

Publications

Brian Ricky Johnson

Journals

1. 2002 Johnson BR. Reallocation of labor in honeybee colonies during heat stress: the relative roles of task switching and the activation of reserve labor. *Behavioral Ecology and Sociobiology*, 51: 188-196.
2. 2002 Calderone NW, Johnson BR. The within-nest behavior of honeybee pollen foragers in colonies with a high or low need for pollen. *Animal Behaviour*, 63: 749-758.
3. 2003 Johnson BR. Organization of work in the honeybee: a compromise between division of labour and behavioural flexibility. *Proceedings of the Royal Society of London B - Biological Sciences*, 270: 147-152.
4. 2005 Johnson BR. Limited flexibility in the temporal caste system of the honey bee. *Behavioral Ecology and Sociobiology*, 58: 219-355.
5. 2007 Johnson BR and Baker N. Adaptive spatial biases in nectar deposition in the honey bee. *Insectes Sociaux*, 54: 351-355.
6. 2008 Johnson BR. Global information sampling in the honey bee. *Naturwissenschaften*, 95: 523-530.
7. 2008 Johnson BR. Within-nest temporal polyethism in the honey bee. *Behavioral Ecology and Sociobiology*, 62: 255-261.
8. 2009 Johnson BR. Pattern formation on the combs of honey bees: increasing fitness by coupling self-organization with templates. *Proceedings of the Royal Society of London B - Biological Sciences*, 276: 255-261.
9. 2009 Johnson BR. A self-organizing model for task allocation via frequent task quitting and random walks in the honey bee. *American Naturalist*, 174: 537-547.
10. 2010 Johnson BR. Division of labor in honey bees: form, function, and proximate mechanisms. *Behavioral Ecology and Sociobiology*, 64: 305-316.

11. 2010 Johnson BR, Linksvayer TA. Deconstructing the Superorganism: Social Physiology, Groundplans, and Sociogenomics. *Quarterly Review of Biology*, 85: 57-79.
12. 2010 Johnson BR. Spatial effects, sampling errors, and task specialization in the honey bee. *Insectes Sociaux*, 57: 239-248.
13. 2010 Johnson BR, Nieh JC. Modeling the adaptive role of negative signaling in honey bee intraspecific competition. *Journal of Insect Behavior*, 23: 459-471.
14. 2010 Johnson BR. Eliminating the mystery from the concept of emergence. *Biology and Philosophy*, 25: 843-849.
15. 2010 Johnson BR. Communication in social insect colonies: the roles of signals and cues in group level coordination of action. *Behavioral Ecology*, 21: 1373-1379.
16. 2010 Johnson BR and Lam SK. Self-organization, Natural Selection, and Evolution: Cellular Hardware and Genetic Software. *BioScience*, 60: 879-885.
17. 2011 Johnson BR, van Wilgenburg E, Tsutsui ND. Nestmate recognition in social insects: overcoming physiological constraints with collective decision making. *Behavioral Ecology and Sociobiology*, 65: 935-944.
18. 2011 Suen G, Teiling C, Li L, Abouheif A, Bornberg_Bauer E, Bouffard P, Caldera EJ, Cash E, Cavanaugh A, Elhaik E, Fave MJ, Gadau J, Gibson J, Graur D, Grubbs KJ, Hagen DE, Helmkampf M, Holt C, Hu H, Johnson BR, Kim J, Marsh SE, Moeller JA, Murphy MC, Munoz-Torres MC, Naughton MC, Nigam S, Overson R, Rajakumar R, Reese JT, Scott JJ, Smith CD, Smith CR, Tao S, Tsutsui ND, Wissler L, Yandell M, Viljakainen L, Zimmer F, Harkins TT, Taylor J, Slater SC, Clifton SW, Warren WC, Elsik CG, Weinstock GM, Gerardo NM, Currie CR. The genome sequence of the Leaf-cutter ant *Atta cephalotes* reveals insights into its obligate symbiotic lifestyle. *PloS Genetics*, 7(2): e1002007.
19. 2011 Smith CD, Abouheif E, Benton R, Cash E, Croset V, Currie CR, Elhaik E, Elsik C, Fave MJ, Vilaiwan F, Gadau J, Gibson JD, Graur D, Grubbs KJ, Hagen DE, Helmkampf M, Holley J, Holt C, Hao H, Ibarraran-Viniegra AS,

