

Rory Mc Donnell PhD

Assistant Professor, Department of Crop and Soil Science,

Oregon State University, Corvallis OR 97331, USA

E-mail: rory.mcdonnell@oregonstate.edu

A. EDUCATION

September 1999 to April 2004, **PhD in Applied Ecology**, National University of Ireland, Galway, Ireland

September 1994 to June 1998, **BSc (Honors) in Environmental Science**, NUI Galway, Ireland.

B. EMPLOYMENT

July 2016 to present day: **Assistant Professor**, Department of Crop and Soil Science, Oregon State University, Corvallis, OR 97331.

June 2011 to June 2016: **Research Specialist**, Department of Entomology, University of California, Riverside, CA 92521.

March 2009 – March 2011: **Postdoctoral Research Fellow**, Applied Ecology Unit, Center for Environmental Science, National University of Ireland, Galway.

February 2008 – January 2009, **Marie Curie Research Fellow**, Applied Ecology Unit, Center for Environmental Science, National University of Ireland, Galway.

January 2006 to January 2008, **Marie Curie Research Fellow**, Department of Entomology, University of California, Riverside.

C. RESEARCH ACTIVITY

Patent

Choi, M-Y., Martin, R.C., Ahn, S-J., **Mc Donnell, R.J.** and Rao, S. (2019) Bioactive peptides having detrimental effects on pest slugs. U.S. PROV. Patent Application Serial No. 62/892,605, filed on August 28, 2019.

Tandingan De Ley, I., **Mc Donnell, R.J.**, and Paine, T., (2015) Mollusk-killing biopesticide. U.S. provisional application serial no. 62/236,674, filed on October 2, 2015.

Publications

International peer-reviewed publications – 55 total

Past 5 years only

1. Klein, M., Chastain, T., Garbacik, C. J., Qian, Y.P. and **Mc Donnell, R.J.** (2020) Acute toxicity of essential oils to the pest slug *Deroceras reticulatum* in laboratory and greenhouse bioassays. *Journal of Pest Science* 93: 415-425 <https://doi.org/10.1007/s10340-019-01154-0>
2. Cordoba, M., Millar, J., Foley, I., Anderson, T.O., Roda, A.L., Adams, G.D., and **Mc Donnell, R.J.** (2020)

Fresh cucumber as an attractant for the invasive snail *Xerolenta obvia*. *American Malacological Bulletin* 37: 62-65

