

## Julie Duboscq

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Eco-Anthropology Lab  
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born May 30th, 1981 – French nationality – single, one child (2018)

### research interests

social networks, costs and benefits of sociality, social complexity & dynamics

### current employment

since 2019 **Permanent researcher**, CNRS-MNHN-University Paris Cité, France

### education and past employment

2016-2018 **Post-doctoral researcher**, Kyoto University Wildlife Research Center & Primate Research Institute, Japan.

Project: “Connecting the dots: linking host behaviour to parasite transmission and infection risk”. Collaborators: Andrew MacIntosh & Munehiro Okamoto

2013-2015 **Post-doctoral researcher**, Dpt Ecology, Physiology, Ethology, University of Strasbourg, France, & Kyoto University Primate Research Institute, Japan.

Project: “Social networks as a trade-off between information and disease transmission”. Collaborators: Cedric Sueur & Andrew MacIntosh

2013 **Doctorate in Natural Sciences (Dr. rer.nat.)**, University of Göttingen & University of Strasbourg.

Thesis: “Social tolerance: novel insights from wild female crested macaques, *Macaca nigra*”, Advisors: Antje Engelhardt & Bernard Thierry

### grants & prizes

2022 **50 000€** - international research project Indonesia-France-Germany, INEE CNRS (PI)

2021 **7 000€** - mobility grant PROCOPE-DAAD France-Germany, MESRI (co-PI)

2020 **12 000€** - mobility grant International Emerging Action France-Indonesia, CNRS (PI)

2020 **13 400€** - research grant for a pilot study, P2GM-MNHN (co-PI)

2018 **346 000€** - research grant, Leverhulme Trust (co-PI)

2017 **85 000€** – postdoctoral fellowship, Japan Society for the Promotion of Science (PI)

2016 **42 000€** – postdoctoral fellowship, Japan Society for the Promotion of Science (PI)

2009 **145 000€** – doctoral grant, Volkswagen Foundation, Evolutionary Biology (PI)

2008 **2 000€** – research & conservation grant, Primate Conservation Inc. (co-PI)

teaching, supervision, outreach

supervision

- 2021-2023 **Research student Doctoral thesis**, MNHN  
thesis: “Animal phobia: an extreme case of misunderstanding the natural world?”
- 2021 **Research student MSc 1<sup>st</sup> year**, University of Strasbourg (France)  
project: “The functions of grunt in wild female crested macaques, *Macaca nigra*”
- 2020 **Research student MSc 2<sup>nd</sup> year**, Sorbonne University (France)  
thesis: “Ophio-phobia and human evolution: examining the Snake Detection Theory (Isbell 2006)”
- 2017 **Research student 3rd year BSc**, Sun-Yat Sen University (China)  
project: « Impact of sociality on parasitism in Japanese macaques : the influence of network size and composition »
- 2013-2017 **Research student Doctoral thesis**, University of Strasbourg (France).  
thesis: « Social network as a trade-off between optimal information transmission and reduced disease transmission »
- 2016 **Research student MSc**, University of Strasbourg (France).  
thesis: « Social networks, social style and the dynamics of parasite infection »
- 2011 – 2012 **Research student BSc**, University of Göttingen (Germany).  
projects: 1) « Characteristics of intergroup encounters in wild *Macaca nigra* » ;  
2) « Detailed analyses of the characteristics and functions of the silent bared teeth in wild female crested macaques, *Macaca nigra* »

teaching

- 2018 **Animal Behavior courses**, Introduction to Animal Behavior, *Kyoto University, Japon*  
**Social Cognition courses**, Comparative Cognition, *Kyoto University, Japon*
- 2016 **Social Network Analyses seminar**, *Kyoto University Primate Research Institute, Japon.*
- 2015 **Analyses of Dominance Relationships seminar**, *IPHC-DEPE, CNRS, Strasbourg.*
- 2006 – 2010 **Training of research and field assistants**, *Macaca Nigra Project, German Primate Centre & Agricultural University of Bogor, Indonésie.*

outreach

- 2006 – 2010 **Development and participation to environmental education activities**, *Macaca Nigra Project & Tasikoki Animal Rescue Centre, Indonésie.*

administration and others

reviewing

*Animal Behaviour, Royal Society Open Science, Behavioral Ecology and Sociobiology, PLoS ONE, PeerJ, Animal Behaviour and Cognition, International Journal of Primatology, American Journal of Primatology, Journal of Zoology, Acta Aecologica Primate Conservation Incorporated, Wenner-Gren Foundation, Animal Behavior Society*

