin of skilled forelimb movements. *Trends Neurosci* 23: 372-376. **[cover article]**
10. Pellis SM, **Iwaniuk AN** (2000) Adult-adult play in primates: comparative analyses of its origin, distribution and evolution. *Ethology* 106: 1083-1104.
9. Pellis SM, **Iwaniuk AN** (2000) An analysis of the role of postnatal development in the expression of play fighting in primates and muroid rodents. *Dev Psychobiol* 36: 136-147.
8. Thierry B, **Iwaniuk AN**, Pellis SM (2000) The influence of phylogeny on the social behavior of macaques. *Ethology* 106: 713-728.
7. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1999) Is digital dexterity really related to corticospinal projections?: A re-analysis of the Heffner and Masterton data set using modern comparative methods. *Behav Brain Res* 101: 173-187.
6. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1999) Brain size is not correlated with forelimb dexterity in fissiped carnivores: A comparative test of the principle of proper mass. *Brain Behav Evol* 54: 167-180.
5. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1999) The relationship between forelimb morphology and behaviour in North American carnivores. *Can J Zool* 77: 1064-1074.
4. **Iwaniuk AN**, Whishaw IQ (1999) How skilled are skilled limb movements in the raccoon (*Procyon lotor*)? *Behav Brain Res* 99: 35-44.
3. Pellis SM, **Iwaniuk AN** (1999) The roles of phylogeny and sociality in the evolution of social play in muroid rodents. *Anim Behav* 58: 361-373.
2. Pellis SM, **Iwaniuk AN** (1999) The problem of adult play fighting: A comparative analysis of play and courtship in primates. *Ethology* 105: 783-807.
1. **Iwaniuk AN**, Ivanco TL, Nelson JE, Pellis SM, Whishaw IQ (1998) Reaching, grasping and manipulation of food objects by two species of tree kangaroos, *Dendrolagus lumholtzi* and *Dendrolagus matschiei*. *Austr J Zool* 46: 235-248.

#### Book chapters

2. Wylie DRW, **Iwaniuk AN** (2012) Neural mechanisms of motion detection in birds. In: Lazareva, O., Shimizu, T., and Wasserman, E. (eds.). *How Animals See the World*, pp. 289-318. New York: Oxford University Press.
1. **Iwaniuk AN** (2004) Evolution. In: Whishaw, I.Q. and Kolb, B.E. (eds.). *The Behavior of the Laboratory Rat: A Handbook with Tests*, pp. 3-14. New York: Oxford University Press.

#### Commentaries

4. Striedter GF, Belgard TG, Cardona A, Chen C-C, Chklovskii D, Davis F, Finlay B, Güntürkün O, Hale M, Harris J, Heberlein U, Hecht E, Hofmann H, Holland L, **Iwaniuk A**, Jarvis E, Karten H, Katz P, Kristan W, Macagno E, Mitra P, Moroz L, Okano H, Preuss T, Ragsdale C, Sherwood C, Stevens C, Stuttgen M, Truman K, Tsumoto T, Wilczynski W (2014) NSF Workshop Report: Discovering general principles of nervous system organization by comparing brain maps across species. Jointly published in: *Brain Behav Evol* 83: 1-8; *J Comp Neurol* 522: 1445-1453.
3. **Iwaniuk AN** (2010) Comparative brain collections are an indispensable resource for evolutionary neurobiology. *Brain Behav Evol* 76: 87-88.
2. Wylie DR, **Iwaniuk AN** (2010) Preface. *Vision with an eye to ecology. A tribute to Barrie Frost*. *Brain Behav Evol* 75: 153-155.
1. **Iwaniuk AN**, Whishaw IQ (2001) The spandrel may be related to culture not brain organization. *Behav Brain Sci* 24: 288.

### Non-refereed publications

1. Phylogenetic principles of brain structure and function: brain maps across phylogeny. White Paper Report from a workshop sponsored by the National Science Foundation and the Howard Hughes Medical Institute.

