

## CONTACT

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URL1: [www.cicasp.pri.kyoto-u.ac.jp/people/andrew-macintosh](http://www.cicasp.pri.kyoto-u.ac.jp/people/andrew-macintosh)  
URL2: <https://www.macintoshlab.com/>  
URL3: <https://www.theprimatecast.com>

## EMPLOYMENT

2022~ Associate Professor (tenure), Wildlife Research Center, Kyoto University  
2017~2022 Associate Professor (tenure), Primate Research Institute, Kyoto University  
2014~2017 Associate Professor (w/o tenure), Wildlife Research Center, Kyoto University  
2012-2014 Assistant Professor, Cent. Intl. Collab. Adv. Stud. Primatol. (CICASP), Kyoto University  
2011-2012 Research Associate (Postdoc), CICASP, Kyoto University  
2010-2011 Research Fellow (Postdoc), Department of Ecology and Social Behavior

## EDUCATION

2007-2010 Graduate School of Science, Div. Biol. Sci., Kyoto University (Doctor of Science, DSc)  
2000-2002 Department of Anthropology, University of Calgary (Master of Arts, MA)  
1997-2000 Department of Anthropology, University of Calgary (Bachelor of Science, BSc)

## AWARDS & SCHOLARSHIPS

2022 Top-cited Paper Award, American Journal of Primatology, Wiley  
2021 Outstanding Editor Award, Frontiers in Ecology and Evolution  
2013 Takashima Prize, Primate Society of Japan (outstanding young researcher)  
2013 Most-cited Paper Award, Primates, Springer  
2007 DSc scholarship: Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
Monbukagakusho scholarship, Japan, 150,000 yen/month (ca. 1,500 USD) \* 3.5 years  
2001 MA scholarship: Province of Alberta Graduate Scholarship (PAGS), Canada, 12,000 CAD

## SKILLS & INTERESTS

• animal behavior • ecology • primatology • comparative cognition • zoo biology • conservation and welfare • biological & ecological networks • parasite/disease ecology & epidemiology • bio-logging • biostats • R • complexity science • SciComm • higher education & pedagogy • EdTech

## RESEARCH OUTPUTS

Refereed Journal Articles: 68 (+5 Preprints)

Book Chapters: 11

Google Scholar: <http://scholar.google.co.jp/citations?user=zCPdEMoAAAAJ&hl=en>

## SELECTED PUBLICATIONS

\*See full list in the Appendix

**Andrew J. J. MacIntosh, D.Sc.**

1. Sarabian C, Wilkinson A, Sigaud M, Kano F, Tobajas J, Darmaillacq A-S, Kalema-Zikusoka G, Plotnik J, **MacIntosh A** (2023) Disgust in animals and the application of disease avoidance to wildlife management and conservation. *J Anim Ecol* DOI:10.1111/1365-2656.13903
2. Castellano-Navarro A, Macanas-Martinez E, Xu Z, Guillen-Salazar F, **MacIntosh AJJ**, Amici F, Albiach-Serrano A (2021) Japanese Macaques' (*Macaca fuscata*) sensitivity to human gaze and visual perspective in contexts of threat, cooperation, and competition. *Sci Rep* 11:5264
3. Romano V, **MacIntosh AJJ**, Sueur C (2020) Stemming the flow: information, infection, and social evolution. *Trends in Ecology and Evolution* 35(10): 849-853.
4. Duboscq J, Romano V, Sueur C, **MacIntosh AJJ** (2016) Network centrality and seasonality interact to predict lice load in a social primate. *Sci Rep* 6:22095
5. Sarabian C, **MacIntosh AJJ** (2015) Hygienic tendencies correlate with low geohelminth infection in free-ranging macaques. *Biol Lett* 11:20150757
6. **MacIntosh AJJ**, Pelletier L, Chiaradia A, Kato A, Ropert-Coudert Y (2013) Temporal fractals in seabird foraging behaviour: diving through the scales of time. *Sci Rep* 3:1884
7. **MacIntosh AJJ**, Jacobs A, Garcia C, Shimizu K, Mouri K, Huffman MA, Hernandez AD (2012) Monkeys in the middle: parasite transmission through the social network of a wild primate. *PLoS ONE* 7:e51144

**GRANTS**

- 2022 **Ishizue Fund**, Kyoto University, Japan, ¥1,000,000 (ca. 7,000 USD) [1yr]
- 2021 Supporting Program for **Interaction-Based Initiative Team Studies (SPIRITS)**, Kyoto University, Japan, ~6,000,000JPY (ca. 52,000 USD) [2yr]
- 2020 Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for **Scientific Research B**, Japan, ~17,000,000JPY (ca. 160,000 USD) #20H03333 [4yr]
- 2019 JSPS/CAS **bilateral grant** Japan/Czech (PI: Klara Petrzekova, Czech Academy of Science & Keiko Matsuura, Oita University) #JPJSBP120192506 [2yr]
- 2018 JSPS Grant-in-Aid for **Scientific Research C**, Japan (PI: Naoki Agetsuma, Hokkaido University) [3yr]
- 2016 JSPS Grant-in-Aid for **Young Scientists A**, Japan, 16,200,000 JPY (ca. 150,000 USD) #16H06181 [4yr]
- 2015 Kyoto University **Step Up Grant**, Japan, 1,600,000 JPY (ca. 13,000 USD) [1yr]
- 2014 JSPS **Sakura grant** Japan/France (PI: Akinori Takahashi, National Institute of Polar Research) [2yr]
- 2012 JSPS Grant-in-Aid for **Young Scientists B**, Japan, 3,500,000 JPY (ca. 35,000 USD) #24770232 [3yr]
- 2012 JSPS **Research Exchange Grant**, Japan/France, 575,000 JPY (ca. 7,000 USD) [1yr]

**TEACHING****Undergraduate** (Kyoto University)

- *Animal Behavior* [since 2014]
- *Conservation Biology* [since 2017]
- *Zoo Biology* [since 2017]
- *Comparative Cognition* [since 2017]

**Teaching Assistant** (University of Calgary)

- Field Primatology in Ghana* [2002]
- Primate Behaviour* [2001]
- Introduction to Social and Cultural Anthropology* [2000]

**Graduate** (Kyoto University)

- *Animal Welfare Science* (team taught) [2023]
- *Conservation Biology* (team taught) [2023]
- *Seminar in Science Communication* [ongoing, weekly; since 2011]
- *Yakushima Field and Genome Science Training Course* [2011, 2016, 2019]

**Professional** (GEOS Language Corp.)

- English as a Foreign Language (EFL)*, Tokyo, Japan [2003-2006, full time]

## ACADEMIC SUPERVISION

I have supervised dozens of students, from undergraduates to doctoral candidates, as well as research interns and postdoctoral fellows.

