

## BIOGRAPHICAL DATA – GEORGE NEWCOMBE

### Field and date of investigator's highest degree:

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Degree	Institution	Department	Year
B.Sc. (Ag.)	McGill University	Plant Science	1983
Ph.D.	University of Guelph	Botany	1988

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**Date of initial appointment as a tenure-track faculty member at University of Idaho (UI):**  
August 1999.

**Present academic rank:** Professor

**Telephone:** (208) 596 8271.

**Lab:** CNR 210, UI College of Natural Resources.

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Recent talk at webinar on Tree resistance to diseases and pests –  
Interaction with and facilitation by the microbiome - [Forestry  
and Agricultural Biotechnology Institute \(up.ac.za\)](#). YouTube link for Oct. 2021 IUFRO  
Webinar: <https://www.youtube.com/watch?v=QEjnvqpxk8g>

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### Refereed Publications at the UI [1999-on]:

1. BUSBY, P.E., NEAT, A., AVERILL, C., and NEWCOMBE, G. 2022. The forest microbiome in the context of global restoration. ***Annual Review of Phytopathology* 60: in review.**
2. NISCHWITZ, C., FERSON, A., RIDOUT, M., BARNEY, K., and NEWCOMBE, G. 2022. First Report of Powdery Mildew Caused by *Podosphaera pannosa* on *Rosa canina* in North America. ***Australasian Plant Disease Notes: in review.***
3. NEWCOMBE, G., MARLIN, M., BARGE, E., HEITMANN, S., RIDOUT, M., and BUSBY, P.E. 2022. Plant seeds as sources of beneficial *Bacillus*. ***Microbial Ecology: accepted for publication.***
4. BORGER, C.P.D., TORRA FARRE, J., ROYO-ENSAL, A., DAVIES, L., and NEWCOMBE, G. 2021. *Bromus diandrus* and *B. rigidus*. Chapter 4 in Chauhan B (Ed), ***Biology and Management of Problematic Weed Species***. Elsevier Inc. ISBN: 978-0-12-822917-0.
5. NEWCOMBE, G. and BUSBY, P.E. 2021. Chapter 9 in ***Hybrid Poplar Growers' Manual***. K.W. Zobrist, N.M. Haider, and B. Stanton, Eds. WSU Extension Manual EMxxx.
6. SRIVASTAVA, A.K., KASHYAP, P.L., SANTOYO, G. and NEWCOMBE, G., 2021. Plant Microbiome: Interactions, Mechanisms of Action, and Applications. ***Frontiers in Microbiology*, 12.**
7. CERVANTES, D., RIDOUT, M., and NEWCOMBE, G. 2021. Adult-plant resistance to white rust in a biennial. ***Phytopathologia Mediterranea* 60(2): 381-385.** <https://doi.org/10.36253/phyto-12805>.