### Conference presentations

89. **Iwaniuk AN**, Krilow JM (2014) Seasonal plasticity in the telencephalon of a non-songbird, the Ruffed Grouse (*Bonasa umbellus*). International Congress for Neuroethology, 28 July – 2 August 2014, Sapporo, Japan.
88. **Burger DK**, Bursian SJ, **Iwaniuk AN** (2014) Does developmental exposure to PCB-126 affect hippocampal anatomy in American mink? 24<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 20-22 February 2014, Fernie, British Columbia, Canada.
87. **Earl B**, **Corfield JR**, **Iwaniuk AN** (2014) Trigeminal nerve size varies with foraging behaviour in ducks 24<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 20-22 February 2014, Fernie, British Columbia, Canada.
86. **Williams L**, **Burger DK**, Bursian SJ, **Iwaniuk AN** (2014) Developmental exposure to PCB-126 affects neocortical and white matter volumes in American mink. 24<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 20-22 February 2014, Fernie, British Columbia, Canada.
85. **Krilow JM**, **Iwaniuk AN** (2014) Seasonal variation and sexual dimorphism in a premotor region in the brains of Ruffed Grouse (*Bonasa umbellus*) 24<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 20-22 February 2014, Fernie, British Columbia, Canada.
84. Wylie D, Jensen M, **Gutierrez-Ibanez C**, Graham DJ, **Iwaniuk AN** (2013) Heterogeneity of calretinin expression in the avian cerebellar cortex of pigeons and relationship with zebrin II. Society for Neuroscience Annual Meeting, 9-13 November 2013, San Diego, CA, U.S.A.
83. **Iwaniuk AN**, **Keeley RJ**, **Burger DK**, Saucier DM (2013) Sexual dimorphism of brain region volumes varies by season in ground squirrels. Society for Neuroscience Annual Meeting, 9-13 November 2013, San Diego, CA, U.S.A.
82. **Gutierrez-Ibanez C**, Jensen M, **Iwaniuk AN**, Wylie DR (2013) Immunohistochemical localization of cocaine- and amphetamine-regulated transcript peptide in the brain of the pigeon (*Columba livia*) and zebra finch (*Taeniopygia guttata*). Society for Neuroscience Annual Meeting, 9-13 November 2013, San Diego, CA, U.S.A.
81. **Park A**, **Gokhale P**, Coyle B, Borgia G, **Iwaniuk AN**, Carr CE (2013) Bowerbirds show a distinctive cerebrotypes, but no enlargement of the mesopallium. Society for Neuroscience Annual Meeting, 9-13 November 2013, San Diego, CA, U.S.A.
80. **Burger DK**, Zwiernik M, Folland W, Bursian SJ, **Iwaniuk AN** (2013) The effects of developmental exposure to 3,3',4,4',5-pentachlorobiphenyl (PCB126) on the hippocampus in American mink (*Neovison vison*). Society for Neuroscience Annual Meeting, 9-13 November 2013, San Diego, CA, U.S.A.
79. **Gutierrez-Ibanez C**, **Iwaniuk AN**, Wylie DR (2013) Mosaic and concerted evolution in the visual system of birds. J.B. Johnston Club for Evolutionary Neuroscience Meeting, 8 November 2013, San Diego, CA, U.S.A.
78. **Iwaniuk AN** (2013) An integrative perspective on the low frequency, non-vocal acoustic display of the Ruffed Grouse (Galliformes: *Bonasa umbellus*). International Bioacoustics Congress, 8-14 September 2013, Pirenopolis, Brazil.
77. **Krilow JM**, **Iwaniuk AN** (2013) A morphometric analysis of wing shape variation among grouse (Aves: Galliformes). 131<sup>st</sup> Meeting of the American Ornithologists' Union, 14-17 August 2013, Chicago, Illinois, U.S.A.
76. **Krilow JM**, **Iwaniuk AN** (2013) A morphometric analysis of wing shape variation among grouse (Aves: Galliformes). Canadian Society for Ecology and Evolution, 11-16 May 2013, University of British Columbia, Kelowna, British Columbia, Canada.
75. **Burger DK**, **Gulbrandsen T**, Saucier DM, **Iwaniuk AN** (2013) Seasonal and sex differences in adult hippocampal neurogenesis in Richardson's ground squirrels. 23<sup>rd</sup> Annual Canadian Spring Conference on Brain and Behaviour, 21-23 February 2013, Fernie, British Columbia, Canada

