(Daniel Rubinoff)

**College of Tropical Agriculture and Human Resources**

(PEPS-Entomology

FTE Distribution: .30% I; .70% R; 0% E

**Education**

|  |  |  |
| --- | --- | --- |
| **Degree** | **University** | **Major** |
| Bachelors | Cornell University | Natural Resources |
|  |  |  |
| PhD | University of California, Berkeley | Environmental Science, Policy and Management |

**Professional Appointments**

|  |  |  |
| --- | --- | --- |
| **Title** | **Employer** | **Dates Employed** |
| **8/11-present** Professor, Associate Professor,Assistant Professor **7/07-7/11** **10/02- presentDirector**, University of Hawai’i Insect Museum **Elected faculty member** of the Ecology, Evolution, and Conservation Biology Graduate Program**10/02-6/07**  | University of Hawai’i Manoa, **Department of Plant and Environmental Protection Sciences-Entomology Graduate program**University of Hawai’i Manoa, **Department of Plant and Environmental Protection Sciences-Entomology Graduate program****N/A**N | 10/02-present12/02-present11/02-present |
|  |  |  |

**Courses Taught**

Course Number and Title (credits)

Invasive Pest Species PEPS 350 (3)

Systematics and Phylogenetics PEPS 662 (3)

Entomology Seminars PEPS 690 (1-2 credits)

**Publications (reverse chronological order)**

Books

*California Insects*. *In press*. Will, K., J. Gross, D. Rubinoff and J. Powell. In Press. University of California Press.

Book Chapters

Lepczyk, C. A. and D. Rubinoff. 2018. Ecological Issues (of invasive species) in *Ecology and Management of Terrestrial Vertebrate Invasive Species in the United States.* W. C. Pitt, J. Beasley and G. W. Witmer, Eds. CRC Press, Taylor and Francis.

Refereed Journal Publications

Rubinoff, D. and C. Doorenweerd. *In press*. In and Out of America: Ecological and species diversity in Holarctic giant silkmoths suggests unusual dispersal, defying the dogma of an Asian origin. *Journal of Biogeography.*

Gillett, C.P., Honsberger, D. and Rubinoff, D. 2019. Rediscovery of the Hawaiian endemic bark beetle *Xyleborus pleiades* Samuleson, 1981 on Moloka ‘i, with records of three new exotic bark beetles for the island (Coleoptera: Curculionidae: Scolytinae: Xyleborini). *Journal of Natural History*, **53**(23-24), pp.1481-1490.

Leblanc L, Hossain MA, Doorenweerd C, Khan SA, Momen M, San Jose M, Rubinoff D. 2019. Six years of fruit fly surveys in Bangladesh: a new species, 33 new country records and discovery of the highly invasive *Bactrocera carambolae* (Diptera, Tephritidae). *ZooKeys* 876: 87-109. [https://doi.org/10.3897/zookeys.876.38096](https://doi.org/10.3897/zookeys.876.38096%22%20%5Ct%20%22_blank)

Medeiros, M.J., Kirkpatrick, J., Elliott, C.H., Prestes, A., Eiben, J. and Rubinoff, D. 2019. Two new day-flying species of *Agrotis* Ochsenheimer (Lepidoptera: Noctuidae) from the alpine summit of the Maunakea Volcano. *Zootaxa*, **4545**; 277-285.

Doorenweerd, C., Leblanc, L., Hsu, Y.F., Huang, C.L., Lin, Y.C., San Jose, M. and Rubinoff, D., 2019. Taiwan's Dacini Fruit Flies: Rare Endemics and Abundant Pests, along Altitudinal Gradients. *Pacific Science*, **73**; 35-60.

Reil, J.B., Doorenweerd, C., San Jose, M., Sim, S.B., Geib, S.M. and Rubinoff, D., 2018. Transpacific coalescent pathways of coconut rhinoceros beetle biotypes: Resistance to biological control catalyses resurgence of an old pest. *Molecular ecology*, **27**; 4459-4474.

Gillett, C.P., Pulakkatu-Thodi, I. and Rubinoff, D., 2018. Rediscovery of an Enigmatic Bark Beetle (Coleoptera: Curculionidae: Scolytinae) Endemic to the Hawaiian Islands. *The Coleopterists Bulletin*, ***72*(4**), pp.811-816.

Dupuis, J.R., Peigler, R.S., Geib, S.M. and Rubinoff, D., 2018. Phylogenomics supports incongruence between ecological specialization and taxonomy in a charismatic clade of buck moths. *Molecular ecology*, **27**;4417-4429.

