CTAHR BIO-Bibliography

Mark G. Wright
University of Hawai‘i at Mānoa
College of Tropical Agriculture and Human Resources
Department of Plant and Environmental Protection Sciences
FTE Distribution: 30% I; 45% R; 25% E

Education

University	Major	Year Graduated
University of Stellenbosch	B.Sc. Hons.	1987
University of Stellenbosch	M.Sc.	1990
University of Natal	Ph.D.	1996

Professional Appointments

Title	Employer	Dates Employed
Professor/Extension specialist	University of Hawaii at Manoa	2012-present
Associate professor/Extension Specialist	University of Hawaii at Manoa	2007-2012
Assistant professor/Extension Specialist	University of Hawaii at Manoa	2001-2007
Research associate II	Cornell University	2000-2001
Post-doctoral associate	Cornell University	1999-2000
Research entomologist	Agricultural Research Council	1992-1999
Assistant agricultural researcher	Department of Agricultural Development	1988-1992

Courses Taught

Course ID	Credits	Semester/Year	No of Students
PEPS671	3	F2022	6
PEPS491 (study abroad)	3-6	S2022	6
PEPS421 (team)	4	Sp2021	12
PEPS422/SUST422	3	S2022	9
PEPS675	3	F2022	8
PEPS421 (team)	4	Sp2021	9
PEPS422/SUST422	3	S2021	6
PEPS491 (study abroad)	3-6	S2021	6
PEPS675	3	F2021	6
PEPS671	3	F 2020	10
PEPS422/SUST422	3	S 2020	8
PEPS421 (team)	4	Sp2020	12
PEPS671	3	F 2018	9
PEPS699	1-4	F 2018	6
PEPS422	3	S 2018	7
PEPS491	3	S 2018	6
PEPS699	1-4	Sp2018	5
TPSS699	1-4	Sp2018	1

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Publications (past five years)

Book chapters, Conference Proceedings

1. Kaufman, L.V., **Wright, M.G.** 2022. Erythrina gall wasp successfully controlled by the introduction of a parasitoid wasp in Hawaii. In: Contributions of classical biocontrol to the US food security, forestry and biodiversity. Eds van Driesche, RG, Winston, RL, Perring, TM, Lopez, VM. USDA Forest Service, FHAAST-2019-05. pp. 367-372.

2. Cave, R., Moore, A., **Wright, M.G**. 2022. Biological Control of the Cycad Aulacaspis Scale, *Aulacaspis yasumatsui.* In: Contributions of classical biocontrol to the US food security, forestry and biodiversity. Eds van Driesche *et al*. USDA Forest Service, FHAAST-2019-05189-203. pp. 189-203.

3. Mafra-Neto, A., **Wright, M**., Fettig, C., Progar, R., Munson, S., Blackford, D., Moan, J., Graham, E., Foote, G., Borges, R., Silva, R., lake, R., Bernardi, C., Saroli, J., Clarke, S., Meeker, J., Nowak, J., Agnello, A., Martini, X., Rivera, M., Stelinski, L. 2021. Repellent semiochemical solutions to mitigate the impacts of global climate change on arthropod pests. In: *Advances in Arthropod Repellents*. Elsevier. pp. 279-322.

4. Day, M., Cock, M., Conant, P., Furlong, M., Paynter, Q., Ramadan, M., **Wright, M.G.** 2021. 14-Biological control success and failures: Oceania region. In*: Biological Control: Global Impacts, Challenges and Future Directions of Pest Management*, Ed. P.G. Mason. CSIRO Publishing, Melbourne. pp. 342-376.

5. **Wright, M.G.** 2017. Assessing host use and population level impacts on non-target species by introduced natural enemies: can host range testing provide insight? Proceedings of the 5th International Symposium on Biological Control of Arthropods. Malaysia. P.G. Mason, D.R. Gillespie and C. Vincent (Eds.). CAB International. 50-51.