74. Hall MI, Kamilar JM, Kirk EC, Carrano MT, **Iwaniuk AN** (2013) The relationship between scleral ring morphology and activity pattern in birds and dinosaurs. Society for Integrative and Comparative Biology Annual Meeting, 3-7 January 2013, San Francisco, CA, U.S.A.
73. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Lisney TJ, Wylie DR (2012) Is activity pattern reflected in the relative size of visual pathways in owls (Aves: Strigiformes)? International Congress for Neuroethology, 6-12 August 2012, University of Maryland, College Park, MD, U.S.A.
72. Park A, Gokhale P, Coyle B, **Iwaniuk A**, Borgia G, Carr CE (2012) Brain composition is not related to bower construction in bowerbirds. International Congress for Neuroethology, 6-12 August 2012, University of Maryland, College Park, MD, U.S.A.
71. Corfield JR, **Iwaniuk AN** (2012) Low frequency specialization in the inner ear of the Ruffed Grouse (*Bonasa umbellus*). International Congress for Neuroethology, 6-12 August 2012, University of Maryland, College Park, MD, U.S.A.
70. Walsh S, **Iwaniuk A**, Knoll M, Bourdon E, Barrett P, Milner A, Abel R, Dello Sterpaio P (2012) Can the size of the avian cerebellar flocculus be used as a proxy for flying ability in extinct birds? Society of Avian Paleontology and Evolution, 11-16 June 2012, Natural History Museum, Vienna, Austria.
69. **Iwaniuk AN**, Dean KM (2011) The effects of perfluoroundecanoic acid (PFUnA) injections on developing Japanese quail (*Coturnix japonica*). Society of Environmental Toxicology and Chemistry, 14-18 November 2011, Boston, MA, U.S.A.
68. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Kolominsky J, Lisney TJ, Wylie DR (2011) Comparative study of the relative size of the isthmo optic nucleus (ION) and its association to other visual brain structures in birds (Aves). Society for Neuroscience Annual Meeting, 13-17 November 2011, Washington, DC, U.S.A.
67. Gokhale P, Coyle B, **Iwaniuk A**, Borgia G, Carr CE (2011) Interspecific variation in brain composition among bowerbird species. Society for Neuroscience Annual Meeting, 13-17 November 2011, Washington, DC, U.S.A.
66. Corfield JR, **Iwaniuk AN** (2011) The neural distribution of aromatase in male Ruffed Grouse (*Bonasa umbellus*). Society for Neuroscience Annual Meeting, 13-17 November 2011, Washington, DC, U.S.A.
65. Lisney TJ, **Iwaniuk AN**, Bandet MV, Wylie DR (2011) Quantitative assessment of the topographic distribution of neurons in the retinal ganglion cell layer in gallinaceous birds. Society for Neuroscience Annual Meeting, 13-17 November 2011, Washington, DC, U.S.A.
64. **Iwaniuk AN**, Ward B, Saucier DM, Wylie DR, Wilkening SR, Day LB (2011) Hippocampal enlargement in hummingbirds. Society for Neuroscience Annual Meeting, 13-17 November 2011, Washington, DC, U.S.A.
63. Therrien RE, **Iwaniuk AN**, James HF, Carr CE, Perry MC, Wells-Berlin AM (2011) A behavioral and anatomical study of electroreception in sea ducks. 4<sup>th</sup> International Sea Duck Conference, 12-16 September 2011, Seward, AK, U.S.A.
62. Lisney TJ, Bandet M, **Iwaniuk AN**, Wylie DR (2011) Does retinal topography reflect activity pattern and habitat in birds? Evidence from two avian orders. Canadian Society for Ecology and Evolution Annual Meeting, 12-16 May 2011, Banff, AB, Canada.
61. Corfield J, Gsell A, Brunton D, Hall MI, Heesy CP, **Iwaniuk AN** (2011) The anatomy of the visual system of the enigmatic and nocturnal parrot, the Kakapo. Canadian Society for Ecology and Evolution Annual Meeting, 12-16 May 2011, Banff, AB, Canada.
60. Garcia M, Charrier I, Rendall D, **Iwaniuk AN** (2011) Bioacoustic analyses reveal individual variation among male Ruffed Grouse (*Bonasa umbellus*) drumming displays. Canadian Society for Ecology and Evolution Annual Meeting, 12-16 May 2011, Banff, AB, Canada.
59. Ward B, Saucier DM, **Iwaniuk AN** (2011) Hippocampal volume in birds: does it mean anything? 21<sup>st</sup> Annual Canadian Spring Conference on Brain and Behaviour, 17-19 February 2011, Fernie, British Columbia, Canada.
58. Corfield JR, **Iwaniuk AN** (2011) Visual system anatomy of the nocturnal Kakapo. 21<sup>st</sup> Annual Canadian Spring Conference on Brain and Behaviour, 17-19 February 2011, Fernie, British Columbia, Canada.

57. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Wylie DR (2010) Relative size of visual and auditory pathways in symmetrically and asymmetrically eared owls. Society for Neuroscience Annual Meeting, 13-17 November 2010, San Diego, CA, U.S.A.
56. Gutiérrez-Ibáñez C, **Iwaniuk AN**, Wylie DR (2010) Relative size of visual and auditory pathways in symmetrically and asymmetrically eared owls. Canadian Association for Neuroscience Annual Meeting, 15-18 May 2010, Ottawa, ON, Canada.
55. Duncan J, Anderson B, Kaufman JA, **Iwaniuk A**, Jones TB, Bray D, Suchocki L, Hall MI (2010) Comparative morphology of the rat optic nerve using light and electron microscopy. American Association of Anatomists Annual Meeting, 24-28 April 2010, Anaheim, CA, U.S.A.
54. **Iwaniuk AN**, Wylie DR, Gutiérrez-Ibáñez C, Overington SE, Boogert NJ, Lefebvre L (2010) Do honeyguides (Indicatoridae) have big or small brains? 6<sup>th</sup> European Conference on Comparative Neurobiology, 22-24 April 2010, Valencia, Spain.
53. James HF, **Iwaniuk AN**, Witmer LM, Spitzer MD, Ridgley RC, Olson SL (2010) Comparative osteology of *Talpanas lippa*, a new fossil species of waterfowl from Kauai with neurological similarities to platypus and kiwi. 128<sup>th</sup> Meeting of the American Ornithologists' Union, 7-11 February 2010, San Diego, CA, U.S.A.
52. **Iwaniuk AN**, Wylie DR, Gutiérrez-Ibáñez C, Overington SE, Boogert NJ, Lefebvre L (2009) Les Indicateurs ont-ils un gros ou un petit cerveau? Société Québécoise pour l'Etude Biologique du Comportement (SQEBC), 13-15 November 2009, Université du Québec à Trois-Rivières, Trois-Rivières. PQ, Canada.
51. **Iwaniuk AN**, Wylie DR, Gutiérrez-Ibáñez C, Overington SE, Boogert NJ, Lefebvre L (2009) Brain size and morphology of the honeyguides (Aves: Piciformes) in comparison with related species. Society for Neuroscience Annual Meeting, 17-21 October 2009, Chicago, IL, U.S.A.
50. Gutiérrez C, **Iwaniuk AN**, Wylie DR (2009) Enlargement of the principal sensory nucleus of the trigeminal nerve (PrV) in three different groups of birds. Society for Neuroscience Annual Meeting, 17-21 October 2009, Chicago, IL, U.S.A.
49. Guay P-J, **Iwaniuk A** (2009) Reproductive costs of large brains in waterfowl. Australasian Evolution Society, 29 September – 1 October 2009, Australian National University, Canberra, ACT, Australia.
48. Gutiérrez-Ibáñez C, **Iwaniuk A**, Wylie DR (2009) The relative importance of the sensory nucleus of the trigeminal nerve (PrV) reflects the importance of somatosensation in avian feeding. 28<sup>th</sup> Annual Meeting of the Society of Canadian Ornithologists, 20-23 August 2009, University of Alberta, Edmonton, Alberta, Canada.
47. **Iwaniuk AN** (2009) The brain of the 'blind mole-duck': the daffiest duck that ever lived. 19<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 12-14 February 2009, Fernie, British Columbia, Canada.
46. Wylie DRW, **Iwaniuk AN**, Pakan JMP, Gutiérrez-Ibáñez C (2008) Calcium-binding proteins in the pretectal-cerebellar and pretecto-olivo-cerebellar pathways in the pigeon (*Columba livia*). Society for Neuroscience Annual Meeting, 15-19 November 2008, Washington, D.C., U.S.A.
45. Huynh HD, Pakan JMP, **Iwaniuk AN**, Wylie DRW (2008) Differential expression of zebrin II in the corticonuclear projections of Purkinje cells to the cerebellar and vestibular nuclei in hummingbirds. Society for Neuroscience Annual Meeting, 15-19 November 2008, Washington, D.C., USA.
44. **Iwaniuk AN**, James HF, Olson SL, Wylie DRW, Ridgely RC, Witmer LM (2008) Evidence of extreme somatosensory specialization in an extinct duck. Society for Neuroscience Annual Meeting, 15-19 November 2008, Washington, D.C., USA.
43. Hall MI, **Iwaniuk AN** (2008) Activity pattern and comparative optic foramen size in avians. Society for Vertebrate Paleontology 68<sup>th</sup> Annual Meeting, 15-18 October 2008, Cleveland, Ohio, USA.
42. García-Peña GC, Sol D, **Iwaniuk A**, Székely T (2008) Sexual selection, parental cooperation and brain size in shorebirds. 12<sup>th</sup> Evolutionary Biology Meeting at Marseilles, 24-26 September 2008, Marseilles, France.

