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Evolutionary Biology

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Born in 1976 in the USA

Studied Evolution at Indiana University

FOCUS

PROJECT

Social Interactions and the Evolution of Complex Phenotypes

I study how social interactions affect the genetic basis, evolution, and development of complex social phenotypes. My project will focus on how multi-level selection acts on genetic components arising from social interactions to shape social evolution. I will extend a model of physiological epistasis arising from interactions between genes within organisms to intergenomic epistasis arising from social interactions. I will also build upon models of the evolution of sociality that incorporate both genes expressed during development and genes with social effects.

Recommended Reading

Linksvayer, T. A., M. K. Fondrk, and R. E. Page. 2009. "Colony-level selection in honey bees produces coevolved socially-interacting gene complexes." *American Naturalist* 173: E99-E107.

Linksvayer, T. A. 2007. "Ant species size differences are determined by epistasis between brood and worker genomes." *PLoS ONE* 2: e994.

Linksvayer, T. A. and M. J. Wade. 2005. "The evolutionary origin and maintenance of eusociality in the aculeate Hymenoptera: maternal effects, sib-social effects, and heterochrony." *The Quarterly Review of Biology* 80: 317-336.

Linksvayer, Timothy A. (Amsterdam,2022)

Microbiome breeding : conceptual and practical issues

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1818315610>

Linksvayer, Timothy A. (Amsterdam [u.a.],2019)

Re-thinking the social ladder approach for elucidating the evolution and molecular basis of insect societies

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=168355731X>

Linksvayer, Timothy A. (Berlin,2018)

Pharaoh ant colonies dynamically regulate reproductive allocation based on colony demography

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018600728>

Linksvayer, Timothy A. (2017)

Ant nurse workers exhibit behavioral and transcriptomic specialization on larval stage but not caste

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018600027>

Linksvayer, Timothy A. (Cambridge, Mass.,2017)

The neuropeptide corazonin controls social behavior and caste identity in ants

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018599460>

Linksvayer, Timothy A. (2017)

Artificial selection on ant female caste ratio uncovers a link between female-biased sex ratios and infection by Wolbachia endosymbionts

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018599134>

Linksvayer, Timothy A. (2017)

Genomic signature of kin selection in an ant with obligately sterile workers

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018598529>

Linksvayer, Timothy A. (2016)

Honey bee colonies regulate queen reproductive traits by controlling which queens survive to adulthood

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018598235>

Linksvayer, Timothy A. (2016)

Late-instar ant worker larvae play a prominent role in colony-level caste regulation

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018597603>

Linksvayer, Timothy A. (2016)

Theoretical predictions for sociogenomic data: the effects of kin selection and sex-limited expression on the evolution of social insect genomes

<https://kxp.k1oplus.de/DB=9.663/PPNSET?PPN=1018597093>