Refereed Journal Publications

1. Ramadan, M.M., Kaufman, L.V., **Wright, M.G.** Recent advances in insect and weed biocontrol in Hawaii: case studies and trends. *Biological Control* (Accepted)
2. Au, M.G. and **Wright, M.G**. 2022. *Arcte coerula* (Lepidoptera: Noctuidae): A new invasive pest in Hawai‘i on endemic plants. *Proceedings of the Hawaiian Entomological Society* 54: 63-75.
3. Honsberger, D.N., Huber, J.T. and **Wright, M.G**. 2022. A new *Mymaromma* sp. (Mymarommatoidea, Mymarommatidae) in Hawai‘i and first host record for the superfamily. *Journal of Hymenoptera Research* 89: 73-87. https://doi.org/10.3897/jhr.89.77931
4. Honsberger, D.N., **Wright, M.G**. 2022. A new species of *Phymastichus* (Hymenoptera: Eulophidae: Tetrastichinae) parasitic on *Xyleborus* beetles (Coleopetera: Curculionidae: Scolytinae) in Hawaii. *Zootaxa* 5116: 107-122.
5. Elliot, C., Gillett, C.P.D.T., Parsons, E., **Wright, M.G**. and Rubinoff, D. Identifying key threats to a refugial population of an endangered Hawaiian moth. *Insect Conservation and Diversity* doi: 10.1111/icad.12553
6. Gugliuzzo, A., Biedermann, P.H.W., Carrillo, D., Castrillo, L.A., Egonyu, J.P., Gallego, D., Haddi, K., Hulcr, J., Jactel, H., Kajimura, H., Kamata, N., Meurisse, N., Li, Y., Oliver, J.B., Ranger, C.M., Rassati, D., Stelinski, L.L., Sutherland, R., Garzia, G.T., **Wright, M.G**., and Biondi, A. 2021. Recent advances toward the sustainable management of invasive *Xylosandrus* ambrosia beetles. *Journal of Pest Science* https://doi.org/10.1007/s10340-021-01382-3
7. Le Roux, J.J., Crous, P.W., Kamutando, C.N., Richardson, D.M., Strasberg, D., Wingfield, M.J., **Wright, M.G**., and Valverde, A. 2021. A core of rhizosphere bacterial taxa associate with two of the world's most isolated plant congeners. *Plant and Soil* https://doi.org/10.1007/s11104-021-05049-x
8. Yousuf, F., Follett, P.A., Gillett, C.P.D.T., Honsberger, D., Chamorro, L., Johnson, T.M., Jaramillo, M.G.,

Machado, P.B. & **Wright, M.G.** 2021. Limited host range in the idiobiont parasitoid *Phymastichus coffea*, a prospective biological control agent of the coffee pest *Hypothenemus hampei* in Hawaii. *Journal of Pest Science* https