Leblanc, L., Doorenweerd, C., San Jose, M., Pham, H.T. and Rubinoff, D. 2018. Descriptions of four new species of *Bactrocera* and new country records highlight the high biodiversity of fruit flies in Vietnam (Diptera, Tephritidae, Dacinae). *ZooKeys*,**797**;87.

Leblanc, L., Doorenweerd, C., Michael San Jose, U.G.A.I., Hemachandra, K.S. and Rubinoff, D., 2018. Description of a new species of Dacus from Sri Lanka, and new country distribution records (Diptera, Tephritidae, Dacinae). *ZooKeys*,**795**;105.

Rubinoff, D. and B. Holland. 2018. The conservation status of two endangered Mariana butterflies, *Hypolimnas octocula marianensis* and *Vagrans egistina* (Nymphalidae). *Journal of the Lepidopterist’s Society.***72**(3) 218-226.

San Jose, M., Doorenweerd, C., Leblanc, L., Barr, N., Geib, S. and Rubinoff, D., 2018. Tracking the origins of fly invasions; using mitochondrial haplotype diversity to identify potential source populations in two genetically intertwined fruit fly species (*Bactrocera carambolae* and *Bactrocera dorsalis* [Diptera: Tephritidae]). *Journal of economic entomology*, **111**, pp.2914-2926.

Dupuis, J.R., Bremer, F.T., Kauwe, A., San Jose, M., Leblanc, L., Rubinoff, D. and Geib, S.M. 2018. HiMAP: robust phylogenomics from highly multiplexed amplicon sequencing. *Molecular ecology resources*.

Krushelnycky, P.D., Starr, F., Starr, K., Abran, M., Thorne, M., Leary, J., Fukada, M. and Rubinoff, D., 2018. Performance of the biocontrol agent *Secusio extensa* (Lepidoptera: Erebidae) on its target host, Senecio madagascariensis (Madagascar fireweed), on an alternate host, *Delairea odorata* (Cape ivy), and on non-target plants, in Hawaii. *Biological Control*, **121**, pp.234-246.

Cognato, A.I., Jordal, B.H. and Rubinoff, D., 2018. Ancient “Wanderlust” Leads to Diversification of Endemic Hawaiian Xyleborus Species (Coleoptera: Curculionidae: Scolytinae). *Insect Systematics and Diversity*, ***2*(3),** p.1.

Doorenweerd, C., Leblanc, L., Norrbom, A.L., San Jose, M. and Rubinoff, D. 2018. A global checklist of the 932 fruit fly species in the tribe Dacini (Diptera, Tephritidae). *ZooKeys,* **730**; p.19.

San Jose, M., Doorenweerd, C., Leblanc, L., Barr, N., Geib, S. and Rubinoff, D., 2018. Incongruence between molecules and morphology: A seven-gene phylogeny of Dacini fruit flies paves the way for reclassification (Diptera: Tephritidae). *Molecular phylogenetics and evolution*, **121**, pp.139-149.

Dupuis, J.R., Sim, S.B., San Jose, M., Leblanc, L., Hoassain, M.A., Rubinoff, D. and Geib, S.M., 2018. Population genomics and comparisons of selective signatures in two invasions of melon fly, *Bactrocera cucurbitae* (Diptera: Tephritidae). *Biological Invasions*, **20**: 1211-1228.

Gillette, C. and D. Rubinoff. 2017. A Second Adventive Species of Pinhole-borer on the Islands of Oahu and Hawaii. *Proceedings of the Hawaiian Entomological Society* **49:**51-57

Rubinoff, D. 2017. Hawaiian Lepidoptera represent remarkable diversity that is disappearing before it can be discovered. *News of the Lepidopterists’ Society*. **59**: 202-204.

Medeiros, M.J., Haines, W.P., Carleton, M.A., & Rubinoff, D. 2017. Small survivors: unexpected endemic diversity of *Hyposmocoma* (Lepidoptera: Cosmopterigidae) moths on Kahoʻolawe, a degraded Hawaiian island. *Zoological Journal of the Linnean Society*.180: 570-592.