8. HEITMANN, S., BERGMANN, G., BARGE, E., RIDOUT, M., NEWCOMBE, G., and BUSBY, P. 2021. Culturable seed microbiota of *Populus trichocarpa*. *Pathogens* 10(6), 653; <https://doi.org/10.3390/pathogens10060653>.
9. YU, Z., DING, H., SHEN, K., BU, F., NEWCOMBE, G., and LIU, H. 2021. Foliar endophytes in forest trees varying greatly in age. *European Journal of Plant Pathology* 160: 375-384. <https://doi.org/10.1007/s10658-021-02250-7>.
10. ALOMRAN, M., HOUBRAKEN, J., and NEWCOMBE, G. 2020. *Aspergillus tubingensis* is a pre-emergent pathogen of date palm seedlings. *Forests* 11, 1327; doi:10.3390/f11121327
11. NEWCOMBE, G., FRASER, S.J., RIDOUT, M. and BUSBY, P.E. 2020. Leaf Endophytes of *Populus trichocarpa* Act as Pathogens of Neighboring Plant Species. *Frontiers in Microbiology* 11.
12. SAINT-VINCENT, P., RIDOUT, M., ENGLE, N.L., LAWRENCE, T.J., YEARY, M.L., TSCHAPLINSKI, T.J., NEWCOMBE, G. and PELLETIER, D.A. 2020. Isolation, Characterization, and Pathogenicity of Two *Pseudomonas syringae* Pathovars from *Populus trichocarpa* Seeds. *Microorganisms*, 8(8), p.1137.
13. ALOMRAN, M., NEWCOMBE, G. and PRATHER, T. 2019. *Ventenata dubia*'s Native Range and Consideration of Plant Pathogens for Biological Control. *Invasive Plant Science and Management*: 12(4), 242-245. doi:10.1017/inp.2019.24.
14. YU, Z., SHEN, K., NEWCOMBE, G., FAN, J., and CHEN, Q. 2019. Leaf cuticle can contribute to non-host resistance to poplar leaf rust. *Forests*: 10(10), 870. <https://doi.org/10.3390/f10100870>.
15. GARCÍA DE LA CRUZ, R., KNUDSEN, G., DANDURAND, L-M C, CARTA, L.K., and NEWCOMBE, G. 2019. Nematodes associated with invasive spotted knapweed. *Nematropica* 49: 200-207.
16. RIDOUT, M.E., GODFREY, B. and NEWCOMBE, G. 2019. Effects of antagonists on mycotoxins of seedborne *Fusarium* spp. in sweet corn. *Toxins*: 11(8), p.438.
17. BARGE, E., LEOPOLD, D.R., PEAY, K.G., NEWCOMBE, G., and BUSBY, P.E. 2019. Differentiating spatial from environmental effects on foliar fungal communities of *Populus trichocarpa*. *Journal of Biogeography*: DOI:10.1111/jbi.13641.
18. BUSBY, P., CRUTSINGER, G., BARBOUR, M., and NEWCOMBE, G. 2019. Contingency rules for pathogen competition and antagonism in a genetically based, plant defense-based hierarchy. *Ecology and Evolution*: 1-9. DOI: 10.1002/ece3.5253.
19. MARLIN, M., WOLF, A., ALOMRAN, M., CARTA, L.K., and NEWCOMBE, G. 2019. Nematophagous *Pleurotus* species consume some nematode species but are themselves consumed by others. *Forests* 10(5): 404.
20. RIDOUT, M., SCHROEDER, K., HUNTER, S., STYER, J., and NEWCOMBE, G. 2019. Priority effects of wheat seed endophytes on a rhizosphere symbiosis. *Symbiosis*:1-13.
21. ZHENG, W., NEWCOMBE, G., HU, D., CAO, Z., YU, Z., and PENG, Z. 2019. The first record of a North American poplar leaf rust fungus, *Melampsora medusae*, in China. *Forests* 10(2): 182; <https://doi.org/10.3390/f10020182>.
22. NEWCOMBE, G., HARDING, A., RIDOUT, M., and BUSBY, P. 2018. A hypothetical bottleneck in the plant microbiome. *Frontiers in Microbiology*: <https://doi.org/10.3389/fmicb.2018.01645>.

