

Curriculum Vitae

Shun-Chern Tsaur (曹順成)

Adjunct associate professor, Center for General Education
National Taiwan University

Education:

1980-84 B.S., Entomology, National Chung Hsing University, Taichung, Taiwan.
1984-86 M.S., Entomology, National Chung Hsing University, Taichung, Taiwan.
1986-89 Ph.D., Entomology, National Taiwan University, Taipei, Taiwan.

Postdoctoral Training:

1996 - 2000 Research associate (with Marty Kreitman and Chung-I Wu)
The University of Chicago, Department of Ecology and Evolution
1992 – 95; Postdoctoral research associate (with Fei-Jann Lin), Academia Sinica,
1989 - 90 Institute of Zoology

Academic and curatorial appointments:

2015/08-2021/1 Assistant professor, National Taiwan University, Center for General
Education
2010 -12 Assistant professor, Yang-Ming University, Department of Life Sciences
2006 Curator/Chair, Academia Sinica, Biodiversity Research Museum
2005 - 09 Assistant research fellow, Academia Sinica, Biodiversity Research Center
2000 - 04 Assistant research fellow, Academia Sinica, Institute of Zoology

Adjunct appointments:

2021- Associate professor, National Taiwan University, Center for General
Education
2013 -15 Associate professor, National Taiwan Normal University, Division of
Preparatory Programs for Overseas Chinese Students
2014 Associate professor, Tunghai University, Department of Life Science
2009-10 Associate professor, Fu Jen Catholic University, Department of Life Science
1994-95 Associate professor, Chinese Culture University, Department of Horticulture

Professional experience in foreign countries:

Dec. '08 Exchange scholar, University of Natural Sciences, Ho Chi Minh City
Dec. '04 – June, '05 Visiting scholar, University of California at Davis (NSC fund)
July-Oct. '04 Visiting foreign research fellow, Drosophila Genetic Resource Center
in Kyoto Institute of Technology (KIT fund)
Jan. '95 – Oct. '95 Visiting scientist (with Brian Wiegmann), North Carolina State
University, Department of Entomology (MOE fund)

Research Interests:

Systematic Entomology, Evolution, and Biodiversity.

Publications:

- Prigent, S. R., S. C. Tsaur*, S. Fang, and J. True* Seasonality and explorative behaviour in host flower choice by *Drosophila elegans* in Taiwan. (Revising).
- Wang, Y. L., B. X. Li, M. D. Cui, Y. Zhang, L. Wang, C. H. Zhang, S. C. Tsaur, H. Y. Chen and J. Huang. 2023. Revision of the subgenus *Stegana* (*Steganina*) from China, with assessment of species delimitation using DNA barcodes (Diptera, Drosophilidae). *Zootaxa*: DOI: [10.11646/ZOOTAXA.5250.1.1](https://doi.org/10.11646/ZOOTAXA.5250.1.1)
- Chen, J. S., S. C. Tsaur, C. T. Ting, and S. Fang 2022. Dietary utilization drives the differentiation of gut bacterial communities between specialists and generalist flies. *Microbiol Spectr.* 10(4):e0141822.
- Wang, Y. L., N. N. Wang, Y. Zhang, S. C. Tsaur, and H. W. Chen. 2021. Cryptic diversity in the subgenus *Oxyphortica* (Diptera, Drosophilidae, *Stegana*). *Peer J* 9:e12347.
- Huang, J., Gong, L., S. C. Tsaur*, Zhu, L., An, K, and H. W. Chen*. 2019. Revision of the subgenus *Phortica* (sensu stricto) (Diptera, Drosophilidae) from East Asia, with assessing species delimitation by DNA barcodes. *Zootaxa*: 4678(1):1-75. (co-corresponding)
- Liu, F. G., S. C. Tsaur, and H. T. Huang. 2015. Biogeography of *Drosophila* (Diptera: Drosophilidae) in East and Southeast Asia. *J. Insect Sci.* 15(1): 69; doi: 10.1093/jisesa/iev056
- Yang, H., B. He, H. M, S. C. Tsaur, C. Ma, Y. Wu, C. T. Ting, and Y. E. Zhang. 2015. Expression profile and gene age jointly shaped the genome-wide distribution of premature termination codons in a *Drosophila melanogaster* population. *Mol. Biol. Evol.* 32 (1): 216-228
- Zhang, Y., S. C. Tsaur, and H. W. Chen. 2014. Survey of the genus *Stegana* Meigen (Diptera, Drosophilidae) from Taiwan, with DNA barcodes and descriptions of three new species. *Zool. Stud.* doi:10.1186/1810-522X-53-2.
- Cheng, Y. J., S. Fang, S. C. Tsaur, Y. L. Chen, H. W. Fu, N. H. Patel, and C. T. Ting. 2012. Reduction of germ cells in the *Odysseus* null mutant causes male fertility defect in *Drosophila melanogaster*. *Genes Genet. Syst.* 87:273-276.
- Prigent, S. R., and S. C. Tsaur. 2009. Diversity of Taiwanese *Drosophilidae* (Diptera). *Proc. Pacific Sci. Intercongress*:137
- Tsaur, S. C. 2009. The rediscovery of the holotype of *Kotonisia kanoi* Matsumura, 1938 with notes on Matsumura's type specimens of Fulgoroidea (Insecta:Hemiptera: Fulgoromorpha). *Zootaxa* 2315:66-68.
- Fang, S., C. T. Ting, C. R. Lee, K. H. Chu, C. C. Wang, and S. C. Tsaur*. 2009. Molecular evolution and functional diversification of fatty acid desaturases after recurrent gene duplication in *Drosophila*. *Mol. Biol. Evol.* 26:1447-1456 (*corresponding author).
- Fang, S., S. C. Tsaur, and C. T. Ting. 2009. Molecular evolution of Desat2. *Sci. Mon.* 684-687. (in Chinese).
- Wang, C. C., S. C. Tsaur, U. Kurosu, S. Aoki, and H.-J. Lee. 2008. Social parasitism and behavioral interactions between two gall-forming social aphids. *Insect. Soc.* 55:147-152.
- Tsaur, S. C. 2007. The red-eyed Dr. *Osophila*. *Sci. Dev.* 48-52. (in Chinese).
- Tsaur, S. C. 2005. Some fulgoroids (Insecta:Hemiptera) collected at Turtle island, Taiwan. *Zool. Stud.* 44:1-4.