Elliot, C., S. E. Weber, J. B. Meyer and D. Rubinoff. 2017. Assessing rainfall accumulation and temperature as catalysts for *Pleocoma tularensis*. Leach, 1933 emergence in the central Sierra Nevada (Coleoptera: Pleocomidae) *Pan-Pacific Entomologist* 93:65-70*.*

Rubinoff, D. M. San Jose and R. Peigler. 2017. Multi-gene phylogeny of the *Hemileuca maia* complex (Saturniidae) across North America suggests complex phylogeography and rapid ecological diversification. *Systematic Entomology.*

Rubinoff, D., San Jose, M. and Powell, J.A., 2017. Sex-biased Secondary Contact Obscures Ancient Speciation onto Relictual Host Trees in Central California Moths (Syndemis: Tortricidae). *Molecular Phylogenetics and Evolution* **109**:388-403*.*

Reil, J. B., M. San Jose and D. Rubinoff. 2016. Low variation in Nuclear and Mitochondrial DNA inhibits resolution of Invasion Pathways across the pacific for the Coconut Rhinoceros Beetle (Scarabeidae: *Oryctes rhinoceros*). *Proceedings of the Hawaiian Entomological Society* **48**: 57-69.

Leblanc, L. M. San Jose, M. Wright and D. Rubinoff. 2016. Declines in biodiversity and the abundance of pest species across land use gradients in Southeast Asia. *Landscape Ecology* **31**: 505-516.

<http://dx.doi.org/10.1007/s10980-015-0276-3>

Rubinoff, D., J. Matsunaga, F. Starr, K. Starr, and W. Haines. 2015. The Sleepy Orange transits the Pacific: a new butterfly species for Hawaii. *News of the Lepidopterist’s Society* **57**. pp.72-73.

Rubinoff, D. and Kitching, I., 2015. *Daphnis placida*, a New Species of Sphinx Moth for Guam, USA. *Proceedings of the Hawaiian Entomological Society* **47**: 79-81.

Dupont, S. and D. Rubinoff. 2015. Larval and larval case morphology of *Hyposmocoma* species (Cosmopterigidae: Lepidoptera), with a discussion on adaptations to larval case-bearing locomotion. *Annals of the Entomological Society of America.* **108**: 1037-1052

Leblanc, L., San Jose, M., Bhandari, B.P., Tauber, C.A. and Rubinoff, D., 2015. Attraction of Lacewings (Neuroptera: Chrysopidae) to Methyl Eugenol in Asia. *Proceedings of the Hawaiian Entomological Society* **47**: 67-70.

Leblanc, L., Fay, H., Sengebau, F., San Jose, M., Rubinoff, D. and Pereira, R., 2015. A Survey of Fruit Flies (Diptera: Tephritidae: Dacinae) and their Opiine Parasitoids (Hymenoptera: Braconidae) in Palau. *Proceedings of the Hawaiian Entomological Society* **47**: 55-66.

Rubinoff, D., M. San Jose, P. Johnson, R. Wells, K. Osborne, and J. J. Leroux. 2015. Ghosts of glaciers and the disjunct distribution of a threatened California moth (*Euprosperpinus euterpe*). *Biological Conservation*. **184**: 278-289.

• Schutze M.K., Aketarawong N., Amornsak W., Armstrong K.F., Augustinos A.A., Barr N., Bo W., Bourtzis K., Boykin L.M., Cáceres C., Cameron S.L., Chapman T.A., Chinvinijkul S., Chomič A., De Meyer M., Drosopoulou E., Englezou A., Ekesi S., Gariou-Papalexiou A., Geib S.M., Hailstones D., , Hasanuzzaman M., Haymer D., Hee A.K.W., Hendrichs J., Jessup A., Ji Q., Khamis F.M., Krosch M.N., Leblanc L., Mahmood K., Malacrida A.R., Mavragani-Tsipidou P., Mwatawala M., Nishida R., Ono H., Reyes J., **Rubinoff D.,** San Jose M., Shelly T.E., Srikachar S., Tan K.H., Thanaphum S., Ul-Haq I., Vijaysegaran S., Wee S.L., Yesmin F., Zacharopoulou A., Clarke A.R. 2015. Synonymization of key pest species within the *Bactrocera dorsalis* species complex (Diptera: Tephritidae): taxonomic changes based on 20 years of integrative morphological, molecular, cytogenetic, behavioral, and chemoecological data. *Systematic Entomology*. **40**: 456-471. DOI: 10.1111/syen.12113.