41. Chee A, Pakan JMP, **Iwaniuk AN**, Wong-Wylie DR, Hurd PL (2008) The effect of reproductive state on GnRH soma size in the convict cichlid female. International Society for Behavioral Ecology Congress, 9-15 August 2008, Cornell University, Ithaca, New York, USA.
40. Wright TF, Schirtzinger EE, Hobson EA, Young AM, Salinas-Melgoza A, Munshi-South JM, **Iwaniuk AN** (2008) Sources of selection on acoustic signal structure: a comparative analysis of the contact calls of Neotropical parrots. International Society for Behavioral Ecology Congress, 9-15 August 2008, Cornell University, Ithaca, New York, USA.
39. Elliott JE, **Iwaniuk AN** (2008) Early exposure and late effects of contaminants in birds with a recent example of field exposure to DDT and its impact on the brain. American Ornithologists' Union, Cooper Ornithological Society and Society of Canadian Ornithologists 2008 Joint Meeting, 4-9 August 2008, Portland, Oregon, U.S.A.
38. Hall MI, Rosenstein SL, **Iwaniuk AN** (2008) Comparative optic nerve and optic foramen size in nocturnal and diurnal raptors. Annual Meeting of the Society for Integrative and Comparative Biology, 2-6 January 2008, San Antonio, Texas, USA.
37. Guay PJ, **Iwaniuk AN** (2007) Captive breeding reduces brain volume in waterfowl (Anseriformes). 4<sup>th</sup> Biennial Australasian Ornithological Conference, 3-5 December 2007, University of Western Australia, Perth, Western Australia, Australia.
36. Wylie D, Pakan JMP, Graham DJ, **Iwaniuk AN** (2007) Differential projections from the vestibular nuclei to the flocculus and uvula-nodulus in pigeons (*Columba livia*). Society for Neuroscience Meeting, 3-7 November 2007, San Diego, California, U.S.A.
35. Pakan JM, Hawkes R, **Iwaniuk AN**, Wylie DRW (2007) Zebrin II and olivocerebellar labeling: zonal organization of the flocculus. Society for Neuroscience Meeting, 3-7 November 2007, San Diego, California, USA.
34. **Iwaniuk AN**, Hawkes R, Marzban H, Pakan JP, Ryan B, Wylie DR (2007) Antigenic compartmentation of the hummingbird cerebellum. Society for Neuroscience Meeting, 3-7 November 2007, San Diego, California, USA.
33. Wylie DRW, Heesy CP, Hall MI, **Iwaniuk AN** (2007) Orbit orientation, binocularity and eye size in relation to visual regions of the avian brain. J.B. Johnston Club Meeting, 1-2 November 2007, San Diego, California, USA.
32. Pakan JMP, Hawkes R, **Iwaniuk AN**, Wylie DRW (2007) Zebrin II and olivocerebellar labeling: Zonal organization of the vestibulocerebellum. IBRO World Congress of Neuroscience, 12-17 July 2007, Melbourne, Victoria, Australia.
31. Wylie DR, Pakan JP, Marzban H, **Iwaniuk AN**, Hawkes R (2006) Zebrin II expression reveals parasagittal organization of the pigeon cerebellum. Society for Neuroscience Meeting, 14-18 October 2006, Atlanta, Georgia, USA.
30. **Iwaniuk AN**, Smith LK, Wylie DR (2006) Neural and behavioral effects of environmental exposure to DDT in a songbird. Society for Neuroscience Meeting, 14-18 October 2006, Atlanta, Georgia, USA.
29. **Iwaniuk AN**, Lefebvre L, Wylie DR (2006) The role of the cerebellum in the evolution of tool using behavior in birds. J.B. Johnston Club Meeting, 12-13 October 2006, Atlanta, Georgia, USA.
28. Espinoza W, Pakan J, **Iwaniuk A**, Wylie DR, Hurd PL (2006) GnRH cell size reflects social status in male, but not female, convict cichlids (*Cryptotheros nigrofasciatus*). 43<sup>rd</sup> Annual Meeting of the Animal Behavior Society, 12-16 August 2006, Snowbird, Utah, USA.
27. **Iwaniuk AN**, Koperski D, Smith LK, Wylie DRW (2006) Neural effects of DDT exposure in a songbird, the American Robin (*Turdus migratorius*). Canadian Society of Zoologists 45<sup>th</sup> Annual Meeting, 2-6 May 2006, Edmonton, Alberta, Canada.
26. Espinoza W, Pakan J, **Iwaniuk A** (2006) Size matters in convict sex: social status influences GnRH soma size in *Cryptotheros nigrofasciatus*. 20<sup>th</sup> Annual Joseph R. Royce Conference, 20 March 2006, University of Alberta, Edmonton, Alberta, Canada.
25. Wylie DRW, **Iwaniuk AN**, Lefebvre L (2006) Tool use in birds: It's not the size that matters, it's how wrinkly it is. 16<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 23-25 February 2006, Fernie, British Columbia, Canada.