conference organisation

member of the scientific committee of the *Francophone Society for Primatology*  
meeting, webinar 2020, Saint-Etienne 2021, Aix-en-Provence 2022

member of the scientific committee of the *European Federation for Primatology* meeting, Strasbourg, 2017

member of the organising committee of the *Société Française pour l'Etude du Comportement Animal* (SFECA), Strasbourg, 2015

co-organiser of the symposium *Réseaux sociaux: de l'individu au groupe* (SFECA), Strasbourg, 2015

co-organiser of the student symposium for the *Behavioural Biology* group of the *German Zoological Society*, Göttingen, 2012

co-organiser of the 2<sup>nd</sup> student retreat from the *Courant Research Centre for the Evolution of Social Behaviour*, Göttingen, 2011

#### administration

member of the administrative council of the Francophone Society for Primatology since 2020 (president 2022-2023)

student representative of the executive committee of the *Courant Research Centre for the Evolution of Social Behaviour*, 2011-2013.

#### media

interview and material for a French radio show “Le temps d’un bivouac” and their chronicle about the vocal communication of crested macaques (<https://www.radiofrance.fr/franceinter/podcasts/le-temps-d-un-bivouac/les-combats-des-peuples-autochtones-8815170>).

interview for *ScienceTake* of the New York Times about the article on the influence of centrality and seasonality on louse nit load in Japanese macaques published in *Scientific Reports* ([http://www.nytimes.com/2016/03/28/science/japanese-monkeys-like-to-socialize-even-with-nits-to-pick.html?\\_r=0](http://www.nytimes.com/2016/03/28/science/japanese-monkeys-like-to-socialize-even-with-nits-to-pick.html?_r=0))

consultant for the BBC documentary « Moonsoon » on crested macaques

interview for German TV about the article on social relationships and response to python predator in crested macaques published in *Proceedings of the Royal Society Biological Sciences*

interview for South Korean and Japanese TV about crested macaque’s biology and ecology

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#### full publication list

2023

Rincon A., Waller B. M., **Duboscq J.**, Mielke A., Pérez C., Clark P. R., Micheletta J. Higher social tolerance is associated with more complex facial behavior in macaques. *eLife* 12: RP87008 <https://doi.org/10.7554/eLife.87008.1>

2022

Zeller K., Garcia C., Maille A., **Duboscq J.**, Morino L., Dezechache G. & Bonnet X. Primate–predator interactions: is there a mismatch between laboratory and ecological evidence? *International Journal of Primatology* <https://doi.org/10.1007/s10764-022-00331-w>

Xu Z., MacIntosh A. J., Castellano-Navarro A., Macanás-Martínez E., Suzumura T., & **Duboscq J.** Linking parasitism to network centrality and the impact of sampling bias in its interpretation. *PeerJ* 10:e14305 <https://doi.org/10.7717/peerj.14305>

Twining-Ward C., Ramos Luna J., Back J. P., Barakagwira J., Bicca-Marques J. C., Chanvin M., Diko N.,

**Duboscq J.**, Fan P., Galán-Acedo C., Gogarten J. F., Guo S., Guzman-Caro D.C., Hou R., Kalbitzer U., Kaplin B. A., Lee S. M., Mekonnen A., Mungongo P., Nautiyal H., Omeja P., Ramananjato V., Raoelinjanakolona N. N., Razafindratsima O., Sarabian C., Sarkar D., Serio-Silva J. C., Rismayanti, and Chapman C. A. Social media's potential to promote conservation at the local level: an assessment in eleven primate range countries. *Primates*, 93: 163-173, <https://doi.org/10.1163/14219980-bja10001>

Kappeler P. M., Huchard E., Baniel A., Canteloup C., Charpentier M. J. E., Cheng L., Davidian E., **Duboscq J.**, Fichtel C., Hemelrijk C. K., Höner O. P., Koren L., Micheletta J., Prox L., Saccà T., Seex L., Smit N., Surbeck M., van de Waal E., Girard-Buttoz C. Sex and dominance: How to assess and interpret intersexual dominance relationships in mammalian societies. *Frontiers in Ecology and Evolution*, 10, <https://doi.org/10.3389/fevo.2022.918773>

2021

Mielke A., Waller B. M., Pérez C., Rincon A. V., **Duboscq J.**, & Micheletta J. NetFACS: Using network science to understand facial communication systems. *Behavior Research Methods*, 1-16. <https://doi.org/10.3758/s13428-021-01692-5>