- Ting, C. T., S. C. Tsaur, S. Sun, W. E. Browne, Y. C. Chen, N. H. Patel and C. I. Wu. 2004. Gene duplication and speciation in *Drosophila*: evidence from the *Odysseus* locus. *Proc. Natl. Acad. Sci. USA*. 101:12232-12235.
- Tsaur, S. C. and T. C. Hsu. 2003. Cixiidae of Taiwan, part VII: tribe Pentaliini (Hemiptera: Fulgoroidea). *Zool. Stud.* 42:431-444.
- Takahashi, A., S. C. Tsaur, J. A. Coyne and C. I. Wu. 2001. The nucleotide changes governing pheromonal variation in *Drosophila* and their evolution. *Proc. Natl. Acad. Sci. USA*. 98:3920-3925.
- Tsaur, S. C., C. T. Ting and C. I. Wu. 2001. Sex in *Drosophila mauritiana*: Very high level of amino acid polymorphism in a male reproductive protein gene, *Acp26Aa*. *Mol. Biol. Evol.* 18: 22-26.
- Ting, C. T*, S. C. Tsaur* and C. I. Wu. 2000. The phylogenetic history of a speciation gene, *Odysseus* of *Drosophila*. *Proc. Natl. Acad. Sci. USA*. 97:5313-5316. (* co-first author).
- Wiegmann, B. M., S. C. Tsaur, D. W. Webb, D. K. Yeates and B. K. Cassel. 2000. Monophyly and relationships of the Tabanomorpha (Diptera:Brachycera) based on 28S ribosomal gene sequences. *Annals Entomol. Soc. Amer.* 93: 1031-1038.
- Ting, C. T., S. C. Tsaur, M. L. Wu and C. I. Wu. 1998. A rapidly evolving homeobox at the site of a hybrid sterility gene. *Science*. 282:1501-1504.
- Tsaur, S. C., C. T. Ting and C. I. Wu. 1998. Positive selection driving the evolution of a gene of male reproduction, *Acp26Aa* of *Drosophila melanogaster*: II Divergence vs. polymorphism. *Mol. Biol. Evol.* 15:1040-1046.
- Tsaur, S. C. and C. I. Wu. 1997. Positive selection and the molecular evolution of a gene of male reproduction, *Acp26Aa* of *Drosophila*. *Mol. Biol. Evol.* 14:544-549.
- Tsaur, S. C. 1993. A new species of *Cixius* from United States (Homoptera: Fulgoroidea). *Pan-Pacific Entomol.* 69:247-249.
- Tsaur, S. C. and F. J. Lin. 1991. A new *Drosophila* species in the montium Meijere subgroup of the melanogaster Meigen species group in the subgenus *Sophophora* Sturtevant from Taiwan (Diptera:Drosophilidae:Drosophila). *Pan-Pacific Entomol.* 67:24-27.
- Tsaur, S. C., T. C. Hsu and J. Van Stalle. 1991b. Cixiidae of Taiwan part VI Cixiini. *J. Taiwan Mus.* 44:169-306.
- Tsaur, S. C., T. C. Hsu and J. Van Stalle. 1991a. Cixiidae of Taiwan part V Cixiini except *Cixius*. *J. Taiwan Mus.* 44:1-78.
- Tsaur, S. C. 1990c. Tropiduchidae of Taiwan (Homoptera:Fulgoroidea), supplement. *Bull. Inst. Zool, Acad. Sini.* 29: 243-248.
- Tsaur, S. C. 1990b. Two new *Oliarus* from Taiwan (Homoptera:Fulgoroidea:Cixiidae), with proposition and discussion on *O. horishanus* group. *Bull. Inst. Zool, Acad. Sini.* 29:135-139.
- Tsaur, S. C. 1990a. Two new species of *Cixius* from California (Homoptera:Fulgoroidea: Cixiidae), with a revised key to the species of the genus. *Bull. Inst. Zool, Acad. Sini.* 29:49-55.
- Tsaur, S. C. 1989d. Cixiidae of Taiwan, part IV Stenophlepsini with description of a new species. *Bull. Inst. Zool, Acad. Sini.* 28:81-85.
- Tsaur, S. C. 1989c. A new species of *Oliarus* from Taiwan (Homoptera:Fulgoroidea: Cixiidae). *Bull. Inst. Zool, Acad. Sini.* 28:171-174.