24. Pakan JP, **Iwaniuk AN**, Wylie DR (2005) Projections of the pretectal nucleus lentiformis mesencephali to the cerebellum in pigeons: two separate optic flow pathways. Society for Neuroscience Meeting, 12-16 November 2005, Washington, D.C., USA.
23. Wylie DRW, **Iwaniuk AN** (2005) How do hummingbirds hover? Hypertrophy of pretectal nuclei involved in gaze stabilization. Society for Neuroscience Meeting, 12-16 November 2005, Washington, D.C., USA.
22. **Iwaniuk AN**, Wylie DRW (2005) Foliation of the avian cerebellum: Allometric, developmental and cognitive correlates. Society for Neuroscience Meeting, 12-16 November 2005, Washington, DC, USA.
21. Lefebvre L, Sol D, Szekely T, Marino L, **Iwaniuk AN** (2005) Bénéfices de l'encéphalisation: longévité accrue, mortalité réduite. 30<sup>th</sup> Congrès Annuel de la Société Québécoise pour l'Étude Biologique du Comportement, 4-6 November 2005, Concordia University, Montréal, Quebec, Canada.
20. Guay P-J, **Iwaniuk AN**, Mulder RA (2005) Ecology, behaviour and brain size in waterfowl. Australasian Evolution Society Meeting, 27-30 September 2005, Fremantle, Western Australia, Australia.
19. **Iwaniuk AN**, Wylie DRW (2005) Hovering hummingbirds and their humongous nuclei. 15<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 24-26 February 2005, Fernie, British Columbia, Canada.
18. Wylie DRW, **Iwaniuk AN** (2005) A funny thing happened on the way to the apodiform. 15<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 24-26 February 2005, Fernie, British Columbia, Canada.
17. **Iwaniuk AN**, Pettigrew JD, Wylie DRW (2004) The frogmouth is an owl not a nightjar: neuroanatomical evidence. Society for Neuroscience Meeting, 23-27 October 2004, San Diego, California, USA.
16. Wylie DRW, Pettigrew JD, **Iwaniuk AN** (2004) Is the owl-nightjar an owl or a nightjar? Society for Neuroscience Meeting, 23-27 October 2004, San Diego, California, U.S.A.
15. **Iwaniuk AN**, Wylie DRW (2004) A case for clipping the Caprimulgiformes: The taxonomic implications of cerebellar morphology. J.B. Johnson Club Meeting, 22 October 2004, San Diego, California, U.S.A.
14. Guay P-J, **Iwaniuk AN**, Mulder RA (2004) Relative brain size and mating system in Anseriformes. Australasian Society for the Study of Animal Behaviour, 15-19 April 2004, Adelaide, South Australia, Australia.
13. **Iwaniuk AN**, Sturdy CB, Wylie DRW (2004) Frogmouths don't suck goats: The importance of neuroanatomy in avian phylogenetics. 18<sup>th</sup> Annual Joseph R. Royce Conference, 5 March 2004, University of Alberta, Edmonton, Alberta, Canada.
12. **Iwaniuk AN**, Pettigrew JD, Sturdy CB, Wylie DRW (2004) The frogmouth is an owl: it's as simple as 1, 2, 3. 15<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 12-14 February 2004, Fernie, British Columbia, Canada.
11. **Iwaniuk AN**, Dean KM, Nelson JE (2003) The evolution of the parrot brain: comparisons with other birds and primates. Society for Neuroscience Meeting, 7-12 November 2003, New Orleans, Louisiana, USA.
10. **Iwaniuk AN**, Dean KM, Nelson JE (2003) Comparative neuroanatomy and evolution of parrot brains (Aves: Psittaciformes). Annual Meeting of the Society for Integrative and Comparative Biology, 3-8 January 2003, Toronto, Ontario, Canada.
9. **Iwaniuk AN** (2002) Relative brain size decreases with avivory in diurnal raptors. 23<sup>rd</sup> International Ornithological Congress, 11-17 August 2002, Beijing, China.
8. **Iwaniuk AN**, Arnold KE (2001) Do cooperatively breeding birds have bigger brains? A comparative analysis of the Corvida. Association for the Study of Animal Behaviour Summer Meeting, 19-21 September 2001, University of Glasgow, Glasgow, UK.
7. **Iwaniuk AN**, Arnold KE (2001) Cooperative breeding and brain size: A comparative analysis in Corvida. Australasian Evolution Society Meeting, 16-18 July 2001, University of Melbourne, Parkville, Victoria, Australia.

