

John R. True
CURRICULUM VITAE

Contact information:

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Positions held:

Duke University	Post-Doctoral Research Associate	1/96 – 8/96
Univ. Wisconsin / HHMI	Post Doctoral Fellow	9/96 – 8/01
Stony Brook University	Assistant Professor	9/01 – 8/07
Stony Brook University	Associate Professor	9/07 – present
National Taiwan University	Visiting Adjunct Professor	4-7/2009

Education:

B.S. (Biology)	1989	University of Rochester, Rochester, NY
Ph.D. (Zoology)	1995	Duke University, Durham, NC

Ph.D. Dissertation Title: A genetic analysis of interspecific divergence in *Drosophila*.
Ph.D. Advisor: Dr. Cathy C. Laurie

Honors, Awards, Fellowships, and Grants:

DeKiewiet Summer Research Fellowship (1988)
magna cum laude, University of Rochester (1989)
Degree with Distinction, University of Rochester (1989)
NIH Training Grant Fellowship, Duke University Program in Genetics (1989-1992)
NSF Doctoral Dissertation Improvement Grant (J.R. True and C.C. Laurie) (1992)
NIH Postdoctoral Fellowship (1F32HG000184-01; NHGRI) (1997-1999)
NSF Instrumentation Grant (co-PI) (2004-2006) (DBI, MUE Program, DBI-0400829, \$159,113)
NIH grant # 1R01GM07171001A2 (2006-2011) "Genetics of Coordinately Evolving Patterns and Behavior" (\$1,188,670)
NSF Doctoral Dissertation Improvement Grant (DEB-0608378; R. Yukilevich and J.R. True) (2006-2008) "DISSERTATION RESEARCH: Colonization History and Genetic Structure of Incipient Sexual Isolation between USA and Caribbean Populations of *Drosophila melanogaster*." (\$12,000)
NIH grant # 1R01GM090094-01 (co-PI) (2010-2014) "Metabolic and dopamine pathways in energy sensing and adaptation in *Drosophila*" (\$300,925)

Publications:

In preparation

Yukilevich, R., and True, J.R. Mechanisms of incipient speciation between geographically isolated body color morphs of *Drosophila elegans*.

Yeh, S.-D. and True, J.R. The genetic basis of divergence in coordinately evolving male wing pigmentation and courtship behavior in *Drosophila elegans* and *D. gunungcola*.