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

Rubinoff, D. 2018. Bees Gone Wild. *Scientific American*. Editorial. <https://blogs.scientificamerican.com/observations/bees-gone-wild/>

# Rubinoff, D. and C. Lepczyk. 2015. Wild Horses Are Terrible for the West

## [**http://www.slate.com/articles/health\_and\_science/science/2015/12/wild\_feral\_horses\_are\_bad\_for\_the\_environment\_in\_the\_west.html**](http://www.slate.com/articles/health_and_science/science/2015/12/wild_feral_horses_are_bad_for_the_environment_in_the_west.html)**. Slate. After 24hours it was the 3rd most viewed article on the website, with over 4,ooo facebook posts.**

Rubinoff, D. 2015. The Butterfly Effect. The Washington Post. Editorial. In print and online, February 22, 2015. http://www.washingtonpost.com/opinions/the-monarch-butterfly-doesnt-need-so-much-help/2015/02/20/cd936d60-b887-11e4-a200-c008a01a6692\_story.html

Leadership Roles (Committees, Boards, Advisory, etc.)

Director, University of Hawaii Insect Museum.

**Graduate Students**

|  |  |  |
| --- | --- | --- |
| Category | Current Number of Students | Number Graduated (Career) |
| *Chair* of Master’s Committees | 0 | 5 |
| *Chair* of PhD Committees | 2 | 4 |
| Member of Master’s Committees | 0 | 6 |
| Member of PhD Committees | 5 | 10 |

**Grant Support**

**For All listed grants D. Rubinoff is sole PI.**

Modeling distributions and assessing population boundaries for the Kamehameha butterfly (*Vanessa tameamea*)

DLNR

$18,897.00

5/1/14-4/30/15

*Bactrocera* Diagnostic Capacity Building

Agriculture, Dept - Animal and Plant Health Inspection Service

 $164,610.00

9/30/14-9/29/15

Development of Diagnostic Resources to Support Fruit Fly Exclusion and Eradication Phase 3

AGRICULTURE, DEPT-AGRI RSCH SVC-FED

 $153,469.00

9/17/14-8/31/16

Evaluation of Population Status Surveys for the Endangered Mariana
Islands Butterflies *Hypolimnas octocula mariannensis* and *Vagrans
egistina*

INTERIOR, DEPT-FISH & WILDLIFE SVC

 $60,000.00

9/1/10-9/30/15

Genomic approaches to fruit fly exclusion and pathway analysis (Year 1-3)

AGRICULTURE, DEPT-AGRI RSCH SVC-FED

 $280,543.00 + $304,266.00 + $303,000.00

9/1/15-9/30/20

The role of insect vectors in the spread of Rapid Ohia Death disease (Ceratocystis fimbriata)

LAND & NATURAL RES, DPT-FORST (DLNR)

 $85,000.00 + $40,020.00

7/1/15-6/30/17

Confirming Molecular Methods for Fruit Fly Identification 2015

Agriculture, Dept - Animal and Plant Health Inspection Service

 $246,100.00 + $298,199.00

9/30/15-9/29/17

Conservation Status of the El Segundo Blue Using a Genomics Approach

INTERIOR, DEPT-FISH & WILDLIFE SVC

 $60,000.00

5/11/16-5/14/19

Determination of Invasion Pathways and Genetic Diversity for the Invasive Coconut Rhinoceros

Agriculture, Dept - Animal and Plant Health Inspection Service

 $60,050.00

9/1/15-8/31/16

Molecular ID of Bactorcera Interceptions and Domestic Captures

Agriculture, Dept - Animal and Plant Health Inspection Service

 $179,971.00

9/30/16-9/29/17

The Systematics, Taxonomy and Ecology of Native Hawaiian Bark Beetles (Xyleborus Scolytinae

AGRICULTURE, DEPT-HI

 $190,300.00

8/1/19-9/30/22

Genomics of Casey's June Beetle

Dudek and Associates

 $20,993.00

2/2/17-2/1/19

*Manduca Blackburni* Population Assessment and Population Genetics

LAND & NATURAL RES, DPT-FORST (DLNR)

 $46,739.00

1/16/17-1/13/18

Molecular ID of Bactrocera Interceptions and Domestic Captures

Agriculture, Dept - Animal and Plant Health Inspection Service

 $198,000.00

9/30/16-9/29/18

Confirming Molecular Methods for Fruit Fly Identification

Agriculture, Dept - Animal and Plant Health Inspection Service

 $260,000.00

9/30/17-9/29/18

Assessing the Conservation Status of the El Segundo Blue (*Euphilotes battoides allyni*) Using Genomics