23. NEWCOMBE, G., MUCHERO, W., and BUSBY, P. 2018. Resistance to an eriophyid mite in an interspecific hybrid pedigree of *Populus*. ***PLoS ONE*** 13(11): e0207839. <https://doi.org/10.1371/journal.pone.0207839>.
24. DE LA CRUZ, R. G., KNUDSEN, G. R., CARTA, L. K., & NEWCOMBE, G. 2018. Either low inoculum or a multi-trophic interaction can reduce the ability of *Sclerotinia sclerotiorum* to kill an invasive plant. ***Rhizosphere*** 5: 76-80.
25. RIDOUT, M. E., and NEWCOMBE, G. 2017. *Sydowia polyspora* is both a foliar endophyte and a pre-emergent seed pathogen in *Pinus ponderosa*. ***Plant Disease***: <https://apsjournals.apsnet.org/doi/10.1094/PDIS-07-17-1074-RE>.
26. GRIFFITH, D. L., LARKIN, B., KLISKEY, A., ALESSA, L., and NEWCOMBE, G. 2017. Expectations for habitat-adapted symbiosis in a winter annual grass. ***Fungal Ecology*** 29: 111-115.
27. RIDOUT, M., HOUBRAKEN, J., and NEWCOMBE, G. 2017. Xerotolerance of *Penicillium* and *Phialocephala* fungi, dominant taxa of fine lateral roots of woody plants in the intermountain Pacific Northwest, USA. ***Rhizosphere*** 4: 94-103.
28. RIDOUT, M., NEWCOMBE, G., and GODFREY, B. 2016. First report of *Fusarium temperatum* in diseased sweet corn ears in the western United States. ***Plant Disease*** 100: 2527.
29. FRASER, S., BOWMAN, E.A., GIANOPULOS, N.G., and NEWCOMBE, G. 2016. *Xanthoria parietina* in the Inland Pacific Northwest. ***North American Fungi*** 11: DOI: <http://dx.doi.org/10.2509/naf2016.011.002>.
30. NEWCOMBE, G., CAMPBELL, J., GRIFFITH, D., BAYNES, M., LAUNCHBAUGH, K., and PENDLETON, R. 2016. Revisiting the life cycle of dung fungi, including *Sordaria fimicola*. ***PLOS ONE***: DOI: 10.1371/journal.pone.0147425.
31. CARTA, L. K., S. LI, A. M. SKANTAR, and NEWCOMBE, G. 2016. Morphological and molecular characterization of two *Aphelenchoides* endophytic in poplar leaves. ***Journal of Nematology*** 48:(1): 28-33.
32. RIDOUT, M., and NEWCOMBE, G. 2016. Disease suppression in winter wheat from novel symbiosis with forest fungi. ***Fungal Ecology*** 20: 40-48.
33. BUSBY, P.E., PEAY, K.G., and NEWCOMBE, G. 2015. Common foliar fungi of *Populus trichocarpa* modify *Melampsora* rust disease severity. ***New Phytologist*** 209: 1681–1692.
34. BUSBY, P.E., RIDOUT, M., and NEWCOMBE, G. 2015. Fungal endophytes and their role in plant disease. ***Plant Molecular Biology*** 90: (doi:[10.1007/s11103-015-0412-0](https://doi.org/10.1007/s11103-015-0412-0)).
35. BUSBY, P.E., LAMIT, L., KEITH, A.R., NEWCOMBE, G., GEHRING, C., WHITHAM, T.G., and DIRZO, R. 2015. Genetics-based interactions among plants, pathogens and herbivores define arthropod community structure. ***Ecology*** 96: 1974-1984.
36. RIDOUT, M., and NEWCOMBE, G. 2015. The frequency of modification of *Dothistroma* pine needle blight severity by fungi within the native range. ***Forest Ecology and Management*** 337: 153-160.
37. BUSBY, P.E., NEWCOMBE, G., DIRZO, R., and WHITHAM, T.G. 2014. Differentiating genetic and environmental drivers of plant-pathogen community interactions. ***Journal of Ecology*** 102: 1300-1309.
38. ASCHEHOUG, E., THARAYIL, N., CALLAWAY, R.M., and NEWCOMBE, G. 2014. Fungal endophyte increases the allelopathic effects of an invasive forb. ***Oecologia*** 175: 285-291.