3. Roda, A.L., Millar, J., Jacobsen, C., Veasey, R., Fujimoto, L., Hara, A. and **Mc Donnell, R.J.** (2019) A new synthetic lure for management of the invasive giant African snail, *Lissachatina fulica*. *PLoS One* 14: e0224270 doi: 10.1371/journal.pone.0224270
4. Rondon, S., Thompson, I., Klein, M., and **Mc Donnell, R.** (2019) First report of the presence of slugs in a commercial potato storage facility in the United States. *American Journal of Potato Research* 96: 414-418
5. Vendetti, J., Burnett, E., Carlton, L., Curran, A., Cedric, L. Matsumoto, R., **Mc Donnell, R.**, Reich, I., and Willadsen, O. (2019) The introduced terrestrial slugs *Ambigolimax nyctelius* (Bourguignat, 1861) and *Ambigolimax valentianus* (Férussac, 1821) (Gastropoda: Limacidae) in California, with a discussion of taxonomy, systematics, and discovery by citizen science. *Journal of Natural History* 53: 1607-1632.
6. **Mc Donnell, R.J.**, Lutz, M., Howe, D., and Denver, D. (2018) First Report of the Gastropod-Killing Nematode, *Phasmarhabditis hermaphrodita*, in Oregon, U.S.A. *Journal of Nematology* 50: 77-78.
7. **Mc Donnell, R.J.**, Tandingan De Ley, I., and Paine, T. (2018) Susceptibility of neonate *Lissachatina fulica* (Achatinidae: Mollusca) to a US strain of the nematode *Phasmarhabditis hermaphrodita* (Rhabditidae: Nematoda). *Biocontrol Science and Technology* 28: 1091-1095.
8. Cordoba, M., Millar, J. and **Mc Donnell, R.J.** (2018) Development of a high throughput laboratory bioassay for testing potential attractants for terrestrial snails and slugs. *Journal of Economic Entomology* 111: 637-644.
9. Johnson, E. Kindermann, G., O'Callaghan, J., Burke, D., McLoughlin, C., Horgan, S., Reich, I., **Mc Donnell, R.J.**, Williams, C., and Gormally, M.J. (2018) Mature exotic conifer stands have greater catches of the EU-protected *Geomalacus maculosus* than adjacent peatland or clear-felled stands—implications for forestry. *Annals of Forest Science* 75: 4-17.
10. **Mc Donnell, R.J.** (2017) Essential oils and their constituents as novel biorational molluscicides for terrestrial gastropod pests. In: *Pesticides: Essential Oils for Pest Control* (Eds. L.M. Nollet, and H.S. Rathore). Pages 479 – 486. Routledge Publishing.
11. Tandingan De Ley, I., **Mc Donnell, R.J.**, Paine, T. and De Ley, P. (2017) *Phasmarhabditis*: The Slug and Snail Parasitic Nematodes in North America. In: *Biocontrol Agents: Entomopathogenic and Slug Parasitic Nematodes* (Eds. M. M.M. Abd-Elgawad, T. Hassan Askary, and J. Coupland). Pages 560-578. CABI Publishing.
12. Carnaghi, M., Rae, R., Tandingan De Ley, I., Johnston, E., Kindermann, G., **Mc Donnell, R.**, O'Hanlon, A., Reich, I., Sheahan, J., Williams C., Gormally, M. (2017) Nematode associates and susceptibility of a protected slug *Geomalacus maculosus* to four biocontrol nematodes. *Biocontrol Science and Technology* 27: 294-299.
13. Reich, I., **Mc Donnell, R.**, McInerney, C., Callanan, S., and Gormally, M. (2017) EU-protected slug *Geomalacus maculosus* and the sympatric *Lehmannia marginata* in commercial forests: What can the mark-recapture method tell us about their population densities? *Journal of Molluscan Studies* 83: 27-35.
14. Johnston, E., Kindermann, G., O'Callaghan, J., Burke, D., McLoughlin, C., Horgan, S., **Mc Donnell, R.**, Williams, C. and Gormally, M. (2017) Monitoring the EU protected *Geomalacus maculosus* (Kerry Slug): what are the factors affecting catch returns in open and forested habitats? *Ecological Research* 32: 95 – 104.
15. Reich, I., O'Meara, K., Nelson, B., **Mc Donnell, R.J.** and Gormally, M.J. (2017) Absence of *Geomalacus maculosus* (Kerry Slug) from parts of western Ireland suggests human mediated transport of species to its most northerly location. *Biology and Environment* 117: 123-129.

16. Holovachov, O., Boström, S., Tandingan De Ley, I., **Mc Donnell, R.J.**, Alvarado, S., Paine, T., and De Ley, P. (2016) *Alloionema similis* sp. n., a genetically divergent sibling species of *A. appendiculatum* Schneider, 1859 (Rhabditida: Alloionematidae) from invasive slugs in California, USA. *Systematic Parasitology* 93: 877-898.
17. **Mc Donnell, R.J.**, Yoo, J, Patel, K, Rios, L., Hollingsworth, R., Millar, J. and Paine, T. (2016) Can essential oils be used as novel drench treatments for the eggs and juveniles of the pest snail *Cornu aspersum* in potted plants? *Journal of Pest Science* 89: 549-555
18. **Mc Donnell, R.J.**, Santangelo, R., Paine, T. and Hoddle, M. (2016) The feeding behavior of *Rumina decollata* (Gastropoda) raises questions about its efficacy as a biological control agent for *Cornu aspersum* (Helicidae: Gastropoda). *Biocontrol Science and Technology* 26: 331-336.
19. Tandingan De Ley, I., Holovachov, O., **Mc Donnell, R.J.**, Bert, W., Paine, T. and De Ley, P. (2016) Description of *Phasmarhabditis californica* new species and first report of *P. papillosa* (Nematoda: Rhabditidae) from invasive slugs in the United States. *Nematology* 18: 175-193.
20. Reich, I., Gormally, M., Allcock, L., **Mc Donnell, R.J.**, Castillejo, J., Iglesias, J., Quintero, J. and Smith, C. (2015) Genetic study reveals close link between Irish and Northern Spanish specimens of the protected Lusitanian slug *Geomalacus maculosus*. *Biological Journal of the Linnean Society* 116: 156 – 168.