Published

- Lachance J, Jung L, True JR. 2013 Genetic background and GxE interactions modulate the penetrance of a naturally occurring wing mutation in *Drosophila melanogaster*. *G3* PMID: 24002866 [Epub ahead of print]
- Lachance, J., Johnson, N.A., and True, J.R. 2011 The population genetics of X-autosome synthetic lethals and steriles. *Genetics* 189:1011-27.
- Yukilevich, R., Turner, T.L., Aoki, F., Nuzhdin, S.V., and True J.R. 2010 Patterns and processes of genome-wide divergence between North American and African *Drosophila melanogaster*. *Genetics*. 2010 186:219-39.
- Lachance, J. and True, J.R. 2010 X-autosome incompatibilities in *Drosophila melanogaster*: tests of Haldane's rule and geographic patterns within species. *Evolution* 64:3035-46.
- Rebeiz, M., Ramos-Womack, M., Jeong, S., Andolfatto, R., Werner, T., True, J., Stern, D.L., and Carroll, S.B. 2009 Evolution of the *tan* Locus Contributed to Pigment Loss in *Drosophila santomea*: A Response to Matute et al. *Cell* 139:1189-1196.
- Yukilevich R, True J.R. 2008 African morphology, behavior, and pheromones underlie incipient sexual isolation between U.S. and Caribbean *Drosophila melanogaster*. *Evolution* 62:2807-2828.
- Yukilevich R, Lachance J, Aoki F, True J.R. 2008 Long-term evolution of epistatic genetic networks. *Evolution* 62:2215-2235.
- Yukilevich R, True J.R. 2008 Incipient sexual isolation among cosmopolitan *Drosophila melanogaster* populations. *Evolution* 62:2112-21.
- True J.R. 2008 Combing evolution. *Evol Dev.* 10:400-402.
- Jeong, S., Rebeiz, M., Andolfatto, P., Werner, T., True, J., and Carroll, S.B. 2008 The evolution of gene regulation underlies the morphological divergence of two closely related *Drosophila* species. *Cell* 132: 783-703.
- Haag, E.S. and True, J.R. 2007 Evolution and development: anchors away! *Curr Biol* 17: R172-R174.
- Wagner, S., Heseding, C., Szlachta, K., True, J.R., Prinz, H. and Hovemann, B.T. 2007 *Drosophila* cysteine peptidase Tan: Expression in photoreceptor cells R1-R8 lends support to a putative histamine neurotransmitter / carcinine cycle between photoreceptor axons and lamina or medulla glia. *J. Comp. Neurol.* 500: 601-611.
- Yukilevich, R., and True, J.R. 2006. Divergent outcomes of reinforcement speciation: the relative importance of assortative mating and migration modification. *American Naturalist* 167: 638-654.
- Yeh, S.-D., Liou, S.-R. and True, J.R. 2006 Genetics of divergence in male wing pigmentation and courtship behavior between *Drosophila elegans* and *D. gunungcola*. *Heredity* 96: 383-395.
- Prud'homme, B., Gompel, N., Rokas, A., Kassner, V.A., Williams, T.M., Yeh, S.-D., True, J.R., and Carroll, S.B. 2006. Repeated morphological evolution through cis-regulatory changes in a pleiotropic gene. *Nature* 440:1050-1053.
See also commentary by Wray, G.A. 2006 Evolution: Spot on (and off). *Nature* 440: 1001-1002
- True, J.R., Yeh, S.-D., Hovemann, B.T., Kemme, T., Meinertzhagen, I.A., Edwards, T.N., Liou, S.-R., Han, Q. and Li, J. 2005 *Drosophila tan* encodes a novel hydrolase required in pigmentation and vision. *Public Library of Science Genetics* 1: 551-562.

- True, J.R. 2005 Evolution and Development. pp. 473-499 in *Evolution*, by D.J. Futuyma (Sunderland, MA: Sinauer Associates, Inc.).
- True, J.R. 2003 Insect melanism: the molecules matter. *Trends in Ecology and Evolution* 18: 640-647.
- Kopp, A. and True, J.R. 2002 Phylogeny of the Oriental *Drosophila melanogaster* species group: a multilocus reconstruction. *Systematic Biology* 51:786-805.
- Kopp, A.† and True, J.R.† 2002 Evolution of male sexual characters in the Oriental *Drosophila melanogaster* species group. *Evolution and Development* 4:278-291. (†authors contributed equally)
- True, J.R. and Carroll, S.B. 2002 Gene co-option in physiological and morphological evolution. *Annual Review of Cell and Developmental Biology* 18:53-80.
- Wittkopp, P.J.†, True, J.R.†, and Carroll, S.B. 2002 Reciprocal functions of the *Drosophila* Yellow and Ebony proteins in the development and evolution of pigment patterns. *Development* 129:1829-1858. (†authors contributed equally)
- True, J.R. Kopp, A. and Carroll, S.B. 2001 Prophenoloxidase as a reporter for the analysis of gene expression in *Drosophila*. *Biotechniques* 30:1004-1006.
- True, J.R. and Haag, E.S. 2001 Developmental system drift and flexibility in evolutionary trajectories. *Evolution and Development* 3:109-119.
- Haag, E.S. and True, J.R. 2001 Perspective: From mutants to mechanisms? Assessing the candidate gene paradigm in evolutionary biology. *Evolution* 55:1077-1084
- True, J.R., Edwards, K.A., Yamamoto, D., and Carroll, S.B. 1999 *Drosophila* wing melanin patterns form by vein-dependent elaboration of enzymatic prepatterns. *Current Biology* 9:1382-1391.
- See also commentary by O'Grady, P.M. and DeSalle, R. 2000 How the fruit fly changed (some of) its spots. *Current Biology* 10: R75-77.
- Laurie, C.C., True, J.R. Liu, J., and Mercer, J.M. 1997 An introgression analysis of quantitative trait loci that contribute to a morphological difference between *Drosophila simulans* and *D. mauritiana*. *Genetics* 145:339-348
- True, J.R. Liu, J. Stam, L.F., Zeng, Z.B., and Laurie, C.C. 1997 Quantitative genetic analysis of divergence in male secondary sexual traits between *Drosophila simulans* and *Drosophila mauritiana*. *Evolution* 51:816-832.
- True, J.R., Weir, B.S. and Laurie, C.C. 1996 A genome-wide survey of hybrid incompatibility factors by the introgression of marked segments of *Drosophila mauritiana* chromosomes into *Drosophila simulans*. *Genetics* 142:819-837.
- True, J.R., Mercer, J.M. and Laurie, C.C. 1996 Differences in crossover frequency and distribution among three sibling species of *Drosophila*. *Genetics* 142:507-523.
- Wu, C. -I., True, J.R., and Johnson, N. 1989 Fitness reduction associated with the deletion of a satellite DNA array. *Nature* 341:248-251.