- Master's students supervised: 8 (2 current; 6 completed)
- Doctoral students supervised: 11 (4 current; 7 completed)
- Postdoctoral fellows supervised: 6 (6 completed)

## INVITED LECTURES/SEMINARS

- 2023 Monkeys in the middle: social and ecological networks in primate-parasite interactions. National Parks, Singapore
- 2022 Monkeys in the middle: navigating the costs of being socially central. France-Japan Exchange Public Symposium [Considering Human-Animal Symbiosis: Intersecting Perspectives], Kyoto
- 2022 Worming out of the tropics: intestinal parasites in a temperate primate. Overview of the World's Primates Symposium, Inuyama, Japan
- 2021 Vignettes from the wormy world of primates: behavioral ecology of host-parasite interactions viewed through a primate lens. University of Lausanne, Switzerland. Online
- 2020 Show me chaos! Measuring organizational complexity through fractal time series analysis of behavior sequences in indicator species. International Bio-logging Society Webinar – Approaches to Modeling Bio-logging Data. Online
- 2019 (1) Show me chaos! Fractal time in animal behavior as a bioindicator of ecological challenge; (2) Behavioral ecology and epidemiology of gastrointestinal parasitism in primates: patterns, processes and host responses (Czech Academy of Sciences, Czechia)
- 2017 Monkeys in the middle: sociality and parasitism in a primate-helminth model system (Primateology and Evolutionary Anthropology Young Scholars Forum, Sun Yat Sen University, Guangzhou, China)
- 2017 Parasites and primate social systems evolution (SoHaPi Workshop, German Primate Center (DPZ), Gottingen, Germany)
- 2016 (1) Project l'AMMER: Adélie Penguins as Monitors of the Marine Environment; (2) The Wormy World of Primates: Vignettes from an Empirical Model System in Japan (National Institute of Ecology, South Korea)
- 2013 Complexity lost: assessing behavioural organization in stress and disease (Central European Institute of Technology mini-symposium and HPI-lab workshop, University of Veterinary and Pharmaceutical Sciences Brno, Czech Republic)
- 2013 The complex primate: interdisciplinary science and the math behind the monkey (Takashima Prize Lecture at the 29<sup>th</sup> Congress of the Primate Society of Japan, Okayama)
- 2013 Epidemiology of nematode parasite infection among wild Japanese macaques: heterogeneity in the external and internal environments (Symposium: "Ecological Roles of Primates in Forest Ecosystems", KUPRI, Japan)
- 2012 A fractal ethos for ethology: revealing behavioural stereotypies in stress and disease (German Primate Center (DPZ) Kolloquium Series, Gottingen, Germany)

## SCIENTIFIC OUTREACH

**Zooentropy** – research collective leveraging complexity theory for zoo animal welfare  
(<https://www.zooentropy.net>)

International Primatology Lecture Series: Past, Present, and Future Perspectives of the Field (co-host, co-producer) (<https://www.youtube.com/user/cicaspTV>)

The PrimateCast – a podcast series dedicated to the study and conservation of primates (host, producer) (<https://www.theprimatecast.com>)

## PROFESSIONAL SERVICES

**Editorial Roles:** Proceedings of the Royal Society B: Biological Sciences (2023~), EcoHealth (2016~), Primate Research (2015~), Frontiers in Ecology and Evolution (2019~2023), Scientific Reports (2015~2020)

**Reviewer Roles:** Front. Ecol. Evol., Front. Comp. Neurosci., Landscape Ecol., Behav. Ecol. Sociobiol., IJPPAW, Kor. J. Parasitol., Mol. Ecol. Resources, EcoHealth, PNAS, Phil. Trans. R. Soc. B. Biol. Sci., Proc. R. Soc. B. Biol. Sci., Anim. Behav., Amer. J. Primatol., Int. J. Primatol., Primates, Ethology, Behav. Proc., PLoS ONE, Peer J, Int. J. Parasitol., Integr. Zool., Am. Soc. Trop. Med. Hyg., Folia Primatol., Sci. Data, National Science Foundation (USA), European Science Foundation, Oxford University Press, The Leakey Foundation, Nat Geo Society, Ranger Rick

**Society Memberships:** International Primatological Society (lifetime), Primate Society of Japan (current), American Society of Primatologists, Society for Conservation Biology, Society for Ecology and Health, Society for Ecology and Health

### Symposium Organization

- *Communicating Science: Expert Panel on Engaging the Media, the Public, and Policy Makers*, 12<sup>th</sup> International Symposium on Primatology and Wildlife Science (September, 2019)
- *10 years of CICASP: making an impact within and beyond Academia in a global community*, 12<sup>th</sup> International Symposium on Primatology and Wildlife Science (September, 2019)
- *Penguins, in Full Color*, 10<sup>th</sup> International Symposium on Primatology and Wildlife Science (September, 2018)

### Departmental Services (non-teaching)

- **Center for International Collaboration and Advanced Studies in Primatology (CICASP):** promoting and managing international center, managing and conducting international exams, developing and teaching curriculum for International Course in Primatology and Wildlife Research, online engagement, web development and social media (2011~present)
- **Wildlife Research Center:** curriculum development for graduate program in Primatology and Wildlife Research (2022~present)
- **Center for the Evolutionary Origins of Human Behavior:** managing doctoral entrance examinations (2022~2023)
- **Primate Research Institute:** managing doctoral entrance examinations (2021~2022), cooperative research program committee member (2018~2022)

