# Katherine A. Cronin, PhD CV

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# **EDUCATION**

Ph.D.	2009	Psychology, University of Wisconsin – Madison Individualized Graduate Major <i>Evolution of Behavior</i>
B.S.	2001	Zoology (honors) University of Wisconsin – Madison

### PRIMARY PROFESSIONAL APPOINTMENT

Director, Animal Welfare Science Program, Lincoln Park Zoo

# **ALL PROFESSIONAL APPOINTMENTS**

Steve Ross)

ALL FINOFESSIO	DIVAL AFFORM I WILLIAM
2024 – present	Guest Scientist, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
2023 – present	Director, Animal Behavior & Welfare Consulting, LLC
2021 – present	Director, Animal Welfare Science Program, Lincoln Park Zoo
2017 – 2022	Faculty, Committee on Evolutionary Biology, University of Chicago
2017 – 2021	Senior Animal Welfare Scientist Animal Welfare Science Program, Lincoln Park Zoo
2014 – 2017	Research Scientist Lester E. Fisher Center for the Study & Cognition of Apes, Lincoln Park Zoo
2010 – 2014	Staff Scientist Comparative Cognitive Anthropology Research Group Max Planck Institute for Psycholinguistics (The Netherlands) & Max Planck Institute for Evolutionary Anthropology (Germany)
2009 – 2010	Postdoctoral Fellow Psychology Department, University of Wisconsin, Madison Assay Services, Wisconsin National Primate Research Center
2005 – 2008	National Science Foundation Graduate Research Fellow Psychology Department, University of Wisconsin, Madison
<b>GRANTS</b> (selec	t)
2022 – 2024	Arcus Foundation. Project: Develop a comprehensive welfare assessment program for chimpanzees living in zoos and sanctuaries. Award amount: 318,000 USD (original PI Dr.

- 2020 2023 Institute of Museum and Library Services (IMLS) National Leadership Grant. Project: Expansion of a behavioral monitoring app for multi-institutional collaboration at zoological and aquarium institutions. Award amount: 570,000 USD. (co-PI with Dr. Jason Wark)
- 2011 2014 Netherlands Organization for Scientific Research (NWO) Veni grant. Award amount: 250,000 euro (approximately 327,250 USD). (Program to fund innovative research programs by young scientists judged to be in top 10% of field.) (PI)
- 2005 2008 National Science Foundation (NSF) Graduate Research Fellowship Award amount: 90,000 USD. (PI)

#### **PUBLICATIONS**

- Freund, C.A., <u>Cronin, K.A.</u>, Huang, M., Robinson, N.J., Yoo, B. & DiGiorgio, A. L. (2024). Effects of captions on viewers' perceptions of images depicting human-primate interaction. *Conservation Biology*. e14199.
- Englund, M.D. & Cronin, K.A. (2023). Choice, control, and animal welfare: definitions and essential inquiries to advance animal welfare science. *Frontiers in Veterinary Science*. 10.
- O'Brien, S.L. & Cronin, K.A. (2023). The impacts of a commercial bubble curtain on zoo-housed African penguin (*Spheniscus demersus*) swimming behavior. *Journal of Zoological and Botanical Gardens*, 4(3), 567-577.
- O'Brien, S.L. & Cronin, K.A. (2023). Doing better for understudied species: Evaluation and improvement of a species-general animal welfare assessment tool for zoos. *Applied Animal Behaviour Science*, 264: 105965.
- Alba, A.C., Ferrie, G.M., Schook, M.W., Leahy, M. & <u>Cronin, K.A.</u> (2023). Gender and age, but not visual context, impact wildlife attitudes and perceptions of animals in zoos. *Journal of Zoological and Botanical Gardens*. 4: 118-133.
- Escribano, D., Doldán-Martelli, V., <u>Cronin, K. A.,</u> Haun, D.B.M., van Leeuwen, E.J., Cuesta, J.A. & Sánchez, A. (2022). Chimpanzees organize their social relationships like humans. *Scientific Reports*. 12, 16641.
- Cairo-Evans, A., Wierzal, N.K., Wark, J.D., & <u>Cronin, K.A.</u> (2022). Do zoo-housed primates retreat from crowds? A simple study of five primate species. *American Journal of Primatology*. 84(10), e23386
- Cronin, K.A., Leahy, M., Ross, S.R., Schook, M. W., Ferrie, G., & Alba, A. (2022). Younger generations are more interested than older generations in having non-domesticated animals as pets. *PLOS One*. 17(1): e0262208.
- Ramont, M., Leahy, M., & <u>Cronin, K.A.</u> (2021). The welfare of domestic goats (*Capra hircus*) in a zoo-based animal-visitor interaction program. *Animal Behavior and Cognition*. 8(4), 493-506.
- Doelling, C. R., <u>Cronin, K. A.,</u> Ross, S. R., & Hopper, L. M. (2021). The relationship between personality, season, and wounding receipt in zoo-housed Japanese macaques (*Macaca fuscata*): A multi-institutional study. *American Journal of Primatology*, e23332.
- Cronin, K.A. (2021). Working to supply the demand: Recent advances in the science of zoo animal welfare. (Editorial). *Journal of Zoological and Botanical Gardens*, 2(3), 349-350.