9. Ali, A.N., & **Wright, M.G.** Response of *Trichogramma papilionis* to semiochemicals induced by host oviposition on plants. Biological Control (In press).
10. Gutierrez-Coarite, R., Cho, A.H., Mollenido, J., Pulakkatu-Thodi, I., & **Wright, M.G**. 2021. Macadamia felted coccid impact on macadamia nut yield in the absence of a specialized natural enemy, and economic injury levels. Crop Protection 139: 105378.
11. Kaufman, L.V., Zarders, D.R., & **Wright, M.G**. 2020. Susceptibility of endemic *Myoporum* (Naio) species and populations to *Klambothrips myopri* (naio thrips) in Hawaii. Pacific Science 74: In press.
12. Rugman-Jones, P.F., Au., M., Ebrahimi, V., Eskalen, A., Gillett, C.P.D.T., Honsberger, D., Husein, D., **Wright, M.G**., Yousuf, F., & Stouthamer, R. 2020. One becomes two: second species of the *Euwallacea fornicatus* complex (Coleoptera: Curculionidae: Scolytinae) species complex is established on two Hawaiian Islands. PeerJ Life and Environment 8:e9987 http://doi.org/10.7717/peerj.9987
13. Ali, A.N., & **Wright, M.G**. 2020. Fitness effects of founder female number of *Trichogramma papilionis* reared on *Ephestia kuehniella*. Proceedings of the Hawaiian Entomological Society 52: 25-34.
14. Ali, A.N., & **Wright, M.G**. 2020. Behavioral response of *Trichogramma papilionis* to host eggs, host plants, and induced volatile plant cues. Biological Control 149: 104323.
15. Kaufman, L.V., Yalemar, J., & **Wright, M.G**. 2020. Classical biological control of the erythrina gall wasp, *Quadrastichus erythrinae*, in Hawaii: conserving an endangered habitat. Biological Control 142: 104161.
16. **Wright, M.G.** 2019. Cover crops, conservation biocontrol and augmentative releases – can *Trichogramma* impacts be magnified? Annals of the Entomological Society of America 112: 295-297.
17. Guitierrez, R., Pulakkatu-thodi, I., & **Wright, M.G**. 2019. Binomial Sequential Sampling Plan for Macadamia Felted Coccid, *Eriococcus ironsidei* (Hemiptera: Eriococcidae) Infesting Hawaii Macadamia Orchards. Environmental Entomology 48: 219-226.
18. **Wright, M.G.,** Spencer, C.R., Cook, R.M., Henley, M.D., North, W. & Mafra-Neto, A. 2018. African bush elephants response to a honeybee alarm semiochemical blend. Current Biology 28: R778-780.
19. Gutierrez-Coarite, R., Mollinedo, J, Cho, A., **Wright, M.G**. 2018. Canopy management of macadamia trees and understory plant diversification to reduce macadamia felted coccid (*Eriococcus ironsidei*) populations. Crop Protection 113: 75-83.
20. Pulakkatu-thodi, I., Gutierrez-Coarite, R., & **Wright, M.G**. 2018. Dispersion and sequential sampling plan for coffee berry borer (Coleoptera: Curculionidae) infestations in Hawaii. Environmental Entomology 47: 1306-1313.
21. Greco, E., **Wright, M.G**., Burgueno, J., & Jaronski, S. 2018. Efficacy of *Beauveria bassiana* applications on coffee berry borer across an elevation gradient in Hawaii. Biocontrol Science & Technology 28: 995-1013.
22. Gutierrez-Coarite, R., Heller, W.P., **Wright, M.G**., Mollinedo, J., Keith, L., Sugiyama, L, & Chun, S. 2018. Entomopathogenic fungi as mortality factors of macadamia felted coccid (*Eriococcus ironsidei*) in Hawaii. Proceedings of the Hawaiian Entomological Society 50: 9-16.
23. Gutierrez-Coarite, R., Yoneishi, N., Mollinedo, J., Pulakkattu-thodi, I., **Wright, M.G**., & Geib, S. 2018. PCR-based gut content analysis to detect predation of *Eriococcus ironsidei* (Hemiptera: Eriococcidae) by Coccinellidae species in macadamia nut orchards in Hawaii. Journal of Economic Entomology DOI: https://doi.org/10.1093/jee/toy019.
24. **Wright, M.G.** & Bennett, G.B. 2018. Evolution of biological control agents following introduction to new environments. BioControl 63: 105-116.

25. Manandhar, R., Wang, K.H., Hooks, C.R.R. & **Wright, M.G**. 2017. Effects of strip-tilled cover cropping on the population density of thrips and predatory insects in a cucurbit agroecosystem. Journal of Asia-Pacific Entomology 20: 1254-1259.
26. Pulakkatu-thodi, I., Guitierrez, R. & **Wright, M.G**. 2017. Comparison of sampling intensity to estimate infestations of coffee berry borer on Hawaii island. Proceedings of the Hawaiian Entomological Society 49: 11-16.
27. Kaufman, L.V. & **Wright, M.G**. 2017. Assessing probabilistic risk assessment approaches for insect biological control introductions. Insects 8(3), 67. (Special Issue Biological Control of Invertebrate Pests.) doi:10.3390/insects8030067

Extension Publications

1. Kawabata, A., Follett, P., **Wright, M**., Brill, E., Curtiss, R.T. 2016. An introduction to the square-necked grain beetle as a predator of coffee berry borer in Hawaii. CTAHR-CES IP-40. pp. 1-4.
2. Gutierrez, R., Pulakkatu-Thodi, I., Zarders, D., Mollenedo, J., Yalemar, J., **Wright, M.G**., & Cho, A. 2017. Macadamia felted coccid, Eriococcus ironsidei (Hemiptera: Eriococcidae) description, monitoring and control. CTAHR CES IP-43.
3. Gutierrez-Coarite, R., Kawabata, A., Cho, A., Mollinedo, J., **Wright, M.G.** 2020. Macadamia nut orchard modification strategies for reducing macadamia felted coccid (*Eriococcus ironsidei*) populations in Hawaii. CTAHR CES IP-48. pp.1-8.
4. Wright, M.G. 2020. Avocado lace bug in Hawaii. CTAHR CES IP-50. pp. 1-2.
5. Thorne, M., Wilson, S., Wright, M., Peck, D. 2022. Twolined spittlebug identification key. CTAHR CES IP-52; PRM-123. pp. 1-5.