2020

Tyrrell, M., Berman, C. M., **Duboscq J.**, Agil, M., Sutrisno, T., & Engelhardt, A. Avoidant social style among wild crested macaque males (*Macaca nigra*) in Tangkoko Nature Reserve, Sulawesi, Indonesia. *Behaviour*, 157: 451-491. <https://doi.org/10.1163/1568539X-bja10009>

2019

**Duboscq J.**, Romano V., & MacIntosh A. Social behavior and infectious diseases. In: *Encyclopedia of Animal Behavior*, Chun Choe J. (ed.), 2<sup>e</sup> édition, Elsevier Academic Press. <https://doi.org/10.1016/B978-0-12-809633-8.90146-8>

2018

**Duboscq J.** Cognition sociale. In : *Cognition Animale*, Darmaillacq A. S. & Dickel L. (eds), Dunod, Paris, France. pp. 155-189.

Balasubramaniam K. N., Beisner B. A., Berman C. M., De Marco A., **Duboscq J.**, Koirala S., Majolo B., MacIntosh A. J. J., McFarland R., Molesti S., Ogawa H., Petit O., Schino G., Sosa S., Sueur C., Thierry, B., de Waal, F. B. M., & McCowan, B. The influence of phylogeny, social style, and sociodemographic factors on macaque social network structure. *American Journal of Primatology*, 80: e22727, <https://doi.org/10.1002/ajp.22727>.

2017

**Duboscq J.** Diffusion studies. In: *Encyclopedia of Animal Cognition and Behavior*, Vonk J. & Shackelford T. (eds), Springer International Publishing, Cham, Switzerland. [https://doi.org/10.1007/978-3-319-47829-6\\_1593-1](https://doi.org/10.1007/978-3-319-47829-6_1593-1)

**Duboscq J.**, Romano V., Sueur C. & MacIntosh A. One step at a time in investigating relationships between self-directed behaviours and parasitological, social and environmental variables. *Royal Society Open Science*, 4: 170461. <https://doi.org/10.1098/rsos.170461>

**Duboscq J.**, Neumann C., Perwitasari-Farajallah, D., Agil M., Thierry B. & Engelhardt A. Degrees of freedom in social bonds of female crested macaques. *Animal Behaviour*, 123: 411-426, doi: <https://doi.org/10.1016/j.anbehav.2016.11.010>.

2016

- Duboscq J.**, Romano V., Sueur C. & MacIntosh A. Scratch that itch: revisiting links between self-directed behaviour and parasitological, social and environmental factors in a free-ranging primate. *Royal Society Open Science*, 3: 160571.  
<https://doi.org/10.1098/rsos.160571>
- Duboscq J.**, Romano V., MacIntosh A. & Sueur C. Social information transmission: Lessons from studies of social diffusion. *Frontiers in Psychology*, 7: 1147.  
<https://doi.org/10.3389/fpsyg.2016.01147>
- Romano V., **Duboscq J.**, Sueur C. & MacIntosh A. Modelling infection transmission in primate networks to predict centrality-based risk. *American Journal of Primatology*, 78: 767-779. <https://doi.org/10.1002/ajp.22542>
- Duboscq J.**, Romano V., Sueur C. & MacIntosh A. Network centrality and seasonality predict lice load in a social primate. *Scientific Reports*, 6: 22095.  
<https://doi.org/10.1038/srep22095>
- 2015
- Duboscq J.** & Heeb P. Parasites, pathogènes, et réseaux dans les sociétés animales. In: *Analyse des réseaux appliquée à l'éthologie et à l'écologie*, Sueur C. (eds), Editions matériologiques, Paris, France. pp. 343-358.
- Duboscq J.**, Bret C. & Sosa S. Les réseaux chez les primates non humains. In: *Analyse des réseaux appliquée à l'éthologie et à l'écologie*, Sueur C. (eds), Editions matériologiques, Paris, France. pp. 261-290.
- 2014
- Duboscq J.**, Agil M., Engelhardt A. & Thierry B. The function of post-conflict interactions: novel insights from a tolerant species of primate. *Animal Behaviour*, 87: 107-120.  
<https://doi.org/10.1016/j.anbehav.2013.10.018>
- 2013
- Duboscq J.**, Micheletta J., Agil M., Hodges J. K., Thierry B. & Engelhardt A. Social tolerance in wild female crested macaques, *Macaca nigra*, in Tangkoko-Batuangus Nature Reserve, Sulawesi, Indonesia. *American Journal of Primatology*, 75: 361-375.  
<https://doi.org/10.1002/ajp.22114>
- 2012
- Micheletta J., Waller B., Panggur M., Neumann C., **Duboscq J.**, Agil M. & Engelhardt A. Social bonds affect anti-predator behaviour in a tolerant species of macaque, *Macaca nigra*. *Proceedings of the Royal Society B: Biological Sciences*, 279: 4042-4050.  
<https://doi.org/10.1098/rspb.2012.1470>
- 2011
- Neumann C., **Duboscq J.**, Dubuc C., Ginting A., Irwan A., Agil M., Widdig A. & Engelhardt A. Assessing dominance hierarchies: validation and advantages of progressive evaluation with Elo-rating. *Animal Behaviour*, 82: 911-921.  
<https://doi.org/10.1016/j.anbehav.2011.07.016>
- 2010
- Sèbe F., **Duboscq J.**, Aubin T., Ligout S. & Poindron P. Early vocal recognition of mother by lambs: contribution of low- and high-frequency vocalizations. *Animal Behaviour*, 79: 1055-1066. <https://doi.org/10.1016/j.anbehav.2010.01.021>
- 2008
- Duboscq J.**, Neumann C., Perwitasari-Farajallah D. & Engelhardt A. Daytime birth of a baby crested