Teaching experience:

Undergraduate:

- Stony Brook Univ., BIO 367, Molecular Diversity Laboratory, 2004 – present
- Stony Brook Univ., BIO 201, Organisms to Ecosystems, 2002 – present
- Stony Brook Univ., SSO 102, Freshman Seminar: The Biology of Healthy Foods, 2006 – 2008

Graduate:

- Stony Brook Univ., BEE 551, Principles of Evolution, 2002 – present
- Stony Brook Univ., BEE 561, Macroevolution, 2002 – present

Stony Brook Univ., BEE 567, Molecular Diversity Laboratory, 2004 – present
Stony Brook Univ., BGE 510, Graduate Genetics, 2002 – present
National Taiwan Univ., B41 U1630 Current Topics in Genetics, Spring 2009

Service

Department

Graduate Curriculum Task Force, Chair (2002 – 2004)
Entering Student Advisory Committee (2002 – 2004)
Admissions Committee (2001-2003, 2004 – 2005)
E&E Newsletter (EEL) Coordinator (2003 – present)
MEAD (Molecular Evolution of Adaptation and Diversity) Lab Director (2004 – present)
Department Retreat Coordinator (2006)
Graduate Program Director (2009 – present)

University

Affirmative Action/ Equal Employment Opportunity Committee, SBU CAS, 2006 – 2008.
Simons Summer Research Fellowship Committee, Spring 2007
Genetics Graduate Program Executive Committee, 2003 – 2009

Professional

Associate Editor, *Evolution*, 2007-2009 (fixed term)
Associate Editor, *Molec Biol Evol*, 2010 – present
Faculty of 1000, Evolutionary Developmental Biology section (2002 – present)
NSF Workshop on Developmental Physiology, Arlington, VA, November 15-16, 2004
Book Review Consultant, *Quarterly Review of Biology*, (2004 – present)

Recent review work:

American Naturalist
Ecological Entomology
European Journal of Entomology
Evolution
Evolution and Development
FEBS Journal
Functional Ecology
Genetics
Integrative and Comparative Biology
Journal of Insect Physiology
NSF (Population and Evolutionary Processes and Behavioral Systems Clusters)
Prentice-Hall, Inc. (textbook chapters)
PLoS Biology
Proc. Natl. Acad. Sci. USA
Quarterly Review of Biology (book reviews)
Roberts & Company Publishers
Sinauer Associates, Inc. (textbook chapters)
Trends in Genetics
Zoological Studies