- Wark, J.D., Wierzal, N.K., & <u>Cronin, K.A.</u> (2021). Gaps in live inter-observer reliability testing of animal behavior: A retrospective analysis and path forward. *Journal of Zoological and Botanical Gardens*. 2: 207-221.
- de Troy, S.E., van Leeuwen, E.J.C., Ross, C.T., <u>Cronin, K.A.</u>, Haun, D.B.M. (2021). Cofeeding tolerance in chimpanzees depends on group composition: A longitudinal study across four communities. *iScience*. 24: 102175.
- Ramont, M., Leahy, M., & <u>Cronin, K.A.</u> (2021). Domestic animal welfare at the zoo: The impact of an animal visitor interaction program on chickens. *Animal Behavior and Cognition, 8*(1), 1-14.
- Woody, S.M., Santymire, R.M. & <u>Cronin, K.A.</u> (2021). Posture as a non-invasive indicator of arousal in American toads (*Anaxyrus americanus*). *Journal of Zoological and Botanical Gardens*. 2: 1-9.
- Cronin, K.A. & Hopper, L.M. (2020). Do monkeys care what's fair? Frontiers for Young Minds. 8: 550299.
- Cronin, K.A. & Ross, S.R. (2020). When is "natural" better? The welfare implications of limiting reproduction in captive chimpanzees. In L.M. Hopper & S.R. Ross (Eds.), Chimpanzees in Context, University of Chicago Press. pp. 509-523.
- Binding, S., Farmer, H., Krusin, L., & <u>Cronin, K.A.</u> (2020). The status of welfare research in zoos and aquariums: Where are we, where to next? *Journal of Zoo and Aquarium Research*, 8(3): 166-174.
- Wark, J.D., Wierzal, N.K., & <u>Cronin, K.A.</u> (2020). Mapping shade availability and use in zoo environments: A tool for evaluating thermal comfort. *Animals*, *10*, 1189.
- Fiore, A., <u>Cronin, K.A.</u>, Ross, S.R., & Hopper, L.M. (2020). Food cleaning by Japanese macaques: Innate, innovative, or cultural? *Folia Primatologica. 91*(4): 433-444.
- Cronin, K.A., Martens, A., Ness, T., Leahy, M., & Ross, S.R. (2020). Sex and season predict wounds in zoo-housed Japanese macaques (*Macaca mulatta*): A multi-institutional study. *Zoo Biology, 39*: 147-155.
- Egelkamp, C.L., Jacobson, S.L., Wagner, K.E., <u>Cronin, K.A.</u>, Ross, S.R. & Hopper, L.M. (2019). A comparison of sequential learning errors made by apes and monkeys reveals individual but not species differences in learning and memory. *International Journal of Comparative Psychology*, 32.
- van Leeuwen, E.J.C., <u>Cronin, K.A.</u>, & Haun, D.B.M. (2019). Reply to Farine & Aplin: Chimpanzees choose their association and interaction partners. *Proceedings of the National Academy of Sciences*, *116*: 16676-16677.
- Woods, J.M., Ross, S.R.. & <u>Cronin, K.A.</u> (2019). The social rank of zoo-housed Japanese macaques is a predictor of visitor-directed aggression. *Animals*, 9: 316-325.
- Saiyed, S.T., Hopper, L.M. & <u>Cronin, K.A.</u> (2019). Evaluating the behavior and temperament of African penguins in a non-contact animal encounter program. *Animals*, 9: 326-339.
- Wark, J.D., <u>Cronin, K.A.</u>, Niemann, T., Kao, A., Shender, M.A., Horrigan, A. & Ross, M.R. (2019). Monitoring the behavior and habitat use of animals to enhance welfare using the ZooMonitor app. *Animal Behavior & Cognition, 6*: 158-168.
- Cronin, K.A. & Ross, S.R. (2019). Technical contribution: A cautionary note on the use of behavioural diversity (H-Index) in animal welfare science. *Animal Welfare*, 28: 157-164.