### Other Services

- **Hiraku 3MT (3-minute thesis) Competition:** acting judge for first round screening of video entries (2021~present)
- **Japan SciCom Forum:** developing and running a workshop in podcasting for science communicators (2023)

## APPENDIX 1: FULL PUBLICATION LIST

- 1.1 Journal Articles
- 1.2 Preprints
- 1.3 Book Chapters
- 1.4 Selected Conference Presentations

### 1.1 JOURNAL ARTICLES

<sup>\*</sup>These authors contributed equally to this work

<sup>†</sup>Invited Paper

1. Romano V, Puga-Gonzalez I, MacIntosh AJJ, Sueur C (Accepted) The role of social attraction and social avoidance in shaping modular networks. *R Soc Open Sci*
2. Kubenova B & MacIntosh AJJ (Accepted) Maternal rejection but not protectiveness predicts juvenile Japanese macaque behavior without direct maternal influence. *Am J Primatol*
3. Lee W, Hayakawa T, Kiyono M, Yamabata N, Enari H, Enari HS, Fujita S, Kawazoe T, Asai T, Oi T, Kondo T, Uno T, Seki K, Shimada M, Tsuji Y, Langgeng A, MacIntosh A, Suzuki K, Yamada K, Onishi K, Ueno M, Kubo K, Hanya G (2023) Diet-related factors strongly shaped the gut microbiota of Japanese macaques. *Am J Primatol* DOI: 10.1002/ajp.23555
4. Sarabian C, Wilkinson A, Sigaud M, Kano F, Tobajas J, Darmaillacq A-S, Kalema-Zikusoka G, Plotnik J, MacIntosh A (2023) Disgust in animals and the application of disease avoidance to wildlife management and conservation. *J Anim Ecol* DOI:10.1111/1365-2656.13903
5. Costa R, Romano V, Pereira AS, Hart JDA, MacIntosh A, Hayashi M (2022) Mountain gorillas benefit from social distancing too: Close proximity from tourists affects gorillas' sociality. *Conserv Sci Pract* DOI: <https://doi.org/10.1111/csp2.12859>
6. Beltzung B, Martinet L, MacIntosh A, Meyer X, Hosselet J, Pele M, & Sueur C (2023) To draw or not to draw: understanding the temporal organization of drawing behaviour using fractal analyses. *Fractals* DOI: <https://doi.org/10.1142/S0218348X23500093>
7. Cheron M, Kato A, Ropert-Coudert Y, Meyer X, MacIntosh AJJ, Raelison L, Brischoux F (2022) Exposure, but not timing of exposure, to a sulfonylurea herbicide alters larval development and behaviour in an amphibian species. *Aquat Toxicol* DOI: 10.1016/j.aquatox.2022.106355
8. Xu Z, MacIntosh AJJ, Castellano-Navarro A, Macanás-Martínez E, Suzumura T, Duboscq J (2022) Linking parasitism to network centrality and the impact of sampling bias in its interpretation. *PeerJ* 10:e14305 DOI: 10.7717/peerj.14305
9. Romano V, Lussiana A, Monteith K, MacIntosh AJJ, Vale P (2022) Host and pathogen drivers of infection-induced changes in social aggregation behavior. *Biol Lett* DOI: 10.1098/rsbl.2022.0233
10. Castellano-Navarro A, Beltrán Francés V, Albiach-Serrano A, MacIntosh AJJ, Maulany RI, Ngakan PO, Liebl K, Amici F (2022) Maternal and offspring behavior in Japanese macaques and moor macaques: a comparative approach. *Am J Primatol* DOI: <https://doi.org/10.1002/ajp.23461>
11. Towle I, MacIntosh AJJ, Hirata K, Kubo MO, Loch C (2022) Atypical tooth wear found in fossil hominins also present in a Japanese macaque population. *Am J Biol Anthropol* DOI: 10.1002/ajpa.24500
12. Romano V, Sueur C, MacIntosh AJJ (2021) The trade-off between information and pathogen transmission in animal societies. *Oikos* DOI: 10.1111/oik.08290
13. Kavanagh E, Street SE, Angwela FO, ... MacIntosh A... et al (2021) Dominance style is a key predictor of vocal use and evolution across nonhuman primates. *R Soc Open Science* DOI: 10.1098/rsos.210873
14. Morino L, Pasquaretta C, Sueur C, MacIntosh AJJ (2021) Communication network reflects social instability in a wild siamang (*Symphalangus syndactylus*) population. *Int J Primatol* 42:618–639 DOI: 10.1007/s10764-021-00227-1
15. Cheron M, Raelison L, Kato A, Ropert-Coudert Y, Meyer X, MacIntosh AJJ, Brischoux F (2021) Ontogenetic changes in activity, locomotion and behavioural complexity in tadpoles. *Biol J Linnean Soc* 134(1):165–176 DOI: 10.1093/biolinnean/blab077

