Daniel K. Riskin

Scientist,
Television Host and Producer,
Author and Speaker
Website: noctilio.com

Adjunct Professor
Department of Biology
University of Toronto Mississauga
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Popular Books

Fiona the Fruit Bat (Greystone) *2022*
Picture book for kids, about the fear of doing something new (and about echolocation).
To be featured on a (to-be-named) STEM-focused kids' show on PBS.

Mother Nature is Trying to Kill You (Simon & Schuster) *2014*
Globe and Mail Bestseller, Original Non-fiction.
Toronto Star Bestseller, Original Non-fiction.
Translated into Hungarian, Japanese, and Korean.

Awards and Honours

Public Education Award, Canadian Society of Zoologists *2020*
''In recognition of excellence in public education about zoology.''

Platinum Winner, Worldfest Houston International Film Festival *2019*
Best Nature/Wildlife Program (*Mother Nature is Trying to Kill You*)

Winner, Worldfest Houston International Film Festival *2018*
Talent/Host On-Screen (*Saturn: Inside the Rings*)

Canadian Screen Award, Academy of Canadian Cinema and Television *2017*
Best News/Info Series (*Daily Planet*)

Distinguished Alumni Award, University of Alberta *2015*
''Recognizes the outstanding accomplishments of living alumni who have earned national or international prominence as a result of their outstanding professional achievements and service to society.''

Science Promotion Award, Canadian Council for University Biology Chairs *2014*
''Awarded to individuals who make an outstanding contribution to the promotion of biology in Canada, through activities encouraging popular interest in science or developing science abilities.''

Service Award, North American Society for Bat Research *2008*
''In recognition of outstanding service and dedication to the North American Society for Bat Research''

Academic Appointments

Adjunct Professor *2014–2025*
Department of Biology, University of Toronto Mississauga
Mississauga, ON, Canada

Assistant Professor *2010–2011*
Department of Biology, City College of the City University of New York
New York, NY, U.S.A.

Postdoctoral Research Associate *2006–2010*
Department of Ecology and Evolutionary Biology, Brown University
Providence, RI, U.S.A.

Postdoctoral Research Fellow *2006–2008*
Center for Ecology and Conservation Biology, Boston University
Boston, MA, U.S.A.

EDUCATION

Ph.D. (Zoology) *2002–2006*
Department of Biomedical Sciences, Cornell University
Ithaca NY, U.S.A.
Advisor: John W. Hermanson

M.Sc. (Biology) *1998–2000*
Department of Biology, York University
Toronto ON, Canada
Advisor: M. Brock Fenton

B.Sc. with Distinction (Zoology) *1993-1997*
Department of Biological Sciences, University of Alberta
Edmonton AB, Canada

TELEVISION HOSTING/PRODUCTION/SCIENCE ADVISING

Secrets in the Ice, *Science Channel* (USA), Expert. *2023*
Investigations of Earth that begin with drone, satellite, and aerial imagery.
One Season (S3).

Mysteries From Above, *Smithsonian Channel* (USA), Expert. *2022–2023*
Investigations of Earth that begin with drone, satellite, and aerial imagery.
Three Seasons.

W5: Alien Invasion, *CTV* (Canada), Host. *2022*
The Billion dollar global battle against invasive species.

Battle of the Alphas, *Love Nature* (Canada), Expert. *2021–2022*
Nature is all about competition, and the quest to be the best.
Two Seasons.

W5: Signal, *CTV* (Canada), Host. *2021*
How close are we to finally hearing from E.T.?.

W5: The Giraffe Whisperer, *CTV* (Canada), Host. *2021*
Profiling a legendary biologist and the long-necked mammals she loves.

The Nature of Things: ''Kids vs. Screens'', *CBC* (Canada), Host. *2020*
What is the effect of digital devices on childhood?

W5: The Host, *CTV* (Canada), Host. *2020*
Could the immune systems of bats hold the key to saving us from COVID-19?
2021 RTDNA Canada Award, Best Feature News

W5: Impossible Journey, *CTV* (Canada), Host. *2020*
Could Humans Survive the Trip to Mars?

Nature's Greatest Mysteries: Solved, *Animal Planet* (USA), Expert. *2019*
Strange videos of nature abound. What could possibly explain them?
Twenty four episodes.