- Jacobson, S., Kwiatt, A., Ross, S.R. & <u>Cronin, K.A.</u> (2019). The effects of cognitive testing on the welfare of zoo-housed Japanese macaques (*Macaca fuscata*). *Applied Animal Behaviour Science*, 212: 90-97.
- Hopper, L.M., <u>Cronin, K.A.</u> & Ross, S.R. (2018). A multi-institutional assessment of a short-form personality questionnaire for use with macaques. *Zoo Biology*, 37: 281-289.
- van Leeuwen, E.J.C., <u>Cronin, K.A.,</u> & Haun, D.B.M. (2018). Population-specific social dynamics in chimpanzees. *Proceedings of the National Academy of Sciences*, 115: 11393-11400.
- Cronin, K.A., Bethell, E.J., Jacobson, S.L., Egelkamp, C., Hopper, L.M., & Ross, S.R. (2018). Evaluating mood changes in response to anthropogenic noise with a response-slowing task in three species of zoo-housed primates. *Animal Behavior and Cognition*, 5: 209-221.
- Hopper, L.M. & Cronin, K.A. (2018). What did you get? What social learning, collaboration, prosocial behavior and inequity aversion tell us about primate social cognition. In L.D. Di Paolo, F. Di Vincenzo & A. F. d'Almeida (Eds.), Evolution of Primate Social Cognition. (pp. 13-26). Springer.
- Antonioni, A., Pereda, M., <u>Cronin, K.A.</u>, Tomassini, M., & Sanchez, A.S. (2018). Collaborative hierarchy maintains cooperation in asymmetric games. *Scientific Reports*, 8: 5375.
- <u>Cronin K.A.</u>, Jacobson S.L., Bonnie K.E., & Hopper L.M. (2017) Studying primate cognition in a social setting to improve validity and welfare: a literature review highlighting successful approaches. *PeerJ* 5:e3649
- van Leeuwen, E.J.C., Mundry, R., <u>Cronin, K.A.</u>, Bodamer, M. & Haun, D.B.M. (2017). Chimpanzee culture extends beyond matrilineal family units. *Current Biology*, 27: R588-R590.
- van Leeuwen, E.J.C., <u>Cronin, K.A.</u> & Haun, D.B.M. (2017). Tool use for corpse cleaning in chimpanzees. *Scientific Reports*, 7: 44091.
- Cronin, K.A. (2017). Comparative studies of cooperation: Collaboration and prosocial behavior in animals. In J. Call, G.B. Burghardt, I. Pepperberg, C.T. Snowdon, & T. Zental (Eds.), APA Handbook of Comparative Psychology. (pp. 915-929). American Psychological Association, Washington, D.C.
- Cronin, K.A. & Hopper, L.M. (2017). A comparative perspective on helping and fairness. In J. Sommerville & J. Decety (Eds.), Frontiers in Developmental Science Series: Social Cognition. (pp. 26-45). Psychology Press, Taylor & Francis Group, London.
- Cronin, K.A., West, V. & Ross, S.R. (2016). The relationship between welfare and rearing young in captive chimpanzees. *Applied Animal Behaviour Science*. 181: 166-172.
- <u>Cronin, K.A.</u> (2016). Unnatural paradigm calls into question whether macaques' social decisions represent empathy. *Proceedings of the National Academy of Sciences*, 113: E1331.
- van Leeuwen, E.J.C., Mulenga, I.C., Bodamer, M. & <u>Cronin, K.A.</u> (2016). Chimpanzees' responses to the dead body of a nine-year old group member. *American Journal of Primatology*. 78: 914-922.
- Cronin, K.A., Acheson, D. J., Hernandez, P., & Sanchez A. (2015). Hierarchy is detrimental for human cooperation. *Scientific Reports*, 5: 18634.
- \* Scientific Reports highlighted Cronin et al., 2015 as one of the top 100 most-read papers of
- Cronin, K.A., De Groot, E., & Stevens, J.M.G. (2015). Bonobos show limited social tolerance in a group setting: A comparison with chimpanzees and a test of the Relational Model. *Folia Primatologica*, 86: 164-177.