Graduate Students (Most recent year only)

Category	Number of Students	Number that Graduated
Chair of Master Committees	3	1
Chair of PhD Committees	5	1
Member of Master Committees	1	0
Member of PhD Committees	5	0

GRANTS AWARDED: Total: $3,044,350

Award Fiscal Year	Title	Award Sponsor	Award Amount
2022	Hawaii statewide implementation of pest management information	USDA-NIFA	$58,410
2022	Detection & Invasive Potential and population dynamics of Arcte coerula	LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)	$13,745
2022	Detection and Management Strategies for the Control of Prosapia Bicincta (Twolined Spittlebug) in Hawaii	LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)	$184,788
2021	Biological Control of Schinus terebinthfolia	DLNR	$42,378
2020	Integrated Pest Management for Macadamia	AGRICULTURE, DEPT-HI	$42,109.00
2018	Phytosanitary Irradiation Treatments and Equipment	AGRICULTURE, DEPT-AGRI RSCH SVC-FED	$20,000.00
2020	Prosapia bicincta (Two Lined Spittle Bug) Detection and Control in Hawaii	AGRICULTURE, DEPT-HI	$333,086.00
2019	Classical Biological Control of Coffee Berry Borer	AGRICULTURE, DEPT-AGRI RSCH SVC-FED	$120,000.00
2020	UH Systems Approach for the Management of CBB	Agriculture, Dept - Animal and Plant Health Inspection Service	$115,000.00

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2018	Prosapia bicinta (Two Lined Spittle Bug) Detection and Control in Hawaii	AGRICULTURE, DEPT-HI	$300,000.00
2018	Detection and Control of Prosapia bicinta (Two Lined Spittle Bug) in Hawaii	LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)	$50,000.00
2018	IPM Extension and Implementation, Hawaii.	AGRICULTURE, DEPT-NATL INS FOOD AND AGRICULTURE	$94,500.00
2017	Classical and Augmentative Biological Control for Coffee Berry Borer in Hawaii	AGRICULTURE, DEPT-HI	$118,800.00
2021	Biological Control of Schinus terebinthfolia: Assessment of Biocontrol Agents and Potential Impacts on Apis mellifera	LAND & NATURAL RES, DPT-FORST (DLNR)	$42,378.00
2020	Detection and Invasive Potential of Arcte Coerula (Lepidoptera, Noctuidae), a New Potential Pest of Mamaki in Hawaii	LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)	$15,378.00
2018	FY17 Systems Approach for the Management of CBB	Agriculture, Dept - Animal and Plant Health Inspection Service	$300,000.00
2021	Improving Trapping Efficacy for Mosquito Detection and Monitoring in Hawaii	Hawaii Invasive Species Council	$48,913.00
2018	HI 17 - PD: Hala Scale	Agriculture, Dept - Animal and Plant Health Inspection Service	$24,382.00
2022	Hawaii Statewide Implementation of Pest Management Information through Extension Activities	AGRICULTURE, DEPT-NATL INS FOOD AND AGRICULTURE	$58,410.00
2021	Prosapia bicincta (Two Lined Spittle Bug) Detection and Control in Hawaii	AGRICULTURE, DEPT-HI	$340,903.00
2020	Conditioning Parasitoids to Exploit Coffee Berry Borer, Hypothenemus hampei	AGRICULTURE, DEPT-HI	$46,000.00
2020	Systems Approach for the Management of Coffee Berry Borer	Agriculture, Dept - Animal and Plant Health Inspection Service	$46,345.00
2021	IPM Extension and Implementation, Hawaii.	AGRICULTURE, DEPT-NATL INS FOOD AND AGRICULTURE	$32,000.00
2019	Systems Approach for the Management of CBB	Agriculture, Dept - Animal and Plant Health Inspection Service	$120,000.00
2018	Management of Coffee Berry Borer Using Non-Toxic Fruit Coating	Crop Enhancement, Inc.	$3,000.00
2018	Area-wide IPM for Coffee Berry Borer Control under Variable Landscapes in Hawaii's Coffee Growing Regions	AGRICULTURE, DEPT-AGRI RSCH SVC-FED	$493,730.00
2018	Prosapia bicinta (Two Lined Spittle Bug) Detection and Control	BIG ISLAND RESOURCE CONSERVATION & DEV COUNCIL INC.	$22,473.00

Presentations at Conferences (*Presenter)

Title: New invasive insect species in Hawaii, classical biological control and resident biotic resistance.
Authors: *Wright, M.G., Au, M., Honsberger, D.
Name of conference: Entomological Society of America/Entomological society of Canada joint meeting.
Date of Presentation: November 2022.