6. **Iwaniuk AN**, Borg N, Nelson JE (2001) Pointing the finger at convergent evolution: a behavioural comparison of the Common Striped Possum and the Aye-aye. Australian Mammal Society 47<sup>th</sup> Scientific Meeting and Possum and Glider Symposium, 2-6 July 2001, Queensland Museum, East Brisbane, Queensland, Australia.
5. Nelson J, **Iwaniuk A**, Shepherd R, Aitkin L, Linahan N (2001) Hearing responses in some possum species. Australian Mammal Society 47<sup>th</sup> Scientific Meeting and Possum and Glider Symposium, 2-6 July 2001, Queensland Museum, East Brisbane, Queensland, Australia.
4. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1999) Are brainy carnivores handy? 11<sup>th</sup> Annual Canadian Spring Conference on Brain and Behaviour, 26-28 February 1999, Fernie, British Columbia, Canada.
3. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1998) Is neurobiology behind the times?: The use of modern comparative statistics in the functional analysis of the corticospinal tract. Society for Neuroscience Meeting, 7-12 November 1998, Los Angeles, California, USA.
2. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1998) The importance of phylogeny in the comparative analysis of the motor system. Alberta Motor Control Council Meeting, 2-4 October 1998, Palisades Environmental Centre, Jasper, Alberta, Canada.
1. **Iwaniuk AN**, Pellis SM, Whishaw IQ (1998) Comparative food handling in three small carnivores. Animal Behavior Society Meeting, 18-22 July 1998, Southern Illinois University, Carbondale, Illinois, U.S.A.

#### **Invited Conference Presentations**

3. The 'thunder chicken' as a potential model for understanding the neuroendocrine control of non-vocal mating displays. 10<sup>th</sup> International Symposium on Avian Endocrinology, 5-9 June 2012, Gifu, Japan.
2. Comparative brain collections in Australia, Canada and major US museums. New Studies of Neurobehavioral Evolution, 25-28 June 2010, National Museum of Health and Medicine, Washington, DC, U.S.A.
1. Hot Topics in Cognitive Evolution, 15-16 June 2007, Konrad Lorenz Forschungsstelle, Universität Wien, Grünau, Austria.