- Keller, K.L., Fritz, R.S., Zoubek, C.M., Kennedy, E.H., <u>Cronin, K.A.</u>, Rothwell, E.S., & Serfass, T.L. (2014). Effects of transport on fecal glucocorticoid levels in captive-bred cotton-top tamarins (*Saguinus oedipus*). *Journal of the Pennsylvania Academy of Science*, 88: 84-88.
- <u>Cronin, K.A.,</u> van Leeuwen, E.J.C., Vreeman, V. & Haun, D.B.M. (2014). Population-level variability in the social climates of four chimpanzee societies. *Evolution and Human Behavior*. 35: 389-396.
- <u>Cronin, K.A.</u>, Pieper, B.P., van Leeuwen, J.C., Mundry, R. & Haun, D.B.M. (2014). Problem solving in the presence of others: How rank and relationship quality impact resource acquisition in chimpanzees (*Pan troglodytes*). *PLOS One*. 9: e93204.
- van Leeuwen, E.J.C., <u>Cronin, K.A.</u>, Schuette, S., Call, J. & Haun, D.B.M. (2013). Chimpanzees (*Pan troglodytes*) flexibly adjust their behavior in order to maximize payoffs, not to conform to majorities. *PLOS ONE*. 8: e80945.
- Nettle, D., <u>Cronin, K. A.,</u> & Bateson, M. (2013). Responses of chimpanzees to cues of conspecific observation. *Animal Behaviour*. 86: 595-602.
- \* Nature News highlighted Nettle et al., 2013 as one of the most viewed papers in science. Nature, 502: 9.
- <u>Cronin, K. A.</u> (2013) Review of *Chimpanzees of the Lakeshore: Natural History and Culture at Mahale*, by Toshisada Nishida, Cambridge University Press. *Animal Behaviour*, 85: 685-686.
- <u>Cronin, K.A.</u> (2012). Prosocial behaviour in animals: the influence of social relationships, communication and rewards. *Animal Behaviour*. 84: 1085-1093.
- van Leeuwen, E.J.C., <u>Cronin, K.A.</u>, Haun, D.B.M., Mundry, R. & Bodamer, M.D. (2012). Neighbouring chimpanzee communities show different preferences in social grooming behavior. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 279: 4362-4367.
- <u>Cronin, K.A.</u> & Sanchez, A. (2012). Social dynamics and cooperation: The case of nonhuman primates and its implications for human behavior. *Advances in Complex Systems*, 15: 1250066.
- Cronin, K.A., van Leeuwen, J.C., Mulenga, I.C. & Bodamer, M.D. (2011). Behavioral response of a chimpanzee mother toward her dead infant. *American Journal of Primatology*, 73: 415-421.
- Cronin, K.A., Schroeder, K.K.S. & Snowdon, C.T. (2010). Prosocial behaviour emerges independent of reciprocity in cottontop tamarins. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 277: 3845-3851.
- Snowdon, C.T., Pieper, B.A., Boe, C.Y., <u>Cronin, K.A.</u>, Kurian, A.V. & Ziegler, T.E. (2010). Within-species variation in oxytocin is related to variation in affiliative behavior. *Hormones and Behavior*, 58: 614-618.
- Cronin, K.A., Schroeder, K.K.E., Rothwell, E.S., Silk, J.B. & Snowdon, C.T. (2009). Cooperatively breeding cottontop tamarins (*Saguinus oedipus*) do not donate rewards to their long-term mates. *Journal of Comparative Psychology*, 123: 231-241.
- Snowdon, C.T. & <u>Cronin, K.A.</u> (2009). Comparative cognition and neuroscience. In G. Berntson & J. Cacioppo (Eds.), Handbook of Neuroscience for the Behavioral Sciences. (pp. 32-55). Hoboken, NJ: John Wiley & Sons.
- <u>Cronin, K.A.</u> & Snowdon, C.T. (2008). The effects of unequal reward distributions on cooperative problem solving by cotton-top tamarins (*Saguinus oedipus*). *Animal Behaviour*, 75: 245-257.

- Snowdon, C.T. & Cronin, K.A. (2007). Cooperative breeders do cooperate. *Behavioural Processes*, 76: 138-141.
- Cronin, K.A., Mitchell, M.A., Lonsdorf, E.V. & Thompson, S.D. (2006). One year later: An evaluation of PMC-recommended births and transfers. *Zoo Biology*, 25: 267-277.
- Cronin, K.A., Kurian, A.V. & Snowdon, C.T. (2005). Cooperative problem solving in a cooperatively breeding primate. *Animal Behaviour*, 69: 133-142.

#### **MENTORING & TEACHING**

# **Teaching Appointments**

Teaching Appointments		
2011 – 2015	Co-instructor Neurobiology and Evolution of Language MsC program Cognitive Neuroscience, Radboud University Nijmegen, The Netherlands	
2008	Associate Lecturer "Special Topics in Psychology: Comparing Animal Minds" Psychology Department, University of Wisconsin, Madison Designed & taught upper-level undergraduate course (Mean student evaluation 4.9/5.0)	
2007 – 2009	Teaching Assistant Animal Behavior: The Primates (3 semesters) Psychology Department, University of Wisconsin, Madison	
2003 – 2004	Visiting Instructor Population Management I (select sections) George Mason University & AZA Professional Development	
Student Supervision		
2022 – 2023	Maisy Englund, PhD Candidate, Georgia State University, advisor Dr. Mike Beran Animal Welfare PhD Fellow at Lincoln Park Zoo Project: Status quo bias in non-human primates (primate decision making)	
2022 – 2022	Owen Howard, Dean's Undergraduate Fellow, DePaul University Project: Analysis of Lincoln Park Zoo's Welfare Discussion Tool	
2020 – 2021	Alexandria Evans, MA Program in the Social Sciences (MAPSS), University of Chicago Project: The effect of visitors on the welfare of five species of zoo-housed primates	
2019 – 2020	Sarah Woody, Animal Welfare Fellow, Lincoln Park Zoo Project: Developing methods to measure amphibian welfare	
2019 – 2020	Margaret Ramont, Animal Welfare Intern, Lincoln Park Zoo Project: Welfare of chickens and goats in "care for" programs	
2018 – 2019	Natasha Wierzal, Animal Welfare Intern, Lincoln Park Zoo Project: Welfare of nocturnal small mammals under different lighting conditions	
2017 – 2018	Sana Saiyed, Animal Welfare Intern, Lincoln Park Zoo	