- Tsaur, S. C. 1989b. Two flatid nymphs from Taiwan (Homoptera:Fulgoroidea). *J. Taiwan Mus.* 42:31-35.
- Tsaur, S. C. 1989a. Additions to the fauna of Taiwanese Meenoplidae. *J. Taiwan Mus.* 42: 25-29.
- Tsaur, S. C. 1988. Cixiidae of Taiwan, part III Bennini. *J. Taiwan Mus.* 41:75-78.
- Tsaur, S. C., T. C. Hsu and J. Van Stalle. 1988. Cixiidae of Taiwan, part I Pentastrini. *J. Taiwan Mus.* 41:35-74.
- Tsaur, S. C. and P. P. Lee. 1987. Cixiidae of Taiwan, part II Bothriocerini. *Bull. Soc. Entomol. NCHU.* 20:7-14.
- Tsaur, S. C., C. T. Yang and M. R. Wilson. 1986. Meenoplidae of Taiwan. *J. Taiwan Mus. Spec. Publ. Ser.* 6:81-118.
- Tsaur, S. C. and C. T. Yang. 1985. The fifth instar nymph of *Lophos carinata* Kirby (Homoptera:Lophopidae). *Bull. Soc. Entomol. NCHU.* 18:75-78.

Postdoctoral Fellows, and technicians:

Darvi Wang (Postdoctoral Fellow, 2000-2001, 2003)

Associate Research Fellow, Academia Sinica, 2012~2021

Yen-Po Lin (Technician, 2001-2004)

Assistant professor, National Chiayi University, 2018~

Mei-Hui Wang (Technician, 2002-2003)

Finance manager, UC Irvine, 2020~

Yu-Po Chen (Technician, 2004-2005)

Ph.D. Candidate, University of Bristol.

Chi-Feng Lee (Postdoctoral Fellow, 2004-2006)

Research Fellow, Taiwan Agricultural Research Institute, 2007~

Paras Mishra (Postdoctoral Fellow, 2006)

Associate Professor, University of Nebraska Medical Center.

Stephane Prigent (Postdoctoral Fellow, 2006-2007, 2009)

Postdoc at École pratique des hautes études

Takahiro Miyo (Postdoctoral Fellow, 2007~2008)

Chuan-Chan Wang (Postdoctoral Fellow, 2005-2008)

Associate professor, Fu Jen Catholic University, 2008~

Chen-Siang Ng (Technician, 2002-2003)

Ph.D., University of California at Davis

Associate Professor, National Tsing-Hua University, 2016~

Cheng-Ruei Lee (Technician, 2007-2008)

Ph.D., Duke University

Professor, National Taiwan University, 2016~

Chi-Yun Kuo (Technician, 2008-2009)

Ph.D., University of Massachusetts

Assistant Professor, Kaohsiung Medical University, 2021~

Teaching experience:

Chinese Cultural University: Plant protection (1994-1995)