black macaque (*Macaca nigra*) in the wild. *Behavioural Processes*, 79: 81–84.  
<https://doi.org/10.1016/j.beproc.2008.04.010>

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## conferences

### Invitations

- 2021 **Duboscq J.** La socialité dans tous ses états : de l'individu au groupe et vice versa (Sociality in a spin : from the individual to the group level). Meeting of the National Research Consortium BIOSIMIA (research consortium on biomedical research with primates), Fontenay-aux-Roses, France. *No publication.*
- 2019 **Duboscq J.** How social transmission can inform about the costs and benefits of sociality. Seminar "Animal Sociality", Constance, Germany. *No publication.*
- 2017 **Duboscq J.** & MacIntosh A. Connecting the dots: linking host behaviour to parasite transmission and infection risk. Symposium "Sociality and Health in Primates", 7<sup>th</sup> meeting of the European Federation for Primatology, Strasbourg, France. *Folia Primatologica*, 88, 145.
- 2016 **Duboscq J.**, Romano de Paula V., Sueur C. & MacIntosh A. Pick your lousy friends wisely: network centrality and seasonality interact to predict louse burden in female Japanese macaques. 10<sup>th</sup> anniversary of the Macaca Nigra Project, Manado, Indonesia. *No publication.*
- 2015 **Duboscq J.**, Romano de Paula V., MacIntosh A. & Sueur C. A social network perspective on macaque social styles. Symposium "Primate Social & Biological networks", 38<sup>th</sup> congress of the American Society of Primatologists, Bend, USA. *American Journal of Primatology*, 77, 42.
- Duboscq J.**, Romano de Paula V., Sueur C. & MacIntosh A. Parasite load and social networks in Japanese macaques. Symposium "Réseaux sociaux: de l'individu au groupe", meeting of the Société Française pour l'Etude du Comportement Animal, Strasbourg, France. *No publication.*

### Contributions

- 2022 **Duboscq J.** De l'avantage d'être (plus ou moins) social (On the benefit of being (more or less) social). Symposium "French-Japanese collaboration on human and animal societies: meeting of minds", Kyoto, Japan. *No publication.*
- 2021 **Duboscq J.**, Agil, M., Perwitasari-Farajallah, D. & Engelhardt, A. Reciprocity in social exchanges of wild female crested macaques. 33<sup>rd</sup> meeting of the Société Francophone de Primatologie, Saint-Etienne, France. *Revue de Primatologie*, online soon.
- 2017 **Duboscq J.** What happens next? Using relational event modelling to investigate temporal social dynamics in macaques. 11<sup>th</sup> Göttinger Freilandtage meeting, Göttingen, Germany. *No publication.*
- Duboscq J.**, Okamoto, M., & MacIntosh, A. Infection patterns of simian foamy virus in macaques. 7<sup>th</sup> meeting of the European Federation for Primatology, Strasbourg, France. *Folia Primatologica*, 88, 102.
- Duboscq J.**, Okamoto, M., & MacIntosh, A. Infection patterns of simian foamy virus in macaques. Meeting of the Société Française pour l'Etude du Comportement Animal, Gif-sur-Yvette, France. *No publication.*
- 2016 **Duboscq J.** & MacIntosh A. Connecting the dots: linking host behaviour to parasite