Project: Welfare of penguins in close encounter program

2015 - 2017Jason Wark, Post-doc, Lincoln Park Zoo Project: Development of a behavioral monitoring app to evaluate and enhance welfare 2010 - 2015Edwin J. C. van Leeuwen, PhD student, Max Planck Institute, co-advisor Dr. Daniel Haun. Dissertation: Behavioral flexibility and learning biases of chimpanzees. Cum laude. 2012 - 2014Maddalena Tacchetti, Master's student, Radboud University, co-advisors Dr. Steven Levinson, Dr. Bart Geurts. Thesis: Communication in order to coordinate: How chimpanzees obtain behavioral synchrony in handclasp grooming. 2012 - 2013Marjolein van Ginneken, Master's student, Antwerp University, co-advisor Dr. Jeroen Stevens. Thesis: Social behavior in zoo-housed bonobos. 2007 - 2008Emily Spray Rothwell, University of Wisconsin, co-supervision by Dr. Charles Snowdon. Undergraduate research supervision. B.S. in Zoology and Psychology. 2006 - 2007Kori K. E. Schroeder, University of Wisconsin, co-supervision by Dr. Charles Snowdon. Undergraduate research supervision. B.S. in Zoology and Biological Aspects of Conservation.

#### **PRESENTATIONS**

#### **Talks**

- 2022 <u>Cronin, K.A.</u> How can we best put animal welfare assessments into action? Association of Zoos and Aquariums Annual Conference, Baltimore, MD, USA
- 2021 <u>Cronin, K.A.</u>, Woody, S., & Santymire, R. Toads "tell" us how they feel about habitat styles. Association of Zoos and Aquariums Annual Conference, virtual.
- 2021 <u>Cronin, K.A.</u> The evening buzz: Animal Welfare Committee research showcase. Association of Zoos and Aquariums Annual Conference, virtual.
- 2019 <u>Cronin, K.A.,</u> Saiyed, S.T., Hopper, L.M. Evaluating whether animal and human interests align in a zoo-based ambassador animal program with African penguins. Universities Federation for Animal Welfare International Symposium, Bruges, Belgium
- 2018 <u>Cronin, K.A.</u> & Ross, S.R. The relationship between limited reproduction and animal welfare. Association of Zoos and Aquariums Annual Conference, Seattle, WA, USA
- 2018 <u>Cronin, K.A.</u> & Price, A., Animal Welfare and Visitor Evaluation of a Voluntary Penguin Encounter Program. Association of Zoos and Aquariums Annual Conference, Seattle, WA, USA
- 2017 <u>Cronin, K.A.</u> Cognitive studies to assess welfare in zoo-housed primates. Association of Zoos & Aquariums Annual Conference, Indianapolis, IN, USA
- 2017 <u>Cronin, K.A.</u>, Bethell, E.J., Jacobson, S.L. & Ross, S.R. Response speed on a simple touchscreen task as a welfare indicator: A study of zoo-housed Japanese macaques. 3<sup>rd</sup> International Symposium on Zoo Animal Welfare, Brookfield Zoo, Brookfield, IL USA