Johnson BR, Johnson RM, Khila A, Kim JW, Laird J, Mathis KA, Moeller JA, Munoz-Torres MC, Murphy MC, Nakamura R, Nigam S, Overson R, Placek JE, Rajakumar R, Reese JT, Robertson HM, Smith CR, Saurez AV, Suen G, Suhr EL, Tao S, Torres CW, van Wilgenburg E, Viljakainen L, Walden KO, Wild A, Yandell MD, Yorke JA, Zimin A, Tsutsui ND. The genome of the globally widespread and invasive Argentine ant (*Linepithma humile*). *Proceedings of National Academy of Sciences, USA*, 108: 5673-5678.

20. 2011 Smith CR, Smith CD, Robertson H, Helmkampf M, Zimin A, Yandell M, Holt C, Hao H, Abouheif E, Benton R, Cash E, Croset V, Currie C, Elhaik E, Elsik C, Fave MJ, Fernandes V, Gibson J, Grauer D, Gronenberg W, Hagen D, Ibarraran-Viniegra AS, Johnson BR, Johnson R, Khila A, Kim J, Mathis K, Munoz-Torres MC, Mustard J, Niehuis O, Overson R, Nigham S, Placek J, Rajakuman R, Reese JT, Suen G, Tao S, Torres C, Tsutsui N, Vihakainen L, Wolschin F, Gadau J. The draft genome of the red harvester ant, *Pogonomyrmex barbatus*: a model for reproductive division of labor and social complexity. *Proceedings of National Academy of Sciences, USA*, 108: 5673-5672.

*@21. 2011 Johnson BR, Tsutsui ND. Taxonomically restricted genes are associated with eusocial evolution in the honey bee. *BMC Genomics*, 12: 164.

*@22. 2012 Johnson BR, van Wilgenburg E, Tsutsui ND. Nestmate recognition in social insects is sometimes more complex than an individual based decision to accept or reject. *Behavioral Ecology and Sociobiology*, 66: 343-346.

*@23. 2012 Johnson BR, Frost E. Individual-level patterns of division of labor in honeybees highlight flexibility in colony-level developmental mechanisms. *Behavioral Ecology and Sociobiology*, 66: 923-930.

Notations:

* = Publication included in the packet. @ =
Refereed.

Presentations

1. 2002 December, Reallocation of labor in honeybee colonies during heat stress: the relative roles of task switching and the activation of reserve labor, Cambridge, UK / International Union for the Study of Social Insects.
 2. 2007 July, Patrolling underlies task allocation in honey bees, Burlington, VT / Animal Behavior Society.
 3. 2008 August, Honey bees use frequent task quitting and random walks to solve problems of spatial variability in task demand, Brussels, Belgium / International Union for the Study of Social Insects.
 4. 2010 July 7, Adaptively regulated behavioral plasticity in the superorganism, Paris, France / European Society for Evolutionary Developmental Biology.
 5. 2010 November 1, Integrative approaches to the organization of work in the honeybee, University of Illinois, Urbana Champaign / Entomology Department Seminar.
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6. 2011 March 15, The roles of self-organization in collective decision making, Sacramento, CA / California Department of Food and Agriculture.
 7. 2011 November 15, Future research directions at UC Davis, Sonoma, CA / California Beekeepers Association.
 8. 2012 September 3, Task allocation in middle age honey bees, Halle, Germany / Eurbee Conference.
 9. 2012 September 26, Organization and evolution of honey bee societies, Howard University, Washington DC / Biology Department Seminar.