Daily Planet, *Discovery Canada*. Co-host and Producer. *2011–2018*
The only daily science magazine show in the world.
2017 Canadian Screen Award, best News/Info Series
2017 WorldFest Houston Int'l Film Festival Platinum Award, Info Series

Mother Nature is Trying to Kill You, *Discovery Canada*. Host and Executive Producer. *2018*
One hour animated special based on the Canadian bestselling book.
Platinum Winner, WorldFest Houston Int'l Film Festival, Best Nature/Wildlife Program (2019)

Monsters Inside Me, *Animal Planet* (USA), Host. *2009–2018*
One-hour episodes about parasites and the people infected by them.
Eight seasons.

Saturn: Inside the Rings *National Geographic*, Host. *2017*
One-hour Special about the fiery end of the Cassini mission to Saturn.
Aired in Canada on *Discovery*.

Your Morning *CTV* (Canada), Co-host. *2016*
Co-hosted live, nationally broadcast, 3-hour episode.

Canada AM *CTV* (Canada), Co-host. *2013–2016*
Co-hosted eight live, nationally broadcast, 3-hour episodes.

Rabid Beasts *Animal Planet (USA)*, Host. *2016*
One-hour Special about Rabies.

Jupiter: Close Encounter *Science Channel* (USA), Host. *2016*
One-hour Special about NASA's Juno mission, upon its arrival at Jupiter.
Aired in Canada, Europe, and Asia on *Discovery*.

Direct from Pluto *Science Channel* (USA), Host. *2015*
One-hour Special about New Horizons fly-by mission to Pluto.
Aired in Canada, Europe, and Asia as *Pluto: First Encounter* on *Discovery*.
2016 Worldfest Houston Special Jury Award for Best Documentary.

The Cat in the Hat Knows a Lot About That! *PBS* (USA), Science Advisor. *2015*
Verified scientific integrity so as to meet educational objectives.
Three Epsiodes.

Rosetta Mission: Landing on a Comet *Science Channel* (USA), Host. *2014*
One-hour Special about the first ever mission to land on a comet.
Platinum Winner, TV Documentary, WorldFest Houston Int'l Film Festival 2015
Aired in Canada, Europe, and Asia on *Discovery*.

Supercomet ISON 2013 *Science Channel* (USA), Host. *2013*
One-hour Special about the enigmatic sungrazing comet.
Gold Medal, NewYork Festivals International TV & Film Awards 2015
Aired in Europe, Asia, and Canada as **Hunt for a Supercomet** on *Discovery*.

Fire in the Sky *Science Channel* (USA), Co-host. *2013*
One-hour special about the meteorite that landed in Chelyabinsk, Russia.
Aired in Canada, Europe, and Asia on *Discovery*.

InnerSpace *Space* (Canada), Co-host. *2012*
Co-hosted one episode with Cynthia Loyst, on 2012-12-07.

One Giant Leap: A Neil Armstrong Tribute *Science Channel* (USA), Co-host. *2012*
One-hour special upon the death of Neil Armstrong. Also aired in Canada on *Discovery*.

Mars landing 2012: The New Search for Life *Science Channel* (USA), Co-host. *2012*
One-hour special. Also aired in Canada on *Discovery*.

Titanic: Under the Microscope *Discovery* (Canada), Co-host. *2012*
One-hour special for the 100th anniversary of the sinking of *H.M.S. Titanic*

Human Nature, *Science Channel* (USA), Host. *2012*
Dan travels the world to understand the mysteries of the mind that make us human.
One Season.

Bedbug Apocalypse, *Animal Planet* (USA), Expert. *2011*
One-hour Special.

Evolve, *History Channel* (USA), Expert. *2008*
One season.
Emmy-nominated.

TELEVISION GUEST APPEARANCES

CTV NewsChannel and local affiliates across Canada *2011–2023*
Various topics; 1-3 appearances per week

Bats: The Mystery Behind COVID, with Anderson Cooper, *CNN*. *2020*
Interviewed by Anderson Cooper for a full hour,
Many excerpts from interview included in special.