- 2017 <u>Cronin, K.A.</u>, Bethell, E.J., Jacobson, S.L. & Ross, S.R. Response speed on a simple touchscreen task as a welfare indicator: A study of zoo-housed Japanese macaques. 40<sup>th</sup> meeting of the American Society of Primatologists, Washington, DC, USA
- 2016 <u>Cronin, K.A.</u>, West, V., Price, E. & Ross, S.R. The relationship between breeding and welfare in captive chimpanzees. International Primatological Society, Chicago, IL, USA. Joint meeting of the XXVI Congress of the International Primatological Society and the 39<sup>th</sup> meeting of the American Society of Primatologists. Chicago, IL, USA
- 2016 <u>Cronin, K.A.</u> Strategic cooperation by chimpanzees: Friend today, foe tomorrow. Chimpanzees in Context, Chicago, IL, USA
- 2013 <u>Cronin, K.A.</u>, van Leeuwen, E.J.C. & Haun, D.B.M. The many metrics of social tolerance: Are we measuring one concept? 5<sup>th</sup> Congress of the European Federation for Primatology, Antwerp, Belgium
- 2012 <u>Cronin, K.A.</u> Putting the cart behind the horse: The impact of contextual variants on the expression of prosocial behavior in primates. XXIV Congress of the International Primatological Society, Cancun, Mexico
- 2012 <u>Cronin, K.A.</u>, van Leeuwen, E.J.C. & Haun, D.B.M. Group differences in social tolerance across four chimpanzee communities. XXIV Congress of the International Primatological Society, Cancun, Mexico
- 2012 <u>Cronin, K.A.</u>, van Leeuwen, E.J.C. & Haun, D.B.M. Variation in the social climate of four chimpanzee societies. 6<sup>th</sup> European Conference on Behavioural Biology, Essen, Germany
- 2010 <u>Cronin, K.A.</u>, Schroeder, K.K.E. & Snowdon, C.T. Prosocial behavior emerges independent of reciprocity in cottontop tamarins. XXIII Congress of the International Primatological Society, Kyoto, Japan
- 2010 <u>Cronin, K.A.</u> & Snowdon, C.T. Learning to play nice: The emergence of prosocial behavior among pairbonded tamarins. 5<sup>th</sup> European Conference on Behavioural Biology, Ferrara, Italy
- 2009 <u>Cronin, K.A.</u> & Snowdon, C.T. Punishment among cooperative primates. Midwest Primate Interest Group, Grand Valley State University, Allendale, MI, USA
- 2008 <u>Cronin, K.A.</u>, Snowdon, C.T. & Silk, J.B. Performance of cottontop tamarins on a food donation task: A comparison with chimpanzees and common marmosets. XXII Congress of the International Primatological Society, Edinburgh, Scotland
- 2007 <u>Cronin, K.A.</u> & Snowdon, C.T. Cooperative problem solving by captive cotton-top tamarins (*Saguinus oedipus*): The effects of inequitable rewards. 30<sup>th</sup> meeting of the American Society of Primatologists, Winston-Salem, NC, USA
- 2006 <u>Cronin, K.A.</u> & Snowdon, C.T. The effect of unequal reward distribution on cooperative problem solving in cotton-top tamarins (*Saguinus oedipus*). XXI Congress of the International Primatological Society, Entebbe, Uganda
- 2005 <u>Cronin, K.A.</u> & Snowdon, C.T. Cooperation in tamarins: Long-term memory and the effects of unequal rewards. Midwest Primate Interest Group, Washington University, St. Louis, MO, USA
- 2004 <u>Cronin, K.A.</u>, Kurian, A.V. & Snowdon, C.T. Cooperative problem solving in a cooperatively breeding primate: cotton-top tamarins (*Saguinus oedipus*). 27<sup>th</sup> meeting of the American Society of Primatologists, Madison, WI, USA

#### Posters (first-authored only)

- 2017 <u>Cronin, K.A.</u>, Bethell, E.J., Jacobson, S.L. & Ross, S.R. Measuring mood with minimal training: Latencies on a simple touchscreen task indicate mood in zoo-housed Japanese macaques (*Macaca fuscata*). Universities Federation for Animal Welfare, University of London, Royal Holloway, UK
- 2016 <u>Cronin, K.A.</u>, Jacobson, S.L., Bonnie, K.E. & Hopper, L.M. Studying primate cognition in a social setting: Trends from 15 years of field and captive experiments. Joint meeting of the XXVI Congress of the International Primatological Society and the 39<sup>th</sup> meeting of the American Society of Primatologists. Chicago, IL, USA
- 2016 <u>Cronin, K.A.</u>, Hopper, L.M. & Ross, S.R., Snow monkeys settle in: the design of a new zoo-based research program for Japanese macaques. 38<sup>th</sup> meeting of the American Society of Primatologists. Bend, OR, USA. *American Journal of Primatology*, 77, S1, 63.
- 2015 <u>Cronin, K.A.</u>, Pieper, B.A., van Leeuwen, E.J.C., Crockford, C. & Haun, D.B.M. Cooperating to compete: Evaluating behavioural coordination in response to simulated territorial intrusion in chimpanzees. American Society of Primatologists Congress, Bend, Oregon, USA. *American Journal of Primatology*, 77, S1, 64.