16. Sarabian C, Belais R, [MacIntosh AJJ](#) (2021) Avoidance of contaminated food correlates with low protozoan infection in bonobos. *Front Ecol Evol* 9:651159 DOI: 10.3389/fevo.2021.651159
17. Frias L, Hasegawa H, Chua TH, Sipangkui S, Stark D, Salgado-Lyn M, Goossens B, Keuk K, Okamoto M, [MacIntosh AJJ](#) (2021) Parasite community structure in sympatric Bornean primates. *Int J Parasitol* 51(11):925-933 DOI: 10.1016/j.ijpara.2021.03.003
18. Castellano-Navarro A, Macanas-Martinez E, Xu Z, Guillen-Salazar F, [MacIntosh AJJ](#), Amici F, Albiach-Serrano A (2021) Japanese Macaques' (*Macaca fuscata*) sensitivity to human gaze and visual perspective in contexts of threat, cooperation, and competition. *Sci Rep* 11:5264
19. Gomez-Melara JL, Acosta-Naranjo R, [MacIntosh AJJ](#), Maulany RI, Ngakan PO, Amici F (2021) Dominance style predicts differences in food retrieval strategies. *Sci Rep* 11:2726
20. Amici F, Widdig A, [MacIntosh AJJ](#), Beltrán Francés V, Castellano-Navarro A, Lopez Caicoya, Karimullah K, Maulany RI, Ngakan PO, Hamzah AS, Majolo B (2020) Dominance style only partially predicts differences in neophobia and social tolerance over food in four macaque species. *Sci Rep* 10:22069
21. Beltrán Francés V, Castellano-Navarro A, Maulany RI, Ngakan PO, [MacIntosh AJJ](#), Llorente M, Amici F (2020) Play behavior in immature moor macaques (*Macaca maura*) and Japanese macaques (*Macaca fuscata*). *Am J Primatol* 82(10):e23192.
22. Romano V, [MacIntosh AJJ](#), Sueur C (2020) Stemming the flow: information, infection, and social evolution. *Trends in Ecology and Evolution* 35(10): 849-853.
23. Miyabe-Nishiwaki T, Miwa M, Konoike N, Kaneko A, Ishigami A, Natsume T, [MacIntosh AJJ](#), Nakamura K (2020) Evaluation of anaesthetic and cardiorespiratory effects after intramuscular administration of alfaxalone alone, alfaxalone-ketamine and alfaxalone- butorphanol -medetomidine in common marmosets (*Callithrix jacchus*). *J Med Primatol* 49(6):291-299
24. Meyer X, [MacIntosh AJJ](#), Chiaradia A, Kato A, Ramirez F, Sueur C, Ropert-Coudert Y (2020) Oceanic thermal structure mediates dive sequences in a foraging seabird. *Ecol Evol* 10:6610-6622
25. Sarabian C, Ngoubangoye B, [MacIntosh AJJ](#) (2020) Divergent strategies in faeces avoidance between two cercopithecoïd primates. *R Soc Open Sci* 7: 191861.
26. Tasdemir D, [MacIntosh AJJ](#), Stergiou P, Kaiser M, Mansour N, Bickle Q, Huffman MA (2020) Antiprotozoal and antihelminthic properties of plants ingested by wild Japanese macaques (*Macaca fuscata yakui*) in Yakushima Island. *J Ethnopharmacol* 247:112270
27. Hasegawa H, Frias L, Peter S, Hasan NH, Stark D, Salgado-Lyn M, Sipangkui S, Goossens B, Matsuura K, Okamoto M, [MacIntosh AJJ](#) (2020) First description of male worms of *Enterobius* (*Colobenterobius*) *serratus* (Nematoda: Oxyuridae), the pinworm parasite of proboscis monkeys. *Zootaxa* 4722(3):287-294
28. Miyabe-Nishiwaki T, [MacIntosh AJJ](#), Kaneko A, Morimoto M, Suzuki J, Akari H, Okamoto M (2019) Hematological and blood chemistry values in captive Japanese macaques (*Macaca fuscata fuscata*). *J Med Primatol* 48:338-350
29. Frias L, Stark DJ, Salgado Lynn M, Nathan S, Goossens B, Okamoto M, [MacIntosh AJJ](#) (2019) Molecular characterization of nodule worm in a community of Bornean primates. *Ecol Evol* 9:3937-3945
30. Poirotte C\*, Sarabian C\*, Ngoubangoye B, [MacIntosh AJJ](#), Charpentier M (2019) Faecal avoidance differs across sexes but not with nematode infection-risk in mandrills. *Anim Behav* 149:97-106
31. Frias L, Hasegawa H, Stark DJ, Salgado-Lynn M, Nathan KSS Senthilvel, Chua T, Goossens B, Okamoto M, [MacIntosh AJJ](#) (2018) A pinworm's tale: the evolutionary history of *Lemuricola* (*Protenterobius*) *nycticebi*. *Int J Parasitol: Parasites & Wildlife*. 8:25-32
32. Le Guen C, Kato A, Raymond B, Barbraud C, Beaulieu M, Bost, C-A, Delord K, [MacIntosh AJJ](#), Meyer X, Raclot T, Sumner M, Takahashi A, Thiebot J-B, Ropert-Coudert Y (2018) Reproductive performance and foraging behaviour share a common sea-ice concentration optimum in Adélie penguins (*Pygoscelis adeliae*). *Global Change Biol* 24:5304-5317
33. Romano V, Shen M, Pansanel J, [MacIntosh AJJ](#), Sueur C (2018) Social transmission in networks: global efficiency peaks with intermediate levels of modularity. *Behav Ecol Sociobiol* 72:154
34. Burgunder J, Petrzelkova KJ, Modry D, Kato A, [MacIntosh AJJ](#) (2018) Fractal measures in activity patterns: do gastrointestinal parasites affect the complexity of sheep behaviour? *Appl Anim Behav Sci* 205:44-53