CTV National News with Lisa LaFlamme *CTV* (Canada) *2012–2020*
Various topics; 5-6 appearances per year

The Dr. Oz Show *ABC* *2009–2017*
2009-09-27: Tapeworms.
2016-01-14: Parasites.
2016-09-01: Eating Parasites on purpose
2017-12-12: Medical Mystery: Botulism

The Doctors *CBS* *2017*
2017-12-12: Parasites

Join or Die with Craig Ferguson *History Channel* *2016*
''History's Greatest Mistake,''
panelists Tim Meadows, Ian Abramson, and Dan Riskin

The Late Late Show with Craig Ferguson *CBS* *2011–2014*
Eight Appearances. Various topics. Mostly animal genitals.

CBS This Morning *CBS* *2014*
2014-04-04: New Book: Mother Nature is Trying to Kill You.

CNN Tonight with Don Lemon *CNN* *2014*
2014-10-08: Could pet dogs spread the Ebola virus?

The Tonight Show with Jay Leno *NBC* *2010*
2010-06-25: Cameron Diaz and Dan Riskin

REFEREED ACADEMIC PUBLICATIONS

[29] **Riskin, D K.** and G. G. Carter. 2023. The Evolution of Sanguivory in Vampire Bats: Origins and Convergences. *Canadian Journal of Zoology*. https://doi.org/10.1139/cjz-2022-0115.

[28] Sui, T., T. Zou, and **D. K. Riskin**. 2022. Optimum design of a novel bio-inspired bat robot. *IEEE Robotics and Automation Letters* 7(2). https://doi.org/10.1109/LRA.2022.3146536.

[27] Hone, D., J. M. Ratcliffe, **D. K. Riskin**, J. W. Hermanson, and R. R. Reisz. 2020. Unique near isometric ontogeny in the pterosaur *Rhamphorhynchus* suggests hatchlings could fly. *Lethaia*

54(10): 106–112.
https://doi.org/10.1111/let.12391.

[26] **Riskin, D. K.**, C. J. Kendall, and J. W. Hermanson. 2016. The crouching of the shrew: Mechanical consequences of limb posture in small mammals. *PeerJ* 4:e2131.
https://doi.org/10.7717/peerj.2131.

[25] **Riskin, D. K.**, J. E. A. Bertram, and J. W. Hermanson. 2016. The evolution of terrestrial locomotion in bats: The bad, the ugly, and the good. In: *Understanding mammalian locomotion: Concepts and applications*. (edited by J. E. A. Bertram).
https://doi.org/10.1002/9781119113713.ch12.

[24] Bergou, A. J. S. M. Swartz, **D. K. Riskin**, H. Vejdani, L. Reimnitz, G. Taubin, K. S. Breuer. 2015. Falling with style: Bats perform complex aerial rotations by adjusting wing inertia. *PLoS Biology* 13(11): e1002297.
https://doi.org/10.1371/journal.pbio.1002297.

[23] Cheney, J. A., D. Ton, N. Konow, **D. K. Riskin**, K. S. Breuer, and S. M. Swartz. 2014. Hindlimb motion during steady flight of the lesser dog-faced fruit bat, *Cynopterus brachyotis*. *PLoS One* 9(5): e98093.
https://doi.org/10.1371/journal.pone.0098093.

[22] Bahlman, J. W., S. M. Swartz., **D. K. Riskin**, and K. S. Breuer. 2012. Glide performance and aerodynamics of non-equilibrium glides in northern flying squirrels (*Glaucomys sabrinus*). *Journal of the Royal Society Interface*. 10: 20120794.
https://doi.org/10.1098/rsif.2012.0794.

[21] Iriarte-Díaz, J., **D. K. Riskin**, K. S. Breuer, and S. M. Swartz. 2012. Kinematic plasticity during flight in fruit bats: Individual variability in response to loading. *PLoS One*. 7(5): e36665.
https://doi.org/10.1371/journal.pone.0036665.

[20] **Riskin, D. K.**, Bergou, A. Breuer, and S. M. Swartz. 2012. Upstroke wing flexion and the inertial cost of bat flight. *Proceedings of the Royal Society B* 279: 2945-2950.
https://doi.org/10.1098/rspb.2012.0346.