# **Invited Talks** (select)

- 2023 Recent Advances in the Welfare and Psychological Science of Great Apes in Zoos (Humans too). Keynote at the Zoo Science Symposium, Antwerp Zoo, Antwerp, Belgium
- 2023 Welfare Assessments in Zoos. Behavior Management Consortium of Nonhuman Primate Research Centers (virtual)
- 2022 Too Good to Be True? The Behavioral Diversity Index. Plenary at the European Association of Zoos & Aquaria (EAZA) Animal Welfare Forum, Appenhuel, The Netherlands
- 2021 One Arm of the Maze: A Career in Zoo Animal Welfare Science. Women in Cognitive Science Career Panel, Cognitive Science Society Meeting (virtual)
- 2021 Are They Happy? Zoo Animal Welfare Science. Northwestern University, Evanston, IL (virtual)
- 2021 Zoo Animal Welfare: Inferences from Animal Behavior. Purdue University, West Lafayette, IN
- 2020 Webinar: Zoo Animal Welfare: Inferences from Animal Behavior. Practical Animal Welfare Science Platform.
- 2020 Zoo Animal Welfare: Inferences from Animal Behavior. Purdue University, West Lafayette, IN
- 2020 The Science of Zoo Animal Welfare, Illinois Science Council, Chicago, IL
- 2019 Animal Welfare and Animal Cognition, Osher Lifelong Learning Institute, Northwestern University, Chicago, IL
- 2019 Animal Welfare Science in Zoos, Detroit Zoological Society, Royal Oaks, MI
- 2018 Evaluating and Enhancing Welfare in Zoos, Illinois Zoo Association Meeting, Wheaton, IL
- 2018 Welfare Research at a Modern Zoo, University of Wisconsin, Madison, WI
- 2017 University of Connecticut, Expression, Communication & the Origins of Meaning Research Group, Storrs, CT
- 2016 Committee on Evolutionary Biology, EvMorph Series, Chicago, IL
- 2016 Chimpanzees in Context, Lincoln Park Zoo, Chicago, IL
- 2016 Comparative Behavioral Biology Workshop, University of Chicago, IL
- 2015 Conservation & Science Lecture Series, Lincoln Park Zoo, Chicago, IL
- 2014 Discussant for Russell Gray's Nijmegen Lecture: Evolution of Cognition without Miracles. Nijmegen, The Netherlands
- 2013 Festschrift in honor of Charles Snowdon, University of Wisconsin, Madison
- 2013 Department of Psychology & Neuroscience, University of St. Andrews, Scotland
- 2013 Department of Anthropology, University of California, San Diego
- 2012 Centre for Behaviour and Evolution, Newcastle University, United Kingdom
- 2012 University of Zurich Evolutionary Biology PhD Retreat, Riederalp, Switzerland

2011 Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands 2011 Department of Behavioural Biology, Leiden University, The Netherlands 2011 Evolution and Co-evolution: Physics of Competition, Cooperation and Conflict. Tarragona, Spain 2010 Department of Psychology, University of Portsmouth, Portsmouth, UK 2010 Department of Developmental and Comparative Psychology, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany Department of Anthropology, University of Zurich, Switzerland 2009 Interdisciplinary Animal Behavior Seminar, University of Wisconsin, Madison, USA 2009 2008 Interdisciplinary Animal Behavior Seminar, University of Wisconsin, Madison, USA 2008 Yale University Primate Social Cognition Workshop, New Haven, CT, USA 2007 Animal Behavior Research Group. University of Chicago, IL, USA **PROFESSIONAL ACTIVITIES Awards & Recognition** 2019 Distinguished Alumni Award, Psychology Department, University of Wisconsin 2006 Best Student Presentation, International Society of Primatologists Organized Symposia, Workshops, Special Issues 2023 Herpetofauna welfare: It's ribbeting! Session organized for the Association of Zoos and Aquariums Annual Conference, Columbus, Ohio. 2022 Finding the right fit: Exhibit design and welfare effects in understudied species. Session organized for the Association of Zoos and Aquariums Annual Conference, Baltimore, Maryland 2021 Making AZA Accreditation Standard 1.5.0 More Meaningful. Roundtable 1: Working out the kinks. Co-organized with Beth Posta for the Association of Zoos and Aquariums Annual Conference, virtual. 2021 Making AZA Accreditation Standard 1.5.0 More Meaningful. Roundtable 2: Maximizing benefits for the animals. Co-organized with Beth Posta for the Association of Zoos and Aquariums Annual Conference, virtual. 2021 Guest Editor for Special Issue: Recent Advances in the Science of Zoo and Aquarium Animal Welfare, Journal of Zoological and Botanical Gardens 2014 Welfare and reproduction in managed primates. Workshop co-organized with Jeroen Stevens and Zief Pereboom, Antwerp, Belgium

Tolerance and inhibition in nonhuman primates. Co-organized with Liesbeth Sterck, for the

Intraspecific variation in primate social dynamics. Organized for the European Conference on

Cooperation, reciprocity & responses to inequity. Organized with Charles Snowdon & Sarah Brosnan for the International Primatological Society Conference, Edinburgh, Scotland

European Federation for Primatology, Antwerp, Belgium

Behavioural Biology, Essen, Germany

2013

2012

2008

#### **Reviewer: Journals**

American Journal of Primatology, Animal Behavior and Cognition, Animal Behaviour, Animal Cognition, Animal Welfare, Animals, Behaviour, Applied Animal Behaviour Science, Biology Letters, Current Biology, Ethology, Frontiers in Psychology, International Journal of Primatology, International Zoo Yearbook, Journal of Applied Animal Welfare Science, Journal of Comparative Psychology, Journal of Zoo & Aquarium Research, Journal of Zoology, Journal of Zoological and Botanical Gardens, Nature, Philosophical Transactions of the Royal Society B, Primates, Public Library of Science (PLOS) One, Public Library of Science (PLOS) Biology, Scientific Reports, Zoo Biology