Grantsmanship

>\$4.5 million total from U.S. Department of Agriculture (Farm Bill, Natural Resources Conservation Service), Oregon Department of Agriculture, California Department of Food and Agriculture, European Union, Christmas Tree Promotion Board, Oregon Seed Council, Oregon Association of Nurseries, and Agricultural Research Foundation.

Past 5 years only (Mc Donnell PI status listed in italics at end of PI list.)

Year(s)	PIs	Agency	Title	Total \$	\$ to McDonnell
2019-20	Mc Donnell, Denver (OSU), LaBonte, Vlach (both ODA) <i>Lead PI</i>	USDA Farm Bill	Development of <i>Phasmarhabditis hermaphrodita</i> as a biological control agent of invasive gastropods in Oregon	\$98,556	\$41,554
2019-20	Mc Donnell, Denver (OSU) <i>Lead PI</i>	Oregon Seed Council	<i>Phasmarhabditis</i> nematodes: potential biological control agents for the gray field slug in Oregon grass seed crops	\$40,000	\$20,000
2018-21	Mc Donnell, Denver (OSU), Dillman, Tandingan DeLey (UCR), Wilen (UCD) <i>Co-PI</i>	USDA Multistate Specialty Crop Block Grant	Optimizing <i>Phasmarhabditis</i> nematodes for mitigating invasive gastropods in Western US	\$770,356	\$106,896

2018-21	Mc Donnell, Denver (OSU), Choi, Martin (both USDA-ARS) <i>Lead PI</i>	ODA-SCBG	Development of new biological control strategies for pest slugs	\$174,853	\$41,000
2018-19	Mc Donnell, Denver (OSU), LaBonte, Vlach (both ODA) <i>Lead PI</i>	USDA Farm Bill	Development of <i>Phasmarhabditis hermaphrodita</i> as a biological control agent of invasive gastropods in Oregon	\$94,125	\$37,200
2018-19	Mc Donnell, Vlach, LaBonte, (both ODA) <i>Co-PI</i>	USDA Farm Bill	Exotic Mollusk Survey of Oregon	\$40,000	\$4,975
2018	Mc Donnell <i>Lead PI</i>	IR-4	Efficacy of new active ingredient formulations for managing slugs and snails on and around ornamental horticulture plants	\$5,000	\$5,000
2017-19	Mc Donnell <i>Lead PI</i>	USDA NRCS	Ground beetles as conservation biological control agents of pest slugs and the development of Best Management Practices (BMPs) to promote malacophagous species in no-till systems	\$250,000	\$250,000
2017-19	Mc Donnell, Landgren (OSU), Chastagner (WSU) <i>Lead PI</i>	Christmas Tree Promotion Board	Development of IPM strategies for management of slugs on Christmas trees	\$80,000	\$40,000
2017-18	Mc Donnell, Chastain (OSU) <i>Lead PI</i>	Oregon Seed Council	Essential oils and terpenes as novel tools for managing the key slug pest, <i>Deroceras reticulatum</i> , in Oregon grass seed crops	\$45,000	\$35,000
2017-18	Mc Donnell, Denver (OSU) <i>Lead PI</i>	Oregon Seed Council	<i>Phasmarhabditis hermaphrodita</i> : a potential nematode biological control agent for the gray field slug in	\$20,000	\$10,000

			Oregon grass seed crops		
2018	Mc Donnell, Denver (OSU) <i>Lead PI</i>	ODA-OAN	Snail and slug-killing nematodes in Oregon nurseries	\$20,000	\$10,000
2017-18	McDonnell, Adams (USDA APHIS MT), Foley (Montana Dept. of Ag.), Roda (USDA-APHIS FL), Millar (UCR) <i>Lead PI</i>	USDA Farm Bill	Attractant-based detection and control methods for invasive gastropod species	\$160,000	\$112,433
2017-18	McDonnell, Hara (UH), Rohrig (Florida Dept. of Ag.) Roda (USDA-APHIS FL), Millar (UCR) <i>Co-PI</i>	USDA Farm Bill	Activators and Attractants for Giant African Snail	\$180,000	\$67,000
2017-20	Mc Donnell, Reich, Gormally (NUIG) <i>Co-PI</i>	European Union	Carabids as biocontrol agents for slugs in Oregon and Ireland - a novel and interdisciplinary approach to determine key malacophagous species and beneficial management options	\$304,315.64 €248,063.40	\$196,438.65 €160,130.40
2017-19	Mc Donnell, Denver (OSU) <i>Lead PI</i>	Agricultural Research Foundation	Malacopathogenic nematodes associated with the key slug pest <i>Deroceras reticulatum</i> in Oregon agriculture	\$12,500	\$9,000
2017	Mc Donnell, Landgren (OSU), Chastagner (WSU) <i>Co-PI</i>	ODA-OAN	Novel essential oil sprays for slug control on exported Christmas trees	\$11,980	\$2,000
2016-17	Mc Donnell, Chastain (OSU) <i>Lead PI</i>	Oregon Seed Council	Essential oils and terpenes as novel tools for managing the key slug pest, <i>Deroceras reticulatum</i> , in Oregon grass seed crops	\$45,000	\$35,000
2016-17	Mc Donnell, Sullivan (OSU)	Oregon Seed Council	If I kill slugs now will it help me later?	\$15,000	\$7,500