[19] Swartz, S. M., J. Iriarte-Díaz, **D. K. Riskin**, and K. S. Breuer. 2012. A bird? A plane? No, it's a bat: an introduction to the biomechanics of bat flight. In: *Evolutionary history of bats: Fossils, molecules, and morphology*. (edited by Gunnell, G. F., and Simmons, N. B.). Cambridge University Press.
https://doi.org/10.1017/CBO9781139045599.010.

[18] Iriarte-Díaz, J., **D. K. Riskin**, D. J. Willis, K. S. Breuer, and S. M. Swartz. 2011. Whole-body kinematics of a fruit bat reveal the influence of wing inertia on body accelerations. *Journal of Experimental Biology*. 214: 1546-1553.
https://doi.org/10.1242/jeb.037804.

[17] MacAyeal, L. C., **D. K. Riskin**, S. M. Swartz, and K. S. Breuer. 2011. Vertical flight performance and load carrying in Lesser Dog-faced Fruit Bats (*Cynopterus brachyotis*). *Journal of Experimental Biology*. 214: 786-793.
https://doi.org/10.1242/jeb.050195.

[16] **Riskin, D. K.**, J. Iriarte-Díaz, K. M. Middleton, K. S. Breuer, and S. M. Swartz. 2010. The effect of body size on the wing movements of pteropodid bats, with insights into thrust and lift production. *Journal of Experimental Biology*. 213: 4110-4122.
https://doi.org/10.1242/jeb.043091.

[15] Hubel, T. Y., **D. K. Riskin**, S. M. Swartz, and K. S. Breuer. 2010. Wake structure and wing kinematics: the flight of the lesser dog-faced fruit bat, *Cynopterus brachyotis*. *Journal of Experimental Biology*. 213: 3427-3440.
https://doi.org/10.1242/jeb.043257 .

[14] Parsons. S., **D. K. Riskin**, and J. W. Hermanson. 2010. Echolocation call production during aerial and terrestrial locomotion by New Zealand's enigmatic lesser short-tailed bat, *Mystacina tuberculata*. *Journal of Experimental Biology*. 213: 551-557. https://doi.org/10.1242/jeb.039008.

[13] **Riskin, D. K.**, and P. A. Racey. 2010. How do sucker-footed bats hold on, and why do they roost head-up? *Biological Journal of the Linnean Society*. 99: 233-240. https://doi.org/10.1111/j.1095-8312.2009.01362.x .

[12] **Riskin, D. K.**, J. W. Bahlman, T. Y. Hubel, J. M. Ratcliffe, T. H. Kunz, and S. M. Swartz. 2009. Bats go head-under-heels: The biomechanics of landing on a ceiling. *Journal of Experimental Biology*. 212: 945-953. https://doi.org/10.1242/jeb.026161 .

[11] **Riskin, D. K.**, D. J. Willis, T. L. Hedrick, J. Iriarte-Díaz, M. Kostandov, J. Chen, D. H. Laidlaw, K. S. Breuer, and S. M. Swartz. 2008. Quantifying the complexity of bat wing kinematics. *Journal of Theoretical Biology*. 254: 604-615. https://doi.org/10.1016/j.jtbi.2008.06.011.

[10] Williams, W. O., **D. K. Riskin**, and K. M. Mott. 2008. Ultrasonic sound measurement as an indicator of acute pain in laboratory mice. *Journal of the American Association of Laboratory Animal Science*. 47: 8-10. http://www.ncbi.nlm.nih.gov/pmc/articles/pmc2652617.

[9] **Riskin, D. K.**, G. G. Carter, S. Parsons, W. A. Schutt, Jr., and J. W. Hermanson. 2006. Terrestrial locomotion of the New Zealand Short-tailed Bat *Mystacina tuberculata* and the Common Vampire Bat *Desmodus rotundus*. *Journal of Experimental Biology* 209: 1725-1736. https://doi.org/10.1242/jeb.02186.

[8] Carter, G. G., and **D. K. Riskin**. 2006. Mystacina tuberculata. *Mammalian Species* 790: 1-8. https://doi.org/10.1644/790.1.

[7] **Riskin, D. K.**, J. E. A. Bertram, and J. W. Hermanson. 2005. Testing the hindlimb-strength hypothesis: Non-aerial locomotion by Chiroptera is not constrained by the dimensions of the femur or tibia. *Journal of Experimental Biology* 208: 1309-1319. https://doi.org/10.1242/jeb.01522.