35. Sarabian C, Belais R, [MacIntosh AJJ](#) (2018) Feeding decisions under contamination risk in bonobos. *Phil Trans B* 373: 20170195
36. Frias L, Stark DJ, Salgado Lynn M, Nathan SKSS, Goossens B, Okamoto M, [MacIntosh AJJ](#) (2018) Lurking in the dark: Cryptic Strongyloides in a Bornean slow loris. *Int J Parasitol: Parasites & Wildlife* 7:141-146.
37. Sarabian C, Ngoubangoye B, [MacIntosh AJJ](#) (2017) Avoidance of biological contaminants through sight, smell and touch in chimpanzees. *R Soc Open Sci* 4:170968
38. Balasubramaniam KN, Beisner BA, Berman CM, De Marco A, Duboscq J, Koirala S, Majolo B, [MacIntosh AJ](#), McFarland R, Molesti S, Ogawa H, Petit O, Schino G, Sosa S, Sueur C, Thierry B, de Waal FBM, and McCowan B (2017) The influence of phylogeny, social style, and sociodemographic factors on macaque social network structure. *Am J Primatol* 80(1):e22727
39. Duboscq J, Romano V, Sueur C, [MacIntosh AJJ](#) (2017) One step at a time in investigating relationships between self-directed behaviours and parasitological, social and environmental variables. *R Soc Open Sci* 4:170461
40. Meyer X, [MacIntosh AJJ](#), Chiaradia A, Kato A, Mattern T, Sueur C, Ropert-Coudert Y (2017) Shallow divers, deep waters, and the rise of behavioural stochasticity. *Mar Biol* 164:149
41. Burgunder J, Hashimoto C, Modry D, Kalousova B, Petrzalkova K, [MacIntosh AJJ](#) (2017) Complexity in behavioural organisation and strongylid infection among wild chimpanzees. *Anim Behaviour* 129:257-268
42. Duboscq J, Romano V, Sueur C, [MacIntosh AJJ](#) (2016) Scratch that itch: revisiting links between self-directed behaviour and parasitological, social and environmental factors in a free-ranging primate. *R Soc Open Sci* 3:160571
43. Rigaille L, [MacIntosh AJJ](#), Higham JP, Winters S, Shimizu K, Mouri K, Suzumura T, Furuichi T, Garcia C (2016) Testing for links between face color and age, dominance status, parity, weight, and intestinal nematode infection in a sample of female Japanese macaques. *Primates* 58:83-91
44. Duboscq J, Romano V, [MacIntosh AJ](#), Sueur C (2016) Social information transmission in animals: Lessons from studies of diffusion. *Front Psych* 7:1147
45. Romano V, Duboscq J, Sueur C, [MacIntosh AJJ](#) (2016) Modelling infection transmission in primate networks to predict centrality-based risk. *Am J Primatol* 78:767-779
46. Duboscq J, Romano V, Sueur C, [MacIntosh AJJ](#) (2016) Network centrality and seasonality interact to predict lice load in a social primate. *Sci Rep* 6:22095
47. Sarabian C, [MacIntosh AJJ](#) (2015) Hygienic tendencies correlate with low geohelminth infection in free-ranging macaques. *Biol Lett* 11:20150757
48. [MacIntosh AJJ](#) (2015) At the edge of chaos – error tolerance and the maintenance of Levy statistics in animal movement: Comment on “Liberating Lévy walk research from the shackles of optimal foraging” by A.M. Reynolds. *Phys Life Rev* 14:105-107
49. Reynolds AM, Ropert-Coudert Y, Kato A, Chiaradia A, [MacIntosh AJJ](#) (2015) A priority-based queuing process explanation for scale-free foraging behaviours. *Anim Behav* 108:67-71
50. Meyer X\*, [MacIntosh AJJ\\*](#), Kato A, Chiaradia A, Ropert-Coudert Y (2015) Hydrodynamic handicaps and organizational complexity in the foraging behavior of two free-ranging penguin species. *Anim Biotel* 3:25
51. Rigaille LR, [MacIntosh AJJ](#), Higham JP, Winters S, Shimizu K, Mouri K, Furuichi T, Garcia C (2015) Multimodal advertisement of pregnancy in free-ranging female Japanese macaques (*Macaca fuscata*). *PLoS ONE* 10(8): e0135127
52. Ropert-Coudert Y, Kato A, Meyer X, Pellé M, [MacIntosh AJJ](#), Angelier F, Chastel O, Widmann M, Arthur B, Raymond B, Raclot T (2015) A complete breeding failure in an Adélie penguin colony correlates with unusual, extreme environmental events. *Ecography* 38:111-113
53. [MacIntosh AJJ](#) (2014) The fractal primate: interdisciplinary science and the math behind the monkey. *Pri Res* 30:95-119
54. [MacIntosh AJJ](#) (2014) Ecology and epidemiology of nematode infection in Japanese macaques: building an empirical model. *Pri Res* 30:23-51
55. Pasquaretta C, Levé M, Claidière N, van de Waal E, Whiten A, [MacIntosh AJJ](#), Pelé M, Borgeaud C, Brosnan S, Crofoot M, Fedigan L, Fichtel C, Hopper L, Mareno MC, Petit O, Schnoell AV, di Sorrentino EP,

- Thierry B, Tiddi B, Sueur C (2014) Social networks in primates: smart and tolerant species have more efficient networks. *Sci Rep* 4:7600
56. Hill DA, Fukui D, Agetsuma N, [MacIntosh AJJ](#) (2014) Influence of trap environment on the effectiveness of an acoustic lure for capturing vespertilionid bats in two temperate forest zones in Japan. *Mammal Study* 39:229-236
57. Cottin M\*, [MacIntosh AJJ\\*](#), Kato A, Takahashi A, Debin M, Raclot T, Ropert-Coudert Y (2014) Corticosterone administration leads to a transient alteration of foraging behaviour and complexity in a diving seabird. *Mar Ecol Progr Ser* 496:249-262
58. [MacIntosh AJJ\\*](#), Pelletier L\*, Chiaradia A, Kato A, Ropert-Coudert Y (2013) Temporal fractals in seabird foraging behaviour: diving through the scales of time. *Sci Rep* 3:1884
59. Sueur C, [MacIntosh AJJ](#), Jacobs AT, Watanabe K, Petit O (2013) Predicting leadership using nutrient requirements and dominance rank of group members. *Behav Ecol Sociobiol* 67: 457-470
60. [MacIntosh AJJ](#), Jacobs A, Garcia C, Shimizu K, Mouri K, Huffman MA, Hernandez AD (2012) Monkeys in the middle: parasite transmission through the social network of a wild primate. *PLoS ONE* 7:e51144
61. Pebsworth PA, [MacIntosh AJJ](#), Morgan HR, Huffman MA (2012) Factors influencing the ranging behaviour of chacma baboons (*Papio hamadryas ursinus*) living in a human-modified habitat. *Int J Primatol* 33:872-887
62. Zhang P, Li BG, Qi XG, [MacIntosh AJJ](#), Watanabe K (2012) A proximity-based social network of a group of Sichuan snub-nosed monkeys (*Rhinopithecus roxellana*). *Int J Primatol* 33: 1081-1095
63. [MacIntosh AJJ](#), Huffman MA, Nishiwaki K, Miyabe-Nishiwaki T (2012) Urological screening of a wild group of Japanese macaques (*Macaca fuscata yakui*): investigating trends in nutrition and health. *Int J Primatol* 33: 460-478
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## 1.2 PREPRINTS