	<i>Co-PI</i>		Optimizing slug management practices in the spring to benefit current and subsequent crops		
2016-17	McDonnell, Adams (USDA APHIS MT), Foley (Montana Dept. of Ag.), Roda (USDA-APHIS FL), Millar (UCR) <i>Lead PI</i>	USDA Farm Bill	Attractant-based detection and control methods for invasive gastropod species	\$188,000	\$103,446
2016-17	McDonnell, Hara (UH), Rohrig (Florida Dept. of Ag.) Roda (USDA-APHIS FL), Millar (UCR) <i>Co-PI</i>	USDA Farm Bill	Activators and Attractants for Giant African Snail	\$184,000	\$56,034
TOTAL				\$2,600,130	\$1,128,923

Professional meetings, symposia, and conferences – 68 total

Invited presentations only – Research (past 5 years)

1. **Mc Donnell, R.J.** (2019) Slime time: Frontiers in slug and snail management in North America. International Congress on Invertebrate Pathology and Microbial Control & 52nd Annual Meeting of the Society for Invertebrate Pathology & 17th Meeting of the IOBC-WPRS Working Group “Microbial and Nematode Control of Invertebrate Pests, Valencia, Spain, July 28 to August 1 2019. Keynote Address.
2. **Mc Donnell, R.J.** (2019) Essential oils as novel tools for managing the invasive slug *Deroceras reticulatum* (Agriolimacidae: Gastropoda). World Congress of Malacology, Pacific Grove, California, August 11-16, 2019.
3. Roda, A.L., Millar, J.G., Cong, M.Y., Jacobsen, C., and **Mc Donnell, R.J.** (2019) Development and Integration of Lures into Southern Florida’s Giant African Snail (*Lissachatina fulica*) Eradication Program. World Congress of Malacology, Pacific Grove, California, August 11-16, 2019.
4. Tandingan De Ley I., **Mc Donnell, R.J.**, and Paine, T.D. (2019) *Phasmarhabditis* spp and Invasive Gastropods in the US: Where are we in the Battle? World Congress of Malacology, Pacific Grove, California, August 11-16, 2019.
5. **Mc Donnell, R.J.**, Colton, A., Howe, D.K., Ha, A.D. and Denver, D.R. (2019) Discovery and biological control potential of slug-killing nematodes in Oregon. 10th International Herbage Seed Group Conference, Corvallis, Oregon, May 12-19, 2019.
6. **Mc Donnell, R.J.** (2019) Workshop on the biology and identification of pest slugs. 10th International Herbage Seed Group Conference, Corvallis, Oregon, May 12-19, 2019.

7. Cordoba, M., Millar, J. and **Mc Donnell, R.J.** (2017) A high throughput laboratory bioassay for testing potential attractants for terrestrial gastropods, demonstrated by identification of a highly attractive food for *Cornu aspersum* and *Deroceras reticulatum*. 50th Annual Meeting of the Western Society of Malacologists, University of Southern California and Natural History Museum of Los Angeles County, June 19th – 23rd 2017.
8. **Mc Donnell, R.J.**, Hollingsworth, R., Millar, J. and Paine, T. (2016) Clove bud oil as a novel tool for managing *Cornu aspersum* (Helicidae: Gastropoda) in potted plants. Symposium: Challenges and Solutions for the Floriculture and Nursery Industry's Exotic Pest Crisis, Pacific Branch Meeting of the Entomological Society of America, Honolulu, Hawaii, April 3rd - 6th 2016.
9. **Mc Donnell, R.J.** (2015) Slime time: California's invasive snails and slugs and alternative approaches for their control. Winter Quarter Seminar Series, California State Polytechnic University, Pomona, March 4th 2015.