[6] **Riskin, D. K.**, and J. W. Hermanson. 2005. Independent evolution of running in vampire bats. *Nature*. 434: 292. https://doi.org/10.1038/434292a.

[5] **Riskin, D. K.**, and M. B. Fenton. 2001. Sticking ability in Spix's disk-winged bat, *Thyroptera tricolor* (Microchiroptera: Thyropteridae). *Canadian Journal of Zoology* 79: 2261-2267. https://doi.org/10.1139/cjz-79-12-2261.

[4] **Riskin, D. K.** 2001. Pipistrellus bodenheimeri. *Mammalian Species* 651: 1-3. https://doi.org/10.2307/0.651.1.

[3] Fenton, M. B., E. Bernard, S. Bouchard, L. Hollis, D. Johnston, C. L. Lausen, J. M. Ratcliffe, **D. K. Riskin**, J. R. Taylor, and J. Zigouris. 2001. The Bat Fauna of Lamanai, Belize: Roosts and trophic roles. *Journal of Tropical Ecology* 17: 511-524. https://doi.org/10.1017/S0266467401001389.

[2] Fenton, M. B., M. J. Vonhof, S. Bouchard, S. Gill, D. Johnston, F. A. Reid, **D. K. Riskin**, K. L. Standing, J. Taylor, and R. Wagner. 2000. Roosts used by *Sturnira lilium* (Chiroptera: Phyllostomidae) in Belize. *Biotropica* 22: 729-733. https://doi.org/10.1111/j.1744-7429.2000.tb00521.x.

[1] **Riskin, D. K.**, M. J. Pybus. 1998. The use of exposed diurnal roosts in Alberta by the little brown bat, *Myotis lucifugus*.*Canadian Journal of Zoology* 76: 767-770.

https://doi.org/10.1139/cjz-76-4-767.

NON-REFEREED PUBLICATIONS

Riskin, D. K. In press. Visually Stunning Book on Bats Focuses on Unanswered Questions. *Quarterly Review of Biology*.

Riskin, D. K. 2018. Science writer Carl Zimmer on his new book, crazy genetics and the ethics of CRISPR *The Globe and Mail*: Globe Books, September 3.

Riskin, D. K. 2013. Making science sexy: How to grab - and hold - an audience to promote science (commentary). *The Wildlife Professional*: Fall 2013: 28-30.

Waldman, R. M., A. Song, **D. K. Riskin**, S. M. Swartz, and K. S. Breuer. 2008. Aerodynamic behavior of compliant membranes as related to bat flight. *American Institute of Aeronautics and Astronautics Journal*: AIAA no. 2008-3716.

Willis, D. J., M. Kostandov, **D. K. Riskin**, J. Peraire, D. H. Laidlaw, S. M. Swartz, and K. S. Breuer. 2007. Modeling the flight of a bat (science visualization feature). *Science* 317: 1860.

Rypien, K. L., J. Anderson, J. Andras, R. W. Clark, G. Gerrish, J. Mandel, M. L. Nydam, and **D. K. Riskin**. 2007. Correspondence: Students unite to create state of the planet course. *Nature* 447: 775.

Swartz, S. M., J. Iriarte-Díaz, **D. K. Riskin**, A. Song, X. Tian, D. J. Willis, and K. S. Breuer. 2007. Wing structure and the aerodynamic basis of flight in bats. *American Institute of Aeronautics and Astronautics Journal*: AIAA no. 2007-42.

Riskin, D. K. 2006. Biomechanics of terrestrial locomotion in bats. Ph.D. Dissertation, Cornell University.

Riskin, D. K. 2000. A behavioural investigation of the sticking mechanisms and non-aerial locomotion of Spix's disk-winged bat, *Thyroptera tricolor* (Microchiroptera: Thyropteridae). M.Sc Thesis, York University.

Riskin, D. K. 1996. Examination of the diversification of eutherian mammals in the early Paleocene of North America. Partially reprinted in Carroll, R. L. 1997. Patterns and Processes of Vertebrate Evolution. Cambridge University Press, 448 Pages.