#### **Invited Presentations**

34. The drumming display of the Ruffed Grouse and implications for census techniques. Alberta Conservation Association, Lethbridge, Alberta, Canada, 25 February 2014.
33. The drumming display of the Ruffed Grouse: an integrative perspective. Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, 30 January 2014.
32. Marching to the beat of a different drum: courtship in the ruffed grouse. Department of Zoology, University of British Columbia, Vancouver, British Columbia, Canada, 30 September 2013.
31. The drumming display of the Ruffed Grouse: an integrative perspective. Department of Biology, University of Toronto at Mississauga, Toronto, Ontario, Canada, 14 February 2013.
30. Thundering chickens of the Great White North. School of Animal Biology, University of Western Australia, Perth, Western Australia, Australia, 7 August 2012.
29. The neuroethology of the thunder chicken courtship display. Department of Neuroscience, University of Lethbridge, Lethbridge, Alberta, Canada, 14 June 2012.
28. The courtship of the thunder chicken. Department of Psychology, Trent University, Peterborough, Ontario, Canada, 29 February 2012.
27. The courtship display and anatomy of the thunder chicken. Department of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, DC, U.S.A., 9 Nov 2011.
26. The behavioural ecology of the avian brain. Department of Biology, University of Regina, Regina, Saskatchewan, Canada, 30 March 2011.
25. Nearly blind ducks, booming parrots and drumming grouse: anatomical correlates of novel behaviours in birds. Department of Biological Sciences, University of Lethbridge, Lethbridge, Alberta, Canada, 1 February 2011.

24. Using brain morphology to infer sensory ecology. Evolutionary Morphology Seminar Series, University of Chicago, Chicago, Illinois, U.S.A., 2 Dec 2010.
23. The anatomical bases of electroreception in vertebrates. USGS Patuxent Wildlife Research Center, Laurel, Maryland, U.S.A., 26 April 2010.
22. Using the brain to see into the past: the intersection between neuroscience and paleontology. Department of Biological Sciences, University of Calgary, Calgary, Alberta, Canada, 17 March 2009.
21. The ecology of the avian brain. Department of Biology, University of Winnipeg, Winnipeg, Manitoba, Canada, 7 April 2008.
20. Neuroendocrine effects of persistent organic pollutants. Canadian Centre for Behavioural Neuroscience, University of Lethbridge, Lethbridge, Alberta, Canada, 31 March 2008.
19. Neural effects of endocrine disruptors. Department of Zoology, Oklahoma State University, Stillwater, Oklahoma, U.S.A., 14 February 2008.
18. The relevance of brain size: hat size, Yoda and an age old question. Department of Biology, University of Nebraska, Lincoln, Nebraska, U.S.A., 25 January 2008.
17. Environmental endocrine disruptors and their effect on the behaviour, neuroanatomy and physiology of vertebrates. Nova Scotia Agricultural College, Truro, Nova Scotia, Canada, 18 January 2008.
16. The avian cerebellum: anatomy, neurochemistry and relations to behaviour. Behavioural Biology Group, Universiteit Utrecht, Utrecht, Netherlands, 25 September 2007.
15. Sensory and cognitive evolution of the avian brain. Institute of Zoology, Universität Wien, Vienna, Austria, 13 June 2007.
14. The neurobehavioural effects of persistent organic pollutants. Department of Psychology, Memorial University, St. John's, Newfoundland, Canada, 22 May 2007.
13. The neurobehavioural effects of persistent organic pollutants. Department of Psychology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, 4 April 2007.
12. Neurobehavioural effects of persistent organic pollutants. Department of Biology, St. Francis Xavier University, Antigonish, Nova Scotia, Canada, 26 March 2007.
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1. Vision with an eye to ecology: A tribute to Barrie Frost. Karger Symposium, 15 October 2009, Chicago, IL, U.S.A.

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#### ***14. Community Involvement***

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|-----------|--|
| 2014-     | Volunteer, Taber Pheasant Fest, Alberta Conservation Association, Taber, Alberta.                          |
| 2013-2014 | Board Member, Pheasants Forever – Lethbridge Chapter, Lethbridge, Alberta.                                 |
| 2007-2008 | Volunteer, Public Outreach Program, Division of Birds, National Museum of Natural History, Washington, DC. |
| 2006-2007 | Volunteer Naturalist, Snow Goose Chase Festival, Tofield, Alberta.   |
| 2005-2007 | Volunteer Owl Surveyor, Beaverhill Bird Observatory, Tofield, Alberta.                                     |