INTERIOR, DEPT-FISH & WILDLIFE SVC

$76,000.00

6/29/17-9/30/20

Genomics of the Bog Buckmoth

INTERIOR, DEPT-FISH & WILDLIFE SVC

 $10,000.00

5/2/18-6/30/19

HI1818FB Res Bactrocera Spec Complexes V

Agriculture, Dept - Animal and Plant Health Inspection Service

 $205,765.00

9/30/18-9/29/19

ID of Bactrocera Larvae

Agriculture, Dept - Animal and Plant Health Inspection Service

 $59,814.00

9/1/18-3/30/20

Collaborative Research: Digitization TCN: Digitizing Collections to Trace Parasite-Host Associations and Predict the Spread of Vector-Borne Disease

NATIONAL SCIENCE FOUNDATION

 $44,660.00

9/1/19-8/31/22

**Presentations at Conferences**

Title: The pace and patterns of unprecedented ecological novelty in Hawaii’s  most diverse adaptive radiation (*Hyposmocoma*). D. Rubinoff Invited speaker: Oregon State Department of Integrative Biology Speaker series. Oregon State University, Corvallis Oregon. May 2015 (travel costs covered).

Title: Cryptic diversity in Hawaii’s charismatic endemic sphinx moths (*Hyles*). Symposium organizer and speaker. D. Rubinoff Pacific Entomology Conference, Honolulu Hawaii. April 2015.

Title:Conservation Status of two listed butterflies in the Mariana Islands. D. Rubinoff Pacific Branch of the Entomological Society of America meeting (100th anniversary). Honolulu, HI. Invited Symposium April 2016.

Title: Evolution of Carnivory in Hawaii’s most diverse endemic radiation. Pacific Branch of the Entomological Society of America meeting (100th anniversary). D. Rubinoff Invited Symposium (Strategies underlying the Evolution of Herbivory). Honolulu, HI. April 2016.

Title:Phylogenetics of a Hyper-diverse Hawaiian moth radiation yield insight into the timing and tempo of adaptation in speciation. D. Rubinoff International Island Biology Meeting. Invited Symposium Speaker in Invertebrate Evolution. Terciera, Azores, Portugal. July, 2016.

Title: The Systematics, Spatial Ecology and complex Taxonomy of *Bactrocera.* Invited speaker. D. Rubinoff Fruit Fly Diagnostics Meeting. Sacramento, CA February 2016.

Title: Phylogenetics of invasive fruit flies and native Hawaiian carnivorous moths reveal remarkable patterns of evolution and diversification. Invited speaker. D. Rubinoff USDA-ARS Hilo, Hawaii. June 2016.

Title: Phylogenomics of an endemic Hawaiian butterfly reveal complex patterns of divergence and isolation. D. Rubinoff Co-authors William Haines, Sheina Sim, and Scott Geib. International Congress of Entomology and National meeting of the Entomological Society of America , Orlando, Florida. September, 2016.

Title:Remarkable evolution in the carnivorous clades of Hawaiian Fancy Case caterpillars (*Hyposmocoma*: Cosmopterigidae). D. Rubinoff Invited Speakers in Gelechiodea Evolution. Podgora, Croatia. April, 2017.

Title:Sex-Biased secondary contact obscures ancient speciation onto relictual host trees in central California Moths (Syndemis, Tortricidae). D. Rubinoff Symposium honoring Jerry Powell. I was symposium organizer. Lepidopterist’s Society National Meeting. Tuscon, AZ, July 2017.

Title: Does a genomic approach reveal genetic diversity suggested by ecological and morphological divergence in a Buckmoth (*Hemileuca maia*)? D. Rubinoff Co-authors Julian Dupuis, Richard Peigler. National meeting of the Entomological Society of America, Denver, Colorado. November, 2017.

Title: Phylogenomics reveals localized, Sporadic and incongruous ecological specialization across *Hemileuca maia* (Saturniidae). D. Rubinoff Co-authors Julian Dupuis, Richard Peigler and Scott Geib. National meeting of the Lepidopterist’s Society, Ottawa, Ontario, Canada, July 2018.

Title: What do genomics reveal about the murky origins of Hawaii**’**s most ecologically diverse adaptive radiation, the Fancy Case caterpillars (*Hyposmocoma*: Cosmopterigidae)? D. Rubinoff Invited speaker: American Genetics Association, international meeting. Hawaii Island, July 2018. (all travel and meeting costs covered).

Title: Genomic revelations regarding the origins of Hawaii’s most ecologically diverse adaptive radiation, the Fancy case Caterpillars (*Hyposmocoma*: Cosmopterigidae). D. Rubinoff Co-authors, Julian Dupuis and Scott Geib. National meeting of the Entomological Society of America, Vancouver, Canada, November, 2018.