D. EXTENSION ACTIVITY

Publications

1. **Mc Donnell, R.J.**, Anderson, N., Sullivan, C., and Dreves, A.J. (in press) Slug control. In: Pacific Northwest Insect Management Handbook (Ed. C.S. Hollingsworth). Oregon State University, Corvallis, OR.
2. **Mc Donnell, R.J.**, Colton, A., Howe, D.K., and Denver, D.R. (in press) The lethality of four species of slug-killing nematodes to the gray field slug. In: 2019 Seed Production Research Report (Eds. N. Anderson, A. Hulting, and D. Walenta). Crop and Soil Science, Oregon State University, Corvallis, OR.
3. Klein, M., Chastain, T., Garbacik, C. J. and **Mc Donnell, R.J.** (2018) Can essential oils be used to control the grey field slug? In: 2018 Seed Production Research Report (Eds. N. Anderson, A. Hulting, and D. Walenta). Pages 29 – 32. Crop and Soil Science, Oregon State University, Corvallis, OR.
4. Mueller-Warrant, G.W., Trippe, K.M., and **Mc Donnell, R.J.** (2018) Timing of slug emergence in new perennial ryegrass plantings. In: 2018 Seed Production Research Report (Eds. N. Anderson, A. Hulting, and D. Walenta). Pages 33 – 35. Crop and Soil Science, Oregon State University, Corvallis, OR.
5. **Mc Donnell, R.J.**, Dreves, A.J., Anderson, N., and Sullivan, C. (2018) Slug control. In: Pacific Northwest Insect Management Handbook (Ed. C.S. Hollingsworth). Oregon State University, Corvallis, OR. (<https://pnwhandbooks.org/node/266>)
6. **Mc Donnell, R.J.**, and Anderson, N.P. (2017) Pest Slugs in Western Oregon Seed Crops: Stakeholder Knowledge, Baiting Strategies, and Attitude Toward Novel Management Tools. In N. Anderson, A. Hulting, and D. Walenta (ed.) 2017 Seed Production Research Report - Crop and Soil Science: 1-4.
7. Dreves, A.J., **Mc Donnell, R.J.**, Anderson, N., and Sullivan, C. (2017) Slug control. In: Hollingsworth, C.S., editor. Pacific Northwest Insect Management Handbook. Corvallis, OR: Oregon State University. p. N14-N16 (<https://pnwhandbooks.org/node/266>)

Trade articles

8. Rondon, S.I. and **Mc Donnell, R.J.** (2020) Unlikely visitor. Dealing with slugs in commercial potato storage facilities. Potato Grower January 2020.
9. **Mc Donnell, R.J.**, and Rosetta, R. (2017) Got slime? Digger Magazine August 2017. http://www.diggermagazine.com/wp-content/uploads/2017/08/Farwest_201708-Slime.pdf

Presentations – 41 total

I have delivered 41 Extension, industry and outreach presentations both face-to-face and through online webinars to growers, legislators, and the general public throughout the U.S.

Year	Invited	Voluntary	# attendees
2016	5	0	771
2017	12	3	1032
2018	13	1	1931
2019	4	3	373
TOTAL	34	7	4107

Invited presentations only (past 5 years)