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- Romano V, Lussiana A, Monteith K, [MacIntosh AJJ](#), Vale P (2022) Host and pathogen drivers of infection-induced changes in social aggregation behavior. *BioRxiv* DOI: 10.1101/2022.05.17.492254
- Costa R, Romano V, Pereira AS, Hart JDA, [MacIntosh AJJ](#), Hayashi M (2022 PrePrint) Mountain gorillas benefit from social distancing too: close proximity from tourists affects gorillas' sociality. *EcoEvoRxiv* DOI: 10.32942/osf.io/ztreq
- Xu Z, [MacIntosh AJJ](#), Casellano-Navarro A, Macanas-Martinez E, Suzumura T, Duboscq J (2021 PrePrint) Linking Parasitism to Network Centrality and the Impact of Sampling Bias in its Interpretation. *bioRxiv* DOI: 10.1101/2021.06.07.447302
- Romano V, [MacIntosh AJJ](#), Sueur C (2020) The trade-off between information and pathogen transmission in animal societies. *EcoEvoRxiv* DOI:10.32942/osf.io/vqt4g

## 1.3 BOOK CHAPTERS

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2. Frias L, [MacIntosh AJJ](#) (2020) Global Diversity and Distribution of Soil-Transmitted Helminths in Monkeys. In: S Knauf & L Jones-Engel (eds) Neglected Diseases in Monkeys - From the Monkey-Human Interface to One Health. Springer Nature, pp. 291-322
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7. [MacIntosh AJJ](#), Frias L (2017) "Coevolution of Hosts and Parasites". In: A Fuentes et al. (eds) The International Encyclopedia of Primatology. Wiley
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9. Huffman MA, [MacIntosh AJJ](#) (2012) Plant-food diet of the Arashiyama Japanese macaques and its potential medicinal value. In: Leca J-B, Huffman MA, Vasey P (eds) The Monkeys of Stormy Mountain: 60 Years of Primatological Research on the Japanese Macaques of Arashiyama. Cambridge University Press, pp. 356-432
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11. Hernandez AD, [MacIntosh AJ](#), Huffman MA (2009) Primate parasite ecology: patterns and predictions from an on-going study of Japanese macaques. In: Huffman MA, Chapman CA (eds) Primate parasite ecology: the dynamics of host-parasite relationships. Cambridge University Press, pp. 387-401

#### 1.4 SELECTED CONFERENCE PRESENTATIONS

\*Best presentation prize

†Invited Talk

1. Chen P, Xu Z, Hayashi M, Akami R, Watanuki K, Yamanashi Y, [MacIntosh AJJ](#) (2023) A preliminary comparison of time budgets and behavior patterns in brown capuchin monkeys (*Sapajus apella*) at Kyoto City Zoo and Japan Monkey Centre. The 67<sup>th</sup> Primates Conference, Inuyama, Japan
2. [MacIntosh AJJ](#), Chen P, Xu Z, Goto Y, Hayashi M, Akami R, Watanuki K, Yamanashi Y (2023) The life zooentropic: leveraging complexity for zoo animal welfare. The 2<sup>nd</sup> Animal Behavior Twitter Conference.
3. Mason B, Cervena B, Frias L, Goossens B, Hasegawa H, Keuk K, Langgeng A, Majewski K, Matsumoto T, Matsuura K, Mendonca R, Okamoto M, Peter S, Petrzalkova K, Sipangkui S, Xu Z, Parfco B, [MacIntosh AJJ](#) (2022) Novel insight into the strongylid nematodes of South-East and East Asian primates. Primate Society of Great Britain, Winter Meeting
4. [MacIntosh AJJ](#), Chen P, Xu Z, Goto Y, Takeshita RSC, Martin C, Stewart B, Turner SE, Hayashi M, Akami R, Watanuki K, Kinoshita K, Yamanashi Y (2022) Project Zooentropy: monitoring animal behavior through a lens of complexity. The 44<sup>th</sup> Meeting of the American Society of Primatologists, Denver, USA
5. Xu Zhihong, [MacIntosh AJJ](#) (2022) Sociability and Disease Transmission: Evolutionary Ecology and Parasitism in Japanese Macaques. The 44<sup>th</sup> Meeting of the American Society of Primatologists, Denver, USA (Online)