39. NEWCOMBE, G. & PSCHIEDT, J. 2014. Rust diseases of *Rhododendron* and *Azalea*. In revised edition of the **Compendium of Rhododendron and Azalea Diseases**. D.M. Benson & R. Linderman, eds. **APS Press**.
40. BUSBY, P.E., ZIMMERMAN, N., WESTON, D.J., JAWDY, S.A., HOUBRAKEN, J., and NEWCOMBE, G. 2013. Leaf endophytes and *Populus* genotype affect severity of damage from the necrotrophic leaf pathogen, *Drepanopeziza populi*. **Ecosphere** 4(10): article 125 (12 pages).
41. OSTRY, M., RAMSTEDT, M., NEWCOMBE, G., and STEENACKERS, M. 2013. Diseases of Poplars and Willows. Chapter 8 in *The Poplar and Willows Book*. Edited by Jud Isebrands and Jim Richardson. Published by the **International Poplar Commission** of UN FAO.
42. BUSBY, P.E., NEWCOMBE, G., DIRZO, R., and WHITHAM, T.G. 2013. Genetic basis of pathogen community structure for foundation tree species in a common garden and in the wild. **Journal of Ecology** 101: 867-877.
43. RAGHAVENDRA, A.K.H. and NEWCOMBE, G. 2013. The contribution of foliar endophytes to quantitative resistance to *Melampsora* rust. **New Phytologist** 197: 909-918.
44. RAGHAVENDRA, A.K.H., NEWCOMBE, G., SHIPUNOV, A., BAYNES, M., and TANK, D. 2013. Exclusionary interactions among diverse fungi infecting developing seeds of *Centaurea stoebe*. **FEMS Microbiology Ecology** 84: 143-153.
45. XIAO, S., CALLAWAY, R. M., NEWCOMBE, G., and E.T. ASCHEHOUG. 2012. Models of experimental competitive intensities predict home and away differences in invasive impact and the effects of an endophytic mutualist. **American Naturalist** 80: 707-718.
46. BAYNES, M., NEWCOMBE, G., CARTA, L., and ROSSMAN, A. 2012. A fungivorous nematode and its fungal cultivar alter the endophyte community of *Bromus tectorum*. **Fungal Ecology** 5: 610-623.
47. BUSBY, P.E., AIME, M.C., and NEWCOMBE, G. 2012. Foliar pathogens of *Populus angustifolia* are consistent with a hypothesis of Beringian migration into North America. **Fungal Biology** 116: 792-801.
48. BAYNES, M., NEWCOMBE, G., DIXON, L., CASTLEBURY, L., & O'DONNELL, K. 2012. A novel plant-fungal mutualism associated with fire. **Fungal Biology** 116: 133-144.
49. ASCHEHOUG, E.T., METLEN, K.L., CALLAWAY, R.M., & NEWCOMBE, G. 2012. Fungal endophytes directly increase the competitive effects of an invasive forb. **Ecology** 93: 3-8.
50. BENNETT, C., AIME, M.C., and G. NEWCOMBE. 2011. Molecular and pathogenic variation within *Melampsora* on *Salix* in western North America reveals numerous cryptic species. **Mycologia** 103: 1004-1018.
51. NEWCOMBE, G. 2011. Endophytes in Forest Management: Four Challenges. Pages 251-262 in: AM Pirttila, A.C. Frank (eds.). **Endophytes of Forest Trees: Biology and Applications**. Springer Berlin, Heidelberg, New York.
52. NEWCOMBE, G. and DUGAN, F.M. 2010. Fungal pathogens of plants in the Homogocene. Chapter 1 in: Y. Gherbawy, K. Voigt (eds.). **Molecular Identification of Fungi**. Springer-Verlag, Berlin, Heidelberg, New York: pages 3-35.
53. NEWCOMBE, G., MARTIN, F., and A. KOHLER. 2010. Defense and nutrient mutualisms in *Populus*. Chapter 12 in: S. Jansson et al. (eds.). **Genetics and Genomics of Populus**. Springer-Verlag, Berlin, Heidelberg, New York: pages 247-279.