## **Reviewer: Granting Agencies**

Austrian Science Fund, AZA Conservation Grants Fund, European Union PRIMOCID Program, Leakey Foundation, International Primatological Society Captive Care

#### **Professional Service**

2021 – present 2021 – present	Chair, Lincoln Park Zoo Institutional Animal Care & Use Committee (IACUC) Member, Animal Welfare Working Group, European Association of Zoos & Aquaria (EAZA)
2021 - present	Editorial Board Member, Zoo Biology
2021 – present	Universities Federation for Animal Welfare (UFAW) LINK
2018 - present	Animal Welfare Committee, Association of Zoos and Aquariums (Vice Chair 2021 - present)
2015 – present	Member, Integrated Animal Welfare Committee, Lincoln Park Zoo (Chair 2015-2018)
2015 - present	Member, Research Committee, Lincoln Park Zoo
2013 – present	Health & Welfare Advisor, Chimfunshi Wildlife Orphanage Trust
2011 – present	Member, Research Advisory Board, Chimfunshi Wildlife Orphanage Trust (Co-Chair 2011-2021)
2023	Examiner for doctoral thesis, University of Antwerp
2020 – 2023	Editorial Board Member, Journal of Zoological and Botanical Gardens
2016 – 2023	Scientific Advisor, Japanese Macaque Species Survival Plan
2016 – 2023	International Primatological Society Captive Care Committee
2019 – 2022	Graduate Admissions Committee, University of Chicago Committee on
	Evolutionary Biology
2019 – 2021	Editorial Board Member, <i>Animals</i>
2019	Examiner for doctoral thesis, Melbourne University
2012 – 2015	Research Facilities Committee, Max Planck Institute for Psycholinguistics

#### **Public Outreach** (select)

ongoing	Animals & Us <u>blog</u>
2023	Chicago Public School Teachers, Animal Welfare Science at Lincoln Park Zoo
2021	Animal Welfare Science & Career, Chicago Mayors Office for People with Disabilities
2021	YouTube Series: The ABCs of Lincoln Park Zoo, A is for Animal Welfare
2019	Breakfast at the Zoo interactive lecture on animal welfare Lincoln Park Zoo, Chicago, IL
2019	Lincoln Park Zoo "LPZooU" course on animal welfare, Lincoln Park Zoo, Chicago, IL
2018	New Challenges for Conservation and Welfare (organized with Professor David Fraser)
	Summer Wine Fest, Lincoln Park Zoo, Chicago, IL, USA (general public)
2017	Heritage Society Luncheon, Lincoln Park Zoo, Chicago, IL, USA (donors)
2017	University of Chicago Committee on Evolutionary Biology Summer Research Program
2016	American Association of Laboratory Animal Sciences, Chicago Branch, Chicago, IL
2016	Science Celebration - Young Researchers Collaborative, Lincoln Park Zoo, Chicago, IL

2016	Francis Parker School introduction to primate science, Chicago, IL
2015	Lincoln Park Zoo "LPZooU" course on primate cognition & welfare, Chicago, IL
2015	Wine & Wildlife Lecture Series, Lincoln Park Zoo, Chicago, IL
2015	Macaque Research Sneak Peek (members & public) Lincoln Park Zoo, Chicago, IL
2013	Chimfunshi Community School – Coexisting with Wildlife
	Copperbelt Province, Zambia (young children, local community members)
2012	Chimfunshi Community School – Dispelling Myths about Birth Control
	Copperbelt Province, Zambia (young adult and adult community members)
2011	Chimfunshi Community School – Chimpanzee Behavior & Conservation
	Copperbelt Province, Zambia (young children, local community members)
2007	What Do Monkeys Think About Cooperation? Wingra (elementary) School, Madison, WI
2006	Primate Origins of Cooperation and Reciprocity, University of Wisconsin, Madison Board
	of Visitors
2004	Animals Need a Yenta Too, Lincoln Park Zoo Lecture Series, Chicago, IL

# Media Coverage (select)

The New York Times. Love triangle challenges reign of Japan's monkey queen. January 21, 2022 & Japan's monkey queen made it through mating season with her reign in tact. April 6, 2022

European Association of Zoos & Aquaria (EAZA)'s Slice of Science series. <u>Being Strategic with Shade</u>. January 8, 2022

YouTube Series: The ABCs of Lincoln Park Zoo. A is for Animal Welfare. July 30, 2021

Chicago's WGN live TV interview about zoo animal reactions to COVID closures. <u>Around Town</u> - Lincoln Park Zoo.

The New York Times Aging and ailing lab chimps are still at center of fight for sanctuary. October 6, 2020

WTTW Chicago. Lincoln Park Zoo ending its 'Meet an Animal' Program April 3, 2019

Discover Magazine Macaques are learning to communicate with touch-screens May 3, 2016

Wall Street Journal Like humans, other primates have fashion-trend setters March 11, 2015