1. Wilen, C., **Mc Donnell, R.J.**, DeLey, I, Dillman, A. (2019) Slugs and Snails. UC Ag Experts Talk Series. Online webinar. May 22nd 2019.
2. Reich, I. and **Mc Donnell, R.J.** (2019) Controlling Slugs in the Willamette Valley. Seed Quality Management Workshop, OSU Seed Laboratory, Corvallis, Oregon, March 25th 2019. 10 attendees.
3. **Mc Donnell, R.J.** (2019) Controlling Slugs in the Willamette Valley. Seed Quality Management Workshop, OSU Seed Laboratory, Corvallis, Oregon, March 19th 2019.
4. **Mc Donnell, R.J.** (2019) Slime time: Slugs and the development of novel approaches for their control. Pacific Northwest Christmas Tree Association Christmas Tree Short Course. Holiday Inn, Wilsonville, Oregon, February 22 2019.
5. **Mc Donnell, R.J.** (2018) Research Update: Managing Slugs in Grass Seed Production. 78th Annual Convention of the Oregon Seed Growers League. Salem Conference Center, Salem, Oregon December 11th 2018.
6. **Mc Donnell, R.J.** (2018) Frontiers in Pest Slug and Snail Management. 45th Annual Hermiston Farm Fair. Eastern Oregon Trade & Event Center Hermiston, November 30th 2018.
7. **Mc Donnell, R.J.** (2018) Slime Time: Snail and Slug ID, Biology and Management. Clatsop County Master Gardeners, Barbey Maritime Center, Astoria, October 24th 2018.
8. **Mc Donnell, R.J.** (2018) Slug Research Updates & Survey Results. 2018 Fall OSU Extension Seed Crop and Cereal Production Meeting. Forest Grove Elk Lodge, Forest Grove, Oregon, September 13th 2018.
9. **Mc Donnell, R.J.** (2018) Slug Research Updates & Survey Results. 2018 Fall OSU Extension Seed Crop and Cereal Production Meeting. Roth's Hospitality Center, Salem, Oregon, September 12th 2018.
10. **Mc Donnell, R.J.** (2018) Slug Research Updates & Survey Results. 2018 Fall OSU Extension Seed Crop and Cereal Production Meeting. Linn Co. Fair and Expo, Albany, Oregon, September 12th 2018.
11. **Mc Donnell, R.J.** (2018) Slime Time: Snail & Slug ID, Biology and Management. Growing Gardeners (G2) Educational Conference. Linfield College, McMinnville, July 13th 2018.
12. **Mc Donnell, R.J.** (2018) Slug Management. Pesticide Recertification 2018. Urban Pest Management Course. Clackamas Community College, Gregory Forum Bldg, Oregon City, February 7th 2018.
13. **Mc Donnell, R.J.** (2018) Frontiers in slug management - current and novel approaches. Oregon Processed Vegetable Commission Grower Meeting, Linn County Expo Center, Albany, January 30th 2018.
14. **Mc Donnell, R.J.** (2018) Frontiers in Slug and Snail Management. Spring 2018 series of Advanced Training Webinars for Master Gardeners. Online webinar, January 29th 2018.