**Andrew J. J. MacIntosh, D.Sc.**

6. [MacIntosh AJJ](#), Lee, YT, Xu Z, Duboscq J, Keuk K, Suzumura T, Nagaoka F, Itoh M (2022) Toward a protective immune phenotype: linking host traits and parasitism with fecal IgA in a primate-helminth model system. The 28th International Primatological Society Congress, Quito, Ecuador (Online)
7. [MacIntosh AJJ](#), Chen P, Xu Z, Takeshita R, Martin C, Stewart B, Turner S, Hayashi M, Akami R, Watanuki K, Kinoshita K, Yamanash Y (2022) Zooentropy: embracing complexity for zoo animal welfare. The 66<sup>th</sup> Primates Conference, Inuyama, Japan
8. Majewski K, Keuk K, [MacIntosh AJJ](#) (2022) All-You-Can-Eat: A preliminary study of invasive raccoon dog (*Nectereutes procyonoides*) predation of endemic species, and dietary competition, on Yakushima Island, Japan. The 17th International Symposium on Primatology and Wildlife Science, Kyoto (Hybrid poster)
9. Xu Z, [MacIntosh AJJ](#) (2022) Sociability and Disease Transmission: Evolutionary Ecology and Parasite Transmission in Japanese Macaques. The 69th Annual Meeting of the Ecological Society of Japan, Fukuoka (Online)
10. Keuk, K, Majewski K, [MacIntosh AJJ](#) (2022) Studying the Effect of a Raccoon Dog Invasion of Yakushima on the Ecology of Disease, from the Ground Up (to the Sky): A Pilot Study. The 17th International Symposium on Primatology and Wildlife Science, Kyoto (Hybrid poster)
11. Langgeng A, [MacIntosh AJJ](#) (2022) Hot spring bathing behavior and helminth infection in Japanese macaques at Jigokudani. The 17th International Symposium on Primatology and Wildlife Science, Kyoto (Online Poster)
12. [MacIntosh AJJ](#), Lee, YT, Xu Z, Duboscq J, Keuk K, Suzumura T, Nagaoka F, Itoh M (2021) Sociality, parasitism, and the protective immune phenotype. IPS-SLAPrim Virtual Program, Symposium on Sociality and Health in Primates (Online)
13. Sarabian C, [MacIntosh AJJ](#), Adachi I (2021) Exploring the effects of disgust-related images on cognition in chimpanzees. Animal Behavior Society Virtual Meeting (Online)
14. Langgeng A, [MacIntosh AJJ](#) (2021) Of hot spring & lice: Linking hot spring bathing behaviour and ectoparasitism in Japanese macaques. Primate Society of Great Britain Winter Meeting (Online)
15. Langgeng A, [MacIntosh AJJ](#) (2021) Seasonal variation of gastrointestinal helminth infection in Japanese macaques of the Jigokudani Snow Monkey Park. The 16th International Symposium on Primatology and Wildlife Science, Kyoto (Hybrid Poster)
16. Sarabian C, [MacIntosh AJJ](#), Adachi I (2021) Exploring the effects of disgust-related images on cognition in chimpanzees. CogSci 2021 Comparative Cognition - Animal Minds, Vienna, Austria (Online poster)
17. Frias L, [MacIntosh AJJ](#) (2021) Worming into the Anthropocene: disturbed parasite communities as indicators of ecosystem health. Commonwealth Science Conference 2021. Virtual (Feb. 22nd-26th, 2021)
18. Langgeng A, [MacIntosh AJJ](#) (2021) The Diversity of Gastrointestinal Helminths in Japanese Macaques of Jigokudani Snow Monkey Park. The 15<sup>th</sup> International Symposium on Primatology and Wildlife Science, Virtual Symposium
19. [MacIntosh AJJ](#), Romano V, Duboscq J, Keuk K, Xu Z, Sueur C (2020) Monkeys in the Middle: Navigating the Costs and Benefits of Social Centrality. The 14<sup>th</sup> International Symposium on Primatology and Wildlife Science, Virtual Symposium
20. Xu Z, [MacIntosh AJJ](#) (2020) Comparative look at the transmission of parasites in macaque social and spatial networks. The 36<sup>th</sup> Congress of the Primatological Society of Japan. Virtual Conference
21. Keuk K, [MacIntosh AJJ](#) (2021) Enter SimuNet: a social network simulation framework, with a zest of empirism. The 15<sup>th</sup> International Symposium on Primatology and Wildlife Science, Virtual Symposium
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23. Keuk K, [MacIntosh AJJ](#) (2020) Primate and Parasite communities in Sabah: the biodiversity-disease relationship across a Bornean landscape. The 14<sup>th</sup> International Symposium on Primatology and Wildlife Science, Virtual Symposium
24. Frias L, [MacIntosh AJJ](#) (2019) Worming into the Anthropocene: impacts of habitat fragmentation on parasite ecology. The 12th International Meeting of Asian Society of Conservation Medicine, Phnom Penh, Cambodia