Yang-Ming University: Special topics in Biodiversity, General Zoology, Genetics, Biotechnology, and Evolution (2000-2005, 2010-2012)
Taiwan Normal University: General Biology (2013-2015)
Fu Jen Catholic University: Evolution (2009-2010)
Tsing-Hua University: Molecular evolution, Population Genetics, and Advanced molecular evolution (2001-2005), Biological program for selected senior high students (2001), Entomology (2014), Population Genetics (2019), Genetics (2011).
Central University: Genetics (2002-2003), Evolution (2019-2020)
Chang-Gung University: Gene and Development (2005), Genetics (2006-2013), Evolution (2012-2013, 2015-2024)
Taiwan Normal University: Population Genetics and Evolution (2005, 2007), and Modern Biology (2000-2008), General Biology (2013-2015)
Taiwan International Graduate Program, Academia Sinica: Advanced Biology (2005-2008)
Taiwan University: General Biology (2010, 2012-2014), Biology around the corner (2015-2016), Biology in the movies (2015-2024), Organisms that changed history (2015-2024), Freshman seminar (2016-2024), Giants in Biology (2017, 2020-2022, 2024), What really bugs you (2015-2024)
Cloud College: Everyday Biology (2021), Organisms that changed history (2021-2022)
Summer College: Organisms that changed history (2021-2023)

Manuscript referee:

Taiwanese Entomological Society
FEBS letters
BMC Evolutionary Biology
Molecular Biology and Evolution
Molecular Ecology
Zoological Studies

Awards and Honors

MOE fellowship for postdoctoral study aboard (1994)
Gordon Conference Travel award (1999)
NSC research award (2000)
Readmoo News 2015 黑牛生白犢獎: The naked ape (2015)
Outstanding teaching award: National Taiwan University (2018, 2021, 2024)
Outstanding teaching award: Center for General Education (2019, 2020)

Popular science books translation

The naked ape (2015) revised edition (2019)
The cell: discovering the microscopic world that determines our health, our consciousness, and our future (2017) second edition (2020)
DNA nation (2020)

Grant Support

Project	Amount	Agency	Period
Molecular mechanism and Evolution of Parthenogenesis in <i>Drosophila albomicans</i> (Co-PI)	4,875,000	NSTC, Taiwan	8/24-7/27
Genome-wide association studies of the noni-toxin tolerance in <i>Drosophila</i> (Co-PI)	4,560,000	MOST, Taiwan	8/21-7/24
Resource center for <i>Drosophila</i> as a biomedical research model (Co-PI)	2,180,000	MOST, Taiwan	5/22-4/23
Resource center for <i>Drosophila</i> as a biomedical research model (Co-PI)	2,200,000	MOST, Taiwan	5/21-4/22
Molecular mechanisms and evolution of a meiotic driver HP1D2 (Co-PI)	1,130,000	MOST, Taiwan	8/20-7/21
Resource center for <i>Drosophila</i> as a biomedical research model (Co-PI)	2,000,000	MOST, Taiwan	5/17-4/21
Genomic and evolutionary analyses of behavioral isolation in <i>Drosophila melanogaster</i> (Co-PI)	5,555,000	MOST, Taiwan	8/17-7/20
Genetic differences between behavior races of <i>Drosophila melanogaster</i> (Co-PI)	3,750,000	NSC, Taiwan	8/13-7/16
Ecological and functional genomics of host-symbiont interactions in <i>Drosophila</i>	3,930,000	NSC, Taiwan	8/10 - 7/13
Quantitative trait loci analyses of cryptic female choice in <i>Drosophila</i> (Co-PI)	5,429,000	NSC, Taiwan	8/07 - 7/10
Revision of Fulgoroidea in Taiwan: morphological and molecular evidence	1,050,000	NSC, Taiwan	8/07 - 7/08
Genetic basis of speciation	3,270,000	Academia Sinica	1/05 - 12/07
Evolution of the male accessory gland protein gene <i>Acp26Aa</i> in <i>Drosophila mauritiana</i>	4,067,900	NSC, Taiwan	8/04 - 7/07
Evolution of cuticular hydrocarbons in <i>Drosophila melanogaster</i> species subgroup: A molecular genetics approach	3,944,300	NSC, Taiwan	8/02 - 7/05
Insect fauna of Taiwan	330,000	NSC, Taiwan	12/03 - 4/05
Evolutionary genomics study of testis-specific genes in <i>Drosophila mauritiana</i>	820,000	Academia Sinica	4/04 - 12/04
Phylogeographic study of <i>Drosophila immigrans</i> (Diptera: Drosophilidae)	2,698,240	Academia Sinica	1/01- 12/04
The insect abundance in Chiu-Fen-Er-Shan influenced by ecological session after 921 earthquake	1,020,000	Academia Sinica	1/00 - 12/01
Molecular evolution of male reproductive genes in <i>Drosophila</i>	3,112,700	NSC, Taiwan	8/00 - 7/03