- transmission and infection risk. 5<sup>th</sup> International Symposium on Primatology and Wildlife Science, Inuyama, Japan. *No publication*.
- 2015 MacIntosh, A., Sarabian, C, **Duboscq, J.**, Thomas, E., Romano, V. Kaneko, A., Okamoto, M., & Suzumura, T. Hidden constraints of chronic parasitism on health and fitness in Japanese macaques. 31<sup>st</sup> congress of the Primate Society of Japan, Kyoto, Japan. *Primate Research Supplement The 31st congress of PSJ, 103*.
- Duboscq J.**, Romano de Paula V., Sueur C. & MacIntosh A. Investigating infection risk and sociality: Centrality interacts with seasonality to predict lice load in female Japanese macaques. 38<sup>th</sup> congress of the American Society of Primatologists, Bend, USA. *American Journal of Primatology, 77, 143*.
- 2014 **Duboscq J.**, Romano de Paula V., Sueur C. & MacIntosh A. Pseudoectoparasites: a useful tool for the study of disease transmission within a social network. 25<sup>th</sup> congress of the International Primatological Society, Hanoi, Vietnam. *No publication*.
- 2013 **Duboscq J.**, Romano de Paula V., Sueur C. & MacIntosh A. Trade-offs between information and disease transmission. 9<sup>th</sup> Göttinger Freilandtage meeting, Göttingen, Germany. *No publication*.
- Duboscq J.**, Perwitasari-Farajallah D., Thierry B. & Engelhardt A. Dominance, but not kinship, influences social interactions in females of a tolerant macaque species, *Macaca nigra*. Behaviour 2013, Newcastle, UK. *No publication*.
- 2012 **Duboscq J.**, Thierry B., Engelhardt A. More valuable and more secure dyads form stronger bonds in wild female crested macaques, *Macaca nigra*. 13<sup>th</sup> congress of the German Primatological Society, Hamburg, Germany. *No publication*.
- Duboscq J.**, Engelhardt A. & Thierry B. Social trait covariation in macaques : a within-species perspective. 105<sup>th</sup> congress of the German Zoological Society, Constance, Germany. *No publication*.
- Duboscq J.**, Engelhardt A. & Thierry B. Social trait covariation in macaques : a within-species perspective. Evolution 2012, Ottawa, Canada. *No publication*.
- Duboscq J.**, Engelhardt A. & Thierry B. Tolerant social style in macaques: parameters and influential factors in a wild population of female crested macaques, *Macaca nigra*. 3<sup>rd</sup> symposium of Evolutionary Biology Initiative, Volkswagen Foundation, Sylt, Germany. *No publication*.
- 2011 **Duboscq J.**, Perwitasari-Farajallah D., Agil M., Engelhardt A. & Thierry B. Post-conflict interactions in wild female crested macaques. 4<sup>th</sup> congress of the European Federation for Primatology, Almada, Portugal. *Folia Primatologica, 82, 329*.
- 2010 **Duboscq J.**, Perwitasari-Farajallah D., Agil M., Thierry B., Hodges K. & Engelhardt A. Dominance and social relationships in females of a tolerant macaque society. 23<sup>rd</sup> congress of the International Primatological Society, Kyoto, Japan. *No publication*.
- 2009 **Duboscq J.**, Perwitasari-Farajallah D., Agil M., Thierry B., Hodges K. & Engelhardt A. Social interactions between females in wild crested macaques, *Macaca nigra*. 3<sup>rd</sup> congress of the European Federation for Primatology, Zurich, Switzerland. *Folia Primatologica, 80, 157*.
- 2006 **Duboscq J.**, Poindron P. & Sebe F. Reconnaissance vocale entre la mère et l'agneau à 12h et 24h après la naissance chez le mouton domestique, *Ovis aries*. Meeting of the Société Française pour l'Etude du Comportement Animal, Boulton-aux-Bois, France. *No publication*.
- 2003 **Duboscq J.** & Lefaux, B. Effect of enclosure enrichment on the behaviour and activity

of Diana Rolloway monkeys at the Doué-la-Fontaine zoo. 16<sup>th</sup> meeting of the Société Francophone de Primatologie, Brussels, Belgium.