**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

PEPS421 (team) 3 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

PEPS699 1-4 F 2017 5

TPSS699 1-4 F 2017 1

PEPS422 3 S 2017 6

PEPS675 3 Sp2017 9

PEPS691 1 Sp2017 3

PEPS422 3 S 2016 7

PEPS691 1 Sp2016 5

**Publications (past five years)**

Book chapters, Conference Proceedings

1. 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.
2. 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.
3. **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
4. 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
5. 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
6. 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
7. 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* httpsAli, A.N., & **Wright, M.G.** Response of *Trichogramma papilionis* to semiochemicals induced by host oviposition on plants. Biological Control (In press).
8. 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.
9. 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.
10. 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>
11. 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.
12. 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.
13. 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.
14. **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.
15. 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.
16. **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.
17. 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.
18. 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.
19. 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.
20. 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.
21. 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.
22. **Wright, M.G.** & Bennett, G.B. 2018. Evolution of biological control agents following introduction to new environments. BioControl 63: 105-116.
23. 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.
24. 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.
25. 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](http://dx.doi.org/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.

**Graduate Students (Most recent year only)**

Category Number of Students Number that Graduated

Chair of Master Committees 4 1

Chair of PhD Committees 4 2

Member of Master Committees 5 3

Member of PhD Committees 3 2

**GRANTS AWARDED: Total: $2,787,407.00**

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| --- | --- | --- | --- |
| Award Fiscal Year | Title | Award Sponsor | Award Amount |
| 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 |
| 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: Managing African elephants with bee alarm pheromones.

Authors; \*Wright, M.G., Au. M.G., Allin, P., Spencer, C., mara-neto, A.

Name of conference: Entomological Society of America Annual meeting.

Date of Presentation: November 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

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](https://esa.confex.com/esa/2017/Paper/124993)

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

Title: Biocontrol: regaining cachet?

Authors: Messing, R.H., \*Wright, M.G.

Name of Conference: International Conference of Entomology 2016

Date of Presentation: November 2016