Title: Factors influencing establishment success of predator and parasitoid biological control introductions in Hawaii.
Authors: *Au, M., Wright, M.G.
Name of conference: Entomological Society of America/Entomological society of Canada joint meeting.
Date of Presentation: November 2022.

Title: Establishment, pest status, and management of the twolined spittlebug, *Prosapia bicincta*, in Hawaii.
Authors: *Wilson, S., Thorne, M., Peck, D., Wright, M.G.
Name of conference: Entomological Society of America/Entomological society of Canada joint meeting.
Date of Presentation: November 2022.

Title: Recent updates on Scoltinae biocontrol in Hawaii.
Authors: *Wright, M.G., Honsberger, D.
Name of conference: Entomological Society of America Pacific Branch meeting.
Date of Presentation: April 2021.

Title: Biology and distribution of Ramie moth in Hawaii, and impacts on native mamaki plants.
Authors; *Au., M.G., Wright, M.G.
Name of conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2021

Title: Avocado lace bug – brief overview.
Authors: Wright, M.G.
Name of conference: Hawaii Tropical fruit Gowers Association Conference.
Date of presentation: October 2021.

Title: Response of African elephants to bee alarm pheromones.
Authors; *Wright, M.G., Allin, P., Spencer, C., Mafra-Neto, A.
Name of conference: Southern African Wildlife management Association Conference.
Date of Presentation: August 2021

Title: Pest status and classical biological control of Scolytinae pests of coffee in Hawaii.
Authors: *Wright, M.G., Follet, P., Youssef, F., Honsberger, D., Gillette, C.P.D.T.
Name of Conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2020

Title: New pest alert! Ramie moth (Arcte coerula, Noctuidae) in Hawaii.
Authors: *Au, M.G., Wright, M.G.
Name of Conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2020

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Title: Semiochemical repellants in pest management.
Authors: *Mafra-Neto, A., Wright, M.G., Fettig, C., Borges, R., Agnello, A.M., Martini, X.
Name of Conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2020

Title: Establishment and pest status of the twolined spittlebug, *Prosapia bicincta*, in Hawai'i.
Authors: *Wilson, S.M., Wright, M.G, Thorne, M., Peck, D.C.
Name of Conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2020

Title: New parasitoids of bark beetles (Curculionidae; Scolytinae) and their life histories in Hawaii.
Authors: * Wright, M.G.
Name of Conference: Entomological Society of America Annual meeting.
Date of Presentation: November 2020

Title: Scale insects, mealybugs, lace bugs, and management options.
Authors: Messing, R.H., *Wright, M.G.
Name of Conference: 30th Annual International Tropical Fruit Growers Conference..
Date of Presentation: September 2020

Title: Assessing host use and population level impacts on non-target species by introduced natural enemies: can host range testing provide insight?
Authors: *Wright, M.G.
Name of Conference: 5th International Symposium on Biological Control of Arthropods.
Date of Presentation: September 2017

Title: PCR-based gut content analysis to detect cryptic predation on macadamia felted coccid (Hemiptera: Eriococcidae) by Coleoptera: Coccinellidae species in macadamia nut orchards
Authors: *Gutierrez, R., Pulakkatu-Thodi, I, Wright, M.G., Geib, S.
Name of Conference: 2017 Entomological Society of America Annual Meeting
Date of Presentation: November 2017

Title: Effect of Beaumont-Fukunaga pruning system on the rate of infestation and spatial distribution of coffee berry borer (Coleoptera: Curculionidae) in Hawai'i Island
Authors: *Pulakkatu-Thodi, I., Gutierrez, R., Wright, M.G.
Name of Conference: 2017 Entomological Society of America Annual Meeting
Date of Presentation: November 2017

Title: Coffee berry borer management in Hawaii and Puerto Rico.
Authors: *Wright, M.G., Pulakkathu-Thodi, I., Aoki, S., Ferrer, J., Vega, F.E. & Greco, E.B.
Name of Conference: 2017 Entomological Society of America Annual Meeting
Date of Presentation: November 2017