15. **Mc Donnell, R.J.** (2018) Slug Trends and Future Directions. 2018 Winter OSU Extension Seed Crop and Cereal Production Meeting. Forest Groves Elk Lodge, Forest Grove, Oregon, January 10th 2018.
16. **Mc Donnell, R.J.** (2018) Slug Trends and Future Directions. 2018 Winter OSU Extension Seed Crop and Cereal Production Meeting. Linn Co. Fair and Expo, Albany, Oregon, January 9th 2018.
17. **Mc Donnell, R.J.** (2018) Slug Trends and Future Directions. 2018 Winter OSU Extension Seed Crop and Cereal Production Meeting. Roth's Hospitality Center, Salem, Oregon, January 9th 2018.
18. **Mc Donnell, R.J.** (2017) OSU Slug Research Updates! 2017 Fall OSU Extension Seed Crop and Cereal Production Meeting. Roth's Hospitality Center, Salem, Oregon, September 6th 2017.
19. **Mc Donnell, R.J.** (2017) OSU Slug Research Updates! 2017 Fall OSU Extension Seed Crop and Cereal Production Meeting. Forest Groves Elk Lodge, Forest Grove, Oregon, September 5th 2017.
20. **Mc Donnell, R.J.** (2017) OSU Slug Research Updates! 2017 Fall OSU Extension Seed Crop and Cereal Production Meeting. Linn Co. Fair and Expo, Albany, Oregon, September 5th 2017.
21. **Mc Donnell, R.J.** (2017) Slugs and the development of novel approaches for their control. Oregon Soil Health Partners Quarterly Webinars, August 29th 2017.
22. **Mc Donnell, R.J.** (2017) New OSU slug research and management strategies. 8th Annual North Valley Field Crop Tour. May 18th, 2017.
23. **Mc Donnell, R.J.** (2017) Slime time – Oregon's slug pests and the development of novel approaches for their management. Salem Rotary Club, Salem Convention Center, Salem. April 26th 2017.
24. **Mc Donnell, R.J.** (2017) Slugs pests in Oregon and the development of novel approaches for their management. USDA-NRCS – Unlock the Secrets to Soil Health Success in Organic Systems. North Willamette Research and Extension Center, Aurora, Oregon. April 6th 2017.
25. **Mc Donnell, R.J.** (2017) Oregon's pest slugs and the development of novel tools for use in IPM. Polk SWCD - Geese, Slugs & Voles: Biocontrol Options. Hamesly Library, Western Oregon University, Monmouth Oregon. March 9th 2017.
26. **Mc Donnell, R.J.** (2017) Making Slugs a Priority - A New Program at OSU! PNW Christmas Tree Association Short Course. Holiday Inn Portland South, Wilsonville, Oregon. February 24th 2017.
27. **Mc Donnell, R.J.** (2017) Concepts of IPM for slug and snail management. North Valley CORE Pesticide Training. Forest Grove Elk's Lodge, Forest Grove, Oregon. February 10th 2017.
28. **Mc Donnell, R.J.** (2017) Slug and snail pests in urban areas and the development of novel tools for their management. Integrated Plant Protection Center IPM/Pesticide Risk Management Recertification Courses Urban Pest Management Course. Clackamas Community College, Oregon City, Oregon. February 1st 2017.
29. **Mc Donnell, R.J.** (2017) Slug and snail pests in non-crop vegetation and the development of novel tools for their management - Integrated Plant Protection Center IPM/Pesticide Risk Management Recertification Courses - Non Crop Vegetation Management. LaSells Stewart Center. Oregon State University, Corvallis, Oregon, January 25th 2017.
30. **Mc Donnell, R.J.** (2016) Making Slugs a Priority - A New Program at OSU. 76th Annual Convention of the Oregon Seed Growers League. Salem Conference Center, Salem, Oregon December 12th 2016.
31. **Mc Donnell, R.J.** (2016) New Slug Research Program at OSU! 2016 Fall OSU Extension Seed Crop and Cereal Production Meeting. Forest Groves Elk Lodge, Forest Grove, Oregon, September 23rd 2016.
32. **Mc Donnell, R.J.** (2016) New Slug Research Program at OSU! 2016 Fall OSU Extension Seed Crop and Cereal Production Meeting. Linn Co. Fair and Expo, Albany, Oregon, September 22nd 2016.
33. **Mc Donnell, R.J.** (2016) New Slug Research Program at OSU! 2016 Fall OSU Extension Seed Crop and Cereal Production Meeting. Roth's Hospitality Center, Salem, Oregon, September 22nd 2016.

34. **Mc Donnell, R.J.** (2016) Slug and snail pests in Oregon and some novel approaches for their control. Integrated Biological Pest Management Practices for Oregon Farms, NRCS plant Materials Center, Corvallis, Oregon, August 23-24th, 2016.

Evaluation of my Extension teaching by attendees. Teaching quality assessed on a scale of 1 – 6 where 1 is very poor, 2 is poor, 3 is fair, 4 is good, 5 is very good and 6 is excellent. Results presented as an average score for each question over three events.

Question	Average
<i>Overall Teaching Quality</i>	
1. Overall, the quality of this educational event was:	5.74
2. The quality of instruction in this educational event was:	5.72
<i>Teaching Qualities within the Discipline</i>	
3. Clarity of educational objectives was:	5.68
4. Clarity of how you might use this education was:	5.56
5. Teaching organization was:	5.74
6. Instructor’s use of examples was:	5.64
7. Instructor’s use of teaching aids (slides, overheads, charts, etc) was:	5.74
8. Instructor’s ability to stimulate my thinking more deeply about the subject was:	5.67
9. Instructor’s responsiveness to questions was:	5.81
10. Instructor’s use of participant discussion to enhance my learning was:	5.53
11. Instructor’s ability to develop a welcoming environment for all participants was:	5.76
12. Instructor’s skill in making the information useful to me was:	5.72

Websites and social media

1. *Slug Portal* – Manager of the Slug Portal (<http://agsci.oregonstate.edu/slug-portal>) which was designed to help growers, crop consultants, Extension faculty, and others understand and better manage slugs; disseminate knowledge on slug biology and behavior; provide information that will forecast slug activity; and provide decision-making tools to assist in effective management strategies.
2. *Twitter* - Active social media presence in the form of a Twitter feed (@RoryJMcDonnell) and currently have 191 followers. I tweet approximately every week. Topics include recent papers and book chapters my team have published, upcoming events that I am speaking at or have helped organize, information on slug management, and other malacological information.