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26. Sarabian C, Plotnik JM, Curtis V, Chapman C, [MacIntosh AJJ](#) (2019) Conservation through disgust and public health: Introducing a new framework. The 29<sup>th</sup> International Congress for Conservation Biology, Kuala Lumpur, Malaysia
27. Sarabian C, Curtis V, Chapman C, [MacIntosh AJJ](#) (2019) Disgust as a tool to mitigate human-primate conflicts and enforce appropriate ecotourism practices? The 2nd African Primatological Society Conference, Entebbe, Uganda
28. [MacIntosh AJJ](#), Frias L (2019) Altered parasite community structure in threatened primates. The 35<sup>th</sup> congress of the Primate Society of Japan, Kumamoto, Japan
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30. [MacIntosh AJJ](#), Meyer X, Chiaradia A, Kato A, Ropert-Coudert Y (2018) Just like clockwork? on the significance of periodic penguins. 10th International Symposium on Primatology and Wildlife Science, Kyoto, Japan
31. Sarabian C, Belais R, [MacIntosh AJJ](#) (2018) Feeding decisions under contamination risk in bonobos. The 27<sup>th</sup> International Primatological Society Congress, Nairobi, Kenya
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33. Frias L, Okamoto M, [MacIntosh AJJ](#) (2017) From the darkness: cryptic diversity of Strongyloides in a community of Bornean primates. 66th Annual International Conference of the Wildlife Disease Association, Chiapas, Mexico
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36. Duboscq J, [MacIntosh A](#) (2017) Connecting the dots: linking host behaviour to parasite transmission and infection risk. 7<sup>th</sup> meeting of the European Federation for Primatology, Strasbourg, France
37. Duboscq J, Okamoto M, [MacIntosh A](#) (2017) Infection patterns of simian foamy virus in macaques. 7<sup>th</sup> meeting of the European Federation for Primatology, Strasbourg, France
38. [MacIntosh AJJ](#), Romano V, Duboscq J, Sueur C (2017) Monkeys in the middle: towards organisational immunity in primate societies. Royal Society Scientific Meeting on the Evolution of parasite and pathogen avoidance, Milton Keynes, UK
39. Frias L, Okamoto M, [MacIntosh A](#) (2016). Parasite sharing as a preliminary indicator of multispecies connectivity. 12<sup>th</sup> Conference of the European Wildlife Disease Association, Berlin, Germany
40. Frias L, Okamoto M, [MacIntosh A](#) (2016). Towards a primate parasite community ecology: parasite sharing in sympatric Bornean primates. The 26<sup>th</sup> Congress of the International Primatological Society, Chicago, USA
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48. Finn K, [MacIntosh A](#) (2016) Behavioral Organization and Parasites in Japanese Macaques (*Macaca fuscata*) on Koshima Island. The 26<sup>th</sup> Congress of the International Primatological Society, Chicago, USA
49. Martin C, [MacIntosh AJJ](#) (2016) Chaotic choice dynamics buffer chimpanzees and orangutans against exploitation by a computer algorithm in a solitary matching pennies task. The 26<sup>th</sup> Congress of the International Primatological Society, Chicago, USA
50. \*Frias L, Okamoto M, [MacIntosh A](#) (2016) Parasite sharing in sympatric Bornean primates. 5th International Symposium on Primatology and Wildlife Science. Inuyama, Japan
51. [MacIntosh AJJ](#), Sarabian C, Duboscq J, Thomas E, Romano V, Kaneko A, Okamoto M, Suzumura T (2015) Hidden constraints of chronic parasitism on health and fitness in Japanese macaques. The 31<sup>st</sup> Congress of the Primate Society of Japan, Kyoto, Japan
52. Duboscq J, Romano V, [MacIntosh A](#), Sueur C (2015) A social network perspective on macaque social styles. The 38<sup>th</sup> meeting of the American Society of Primatologists, Bend, USA.
53. Duboscq J, Romano V, Sueur C, [MacIntosh A](#) (2015) Investigating infection risk and sociality: centrality interacts with seasonality to predict lice load in free-ranging female Japanese macaques, *Macaca fuscata*. The 38<sup>th</sup> meeting of the American Society of Primatologists, Bend, USA.
54. Rigail LR, [MacIntosh AJJ](#), Higham JP, Winters S, Shimizu K, Mouri K, Furuichi T, Garcia C (2015) Multiple sexual signals of pregnancy in Japanese macaques. The 31<sup>st</sup> Congress of the Primate Society of Japan, Kyoto, Japan
55. Sarabian C, [MacIntosh A](#) (2015) Hygiene efficiency against parasites in Japanese macaques. The 31<sup>st</sup> Congress of the Primate Society of Japan, Kyoto, Japan
56. Hill DA, Anuar S, [MacIntosh AJJ](#), Ghazali A (2014) Acoustic lure gives increased efficiency for short-term surveys of bat diversity in tropical rainforest. The 13th European Bat Research Symposium, Sibenik, Croatia
57. [MacIntosh AJJ](#), Kato A, Ropert-Coudert Y (2014) Logging Complexity: ecological challenges and the emergence of behavioral organization. *Bio-logging Science* 5, Strasbourg, France.
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59. Morino L, [MacIntosh AJJ](#) (2014) Gibbon songs and intergroup dynamics: a community-level network analysis. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam
60. Sueur C, Pasquaretta C, Leve M, Claidiere N, van de Waal E, [MacIntosh AJ](#), Pele M, Whiten A (2014) Information transmission efficiency in primate networks. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam
61. [MacIntosh AJJ](#) (2014) A field-experimental approach to primate-parasite interactions: filling in the knowledge-gaps. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam
62. Romano V, Duboscq J, Sueur C, [MacIntosh A](#) (2014) Modelling disease transmission in primate networks to predict epidemics. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam
63. Sarabian C, [MacIntosh A](#) (2014) In the dirt: hygienic behaviours and revulsion as parasite avoidance adaptations in Japanese macaques. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam

**Andrew J. J. MacIntosh, D.Sc.**

64. Dubosq J, Sueur C, Romano De Paula V, [MacIntosh A](#) (2014) Pseudoectoparasites: a promising tool for the study of parasite transmission in relation to social networks. The 25<sup>th</sup> Congress of the International Primatological Society, Hanoi, Vietnam
65. \*Sarabian C, [MacIntosh AJJ](#) (2014) On the origins of hygiene: from Japanese macaques to African great apes. Origins of human mind annual symposium, International Institute for Advanced Studies, Kyoto, Japan
66. [MacIntosh AJJ](#) (2014) The complex animal: ecological constraints and the emergence of behavioural organization. Origins of human mind annual symposium, International Institute for Advanced Studies, Kyoto, Japan
67. Dubosq J, de Paula VR, Sueur C, [MacIntosh AJJ](#) (2013) Social networks as a trade-off between optimal decision-making, information transmission and reduced disease transmission. The 9<sup>th</sup> Congress of the Göttinger Freilandtage, Göttingen, Germany
68. [MacIntosh AJJ](#), Sarabian C, Thomas E, Suzumura T, Kaneko A, Takeshita S, Mouri K, Itoh M, Shimizu K, Okamoto M (2013) A field-experimental approach to primate-parasite interactions: filling in the knowledge-gaps. The 29<sup>th</sup> Congress of the Primate Society of Japan, Okayama, Japan
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70. [MacIntosh AJJ](#), Cottin M, Pelletier L, Kato A, Ropert-Coudert Y (2012) Primates, penguins, and periodicity: maintaining complexity in the face of ecological challenge. The 24<sup>th</sup> Congress of the International Primatological Society, Cancun, Mexico
71. [MacIntosh AJJ](#), Jacobs A, Garcia C, Huffman MA, Hernandez AD (2012) Socially-mediated parasite transmission: the role of dominance in exposure and susceptibility. The 24<sup>th</sup> Congress of the International Primatological Society, Cancun, Mexico
72. [MacIntosh AJJ](#), Jacobs A, Huffman MA, Hernandez AD (2011) Parasite transmission through social networks of Japanese macaques: a cost of grooming? The 26<sup>th</sup> Congress of the Primate Society of Japan, Inuyama, Japan. *Primate Res* 27(S):16
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