AWARDS FOR TEACHING AND ORAL PRESENTATION

Society for Experimental Biology Talk Prize *2008*
Biomechanics Session, Society for Experimental Biology Meeting

Robert H. Whittaker Award for Best Oral Presentation *2005*
Cornell Ecology and Evolutionary Biology Symposium

Bat Conservation International Award *2004*
North American Symposium on Bat Research

Knight Institute Buttrick-Crippen Fellowship *2004*
To design and teach a Freshman Writing Seminar at Cornell University

Outstanding Teaching Assistant Award *2003*
For Introductory Biology at Cornell University

OTHER GRANTS AND SCHOLARSHIPS

Company of Biologists Travel Grant and **Student Grant** *2008*
Society for Experimental Biology

AAAS International Science and Engineering Visualization Challenge *2007*
First Prize: ''Modeling the flight of a bat.'' (Published in *Science* 317: 1860).

Sigma Xi Grant in Aid of Research *2005*

Veterinary Medicine Conference Grant *2005*
Cornell University Department of Biomedical Sciences

Company of Biologists Traveling Fellowship *2004*
from the *Journal of Experimental Biology*

Veterinary Medicine Conference Grant *2004*
Cornell University Department of Biomedical Sciences

Bat Conservation International Scholarship (declined) *2004*

NSERC Canada Graduate Scholarship (declined) *2003*

Andrew W. Mellon Scholarship *2003*
Cornell University

NSERC Postgraduate Scholarship B *2003*

Graduate Development Fund Scholarship *1999*
York University

NSERC Winner Award Supplement *1998*
York University

NSERC Postgraduate Scholarship A *1998*

Young Canada Works in Heritage Institutions Scholarship *1996*
Canadian Library Association

1994 Alexander Rutherford Scholarship *1994*
Provincial Government of Alberta

COURSES TAUGHT

State of the Planet *2006*
Cornell University, Ithaca, NY.
The course was a lecture series with guided discussion groups focused on sustainability issues. Guest speakers spanned a broad range of disciplines with diverse perspectives on the problems and solutions facing our planet. I helped to design the course, and wrote about that experience in a commentary to the journal *Nature*.

The Biology of Desert-dwelling Bats (Two-week field course in Sede Boqer, Israel) *2006*
University of Western Ontario, London, ON.
Taught identification, handling, and echolocation call analysis for bats, and assisted undergraduate students in the design of their independent projects.

The Vertebrates: Structure, Function, and Evolution *2006*
Cornell University, Ithaca, NY.
Lab instructor and occasional lecturer.

Freshman Writing Seminar: "How to Write About Science" *2005*
Cornell University, Ithaca, NY.
Designed and taught one-semester course for undergraduate students.

Introductory Biology *2002–2005*
Cornell University, Ithaca, NY.
Lab Instructor. (Outstanding Teaching Assistant Award)

Introductory Biology *2001*
Camosun College, Victoria, Canada.
Lecturer and Lab Instructor

Concepts in Animal Ecology *1999*
York University, Toronto, Canada.
Laboratory Instructor

JOURNAL REFEREE

Acta Chiropterologica
Australian Journal of Zoology
Biological Journal of the Linnean Society
Evolutionary Ecology
Journal of Anatomy
Journal of Experimental Biology
Journal of Experimental Zoology Part A: Ecological Genetics and Physiology
Journal of Mammalogy
Journal of Theoretical Biology
Journal of Tropical Ecology
Journal of Wildlife Management
Scientific Reports
Zoological Studies
Zoology

PODCASTS

Inside the Breathrough: How Science Comes to Life *2021–*
In its third Season.
Bi-weekly episodes.
#1 Science Podcast in iTunes Canada (Feb, 2021)
Webby Nominee in Podcasts - Best Branded Podcast or Segment (2022)

Recent Paper Decent Puzzle *2016–2017*
Weekly episodes.

OTHER SCIENCE OUTREACH

Twitter Verified Account *2011-present*
@RiskinDan

Reddit AMA (Ask Me Anything) *2015*
I'm Dan Riskin, author, biologist, host of...
Reddit Front Page (29 Oct)

Reddit AMA (Ask Me Anything) *2014*
I'm Dan Riskin, biologist turned Animal Planet/Discovery presenter...
Reddit Front Page (28 May)