E. SUPERVISORY ACTIVITY

Past 2 years only

Graduate level - One graduate student (Mr. Fares Alzrahani), one visiting graduate student (Ms. Allison Bistline-East)

CAPSTONE students - Twelve senior Mechanical, Industrial and Manufacturing Engineering (MIME) undergraduate CAPSTONE students (Ms. Sukeina Ali Almomen, Mr. Abdulazeiz Abbas Mousa Yousuf Alraeesi, Mr. Mohammad Hussain, Mr. Jordan Bolt, Mr. Ali Alahmari, Mr. Joseph Butler, Mr. Wil Becker, Mr. Zach Holmes, Mr. Abdulla Al-Huthaili, Mr. Zach Petchell, Mr. Adnan Alzakaria, and Mr. Coel French)

Paid undergraduate – Ms. Marisa Lutz

Volunteer undergraduate students - Ms. Havana Soler, Ms. Ashley Castaneda, Ms. Eve Selbie, Ms. Chloe Hull, Mr. Carlos Mendoza, Mr. Michael Hampton, Ms. Silvia Vasquez Lima, Ms. Nina Rudin, Ms. Taylor Lust, Ms. Alana MacKinnon, Ms. Aleah Dew, and Mr. Warren Anderson.

These students include representatives from underrepresented minority groups, from diverse national origins, from diverse religious beliefs and include a number of first-generation college students.

F. OTHER INDICATORS OF LEADERSHIP AND ESTEEM

Peer review

Scientific Journals: Expert reviewer for the following international journals, African Invertebrates; Agriculture, Ecosystems & Environment; Agricultural & Forest Entomology; Annals of Applied Biology; American Journal of Enology & Viticulture; Aquatic Invasions; Biological Control; Biological Invasions; Biological Journal of the Linnean Society; Biology & the Environment; Canadian Entomologist; Ecology & Evolution; Ecological Indicators; Ecosphere; Environmental Entomology, Hawaiian Journal of Medicine & Public Health; Journal of Natural History, Insect Conservation & Diversity; Journal of Pest Science; NeoBiota; Pedobiologia; PLoS ONE, Proceedings of the Entomological Society of Washington; Nautilus; and Zootaxa.

Societies

1. November 2014 – Present: Elected Secretary of the Governing Board of the International Branch of the Entomological Society of America (ESA). The latter is the largest organization in the world serving the professional and scientific needs of entomologists.
2. January 2013 – October 2014: Chair of the Awards Committee of the International Branch of the Entomological Society of America.
3. January 2010 to December 2012: Member of the Awards Committee of the International Branch of the Entomological Society of America.
4. Councilor-At-Large for the American Malacological Society (2013).
5. Active member of American Malacological Society, Entomological Society of America, Marie Curie Fellow Association, and Tropical Biology Association.

Advisory

1. Invited to the Jiangsu Academy of Agricultural Sciences in Nanjing, China from June 16th – 21st 2019 to deliver an academic seminar, provide training on snail and slug identification and guidance on snail management strategies in crops.
2. Invited to Ecuador by the Association of Pineapple Producers (ASOPINA) to review snail control in pineapple crops. During the trip (November 4 – 11 2017) I met with growers and other stakeholders

(e.g. the Ecuadorian Phytosanitary Agency) and made recommendations for improving snail management during all stages of crop production.

3. Invited to Alaska by the US Forest Service to advise on the potential ecological impacts of the invasive slug *Arion ater* and to present at the 2017 Alaska Invasive Species Workshop in Anchorage from October 23 – 26 2017.
4. Invited by the US Department of Agriculture – Agricultural Research Service - Pacific Area to the Big Island of Hawaii to survey for the slug, semi-slug and snail hosts of the potentially fatal human disease, eosinophilic meningo-encephalitis, from January 12th - 20th 2017.

Media

1. Interviewed by National Geographic for an article published on July 22 2017 about slugs and snails (<http://news.nationalgeographic.com/2017/07/inside-the-strange-world-of-slug-sex-and-slime/>).
2. Interviewed by The New Yorker magazine for an article published on June 12 2017 about a snail and slug-borne human disease (eosinophilic meningo-encephalitis) in Hawaii (<https://www.newyorker.com/tech/elements/rat-lungworm-the-tropical-parasite-that-took-hawaii-by-surprise>).