54. WORAPONG, J., SUN, J., and G. NEWCOMBE. 2009. First report of *Myrothecium roridum* from a gymnosperm. **North American Fungi** 4(6): 1-6.
55. NEWCOMBE, G., GAYLORD, R., YENISH, J.P., MASTROGIUSEPPE, J., and F.M. DUGAN. 2009. New records for pathogenic fungi on weedy or non-indigenous plants. **North American Fungi** 4(8): 1-12.
56. Shipunov, A., A.K. Raghavendra, R.J. Ganley, G. and G. NEWCOMBE. 2009. *Ulocladium populi* sp. nov. E.G. Simmons, G. Newcombe and A. Shipunov, sp. nov. **Persoonia** 23: 180-181.
57. NEWCOMBE, G. 2009. Forest Genetics – A Tree is Just a Forest’s Way of Making Another Forest. **BioScience** 59: 351-352.
58. Newcombe, G., A. Shipunov, S. D. Eigenbrode, A. Raghavendra, H. Ding, C. L. Anderson, R. Menjivar, M. Crawford, and M. Schwarzländer. 2009. Endophytes influence protection and growth of an invasive plant. **Communicative and Integrative Biology** 2:1-3.
59. HOFFMANN K, TELLE S, WALTHER G, ECKART M, KIRCHMAIR M, PRILLINGER HJ, PRAZENICA A, NEWCOMBE G, DÖLZ F, PAPP T, VÁGVÖLGYI C, DEHOOG S, OLSSON L & VOIGT K. 2008. Diversity, genotypic identification, ultrastructural and phylogenetic characterization of zygomycetes from different ecological habitats and climatic regions: Limitations and utility of nuclear ribosomal DNA barcode markers. In: Y. Gherbawy (ed.) **Current Advances in Molecular Mycology**. Nova Science Publishers, Inc. (USA). Invited contribution.
60. SHIPUNOV, A., NEWCOMBE, G., RAGHAVENDRA, A., and C. ANDERSON. 2008. Hidden diversity of endophytic fungi from invasive spotted knapweed (*Centaurea stoebe* L., Asteraceae). **American Journal of Botany** 95: 1096-1108.
61. GANLEY, R.J., SNIEZKO, R.A., and G. NEWCOMBE. 2008. Endophyte-mediated resistance against white pine blister rust in *Pinus monticola*. **Forest Ecology and Management** 255: 2751-2760.
62. ROSSMAN, AMY, FARR, DAVE, PLATAS, GONZALO, and G. NEWCOMBE. 2008. *Hydropisphaera fungicola* sp. nov. **Fungal Planet**, no. 22.
63. DUGAN, FRANK, and G. NEWCOMBE. 2007. New records for powdery mildews and *Taphrina* species in Idaho and Washington. **North American Fungi** 2(8): 1-5.
64. GANLEY RJ, and NEWCOMBE G. 2006. Fungal endophytes in seeds and needles of *Pinus monticola*. **Mycological Research** 110: 318-327.
65. NEWCOMBE, G. 2005. Genes for parasite-specific, nonhost resistance in *Populus*. **Phytopathology** 95: 779-783.
66. NISCHWITZ, C, NEWCOMBE, G, and ANDERSON, CL. 2005. Host specialization of the hyperparasite *Eudarluca caricis* and its evolutionary relationship to *Ampelomyces*. **Mycological Research** 108: 421-428.
67. SMITH, JA, BLANCHETTE, RA, and NEWCOMBE, G. 2004. Molecular and morphological characterization of the willow rust fungus, *Melampsora epitea*, from arctic and temperate hosts in North America. **Mycologia** 96: 1354-1362.
68. GANLEY RJ, BRUNSFELD SJ, and NEWCOMBE G. 2004. A community of unknown, endophytic fungi in western white pine. **Proceedings of the National Academy of Sciences** 101: 10107-10112.
69. NEWCOMBE, G. 2004. Forest Pathology Rust Diseases. Chapter 5 in “**Encyclopedia of Forest Sciences**”. Burley, J., Evans, J., and Youngquist, J., editors. Elsevier Science.

70. MARTIN, F., TUSKAN, G.A., DiFAZIO, S.P., LAMMERS, P., NEWCOMBE, G. and PODILA, G.K. 2004. Symbiotic sequencing for the *Populus* mesocosm. ***New Phytologist*** 161:330-335.
71. NEWCOMBE, G. and NISCHWITZ, C. 2004. First report of powdery mildew (*Erysiphe cichoracearum*) on creeping thistle (*Cirsium arvense*) in North America. ***Plant Disease*** 88: 312.
72. NEWCOMBE, G. 2003. *Puccinia tanacetii*: specialist or generalist? ***Mycological Research*** 107: 797-802.
73. NISCHWITZ, C. and NEWCOMBE, G. 2003. First report of powdery mildew (*Sawadea bicornis*) on Norway maple (*Acer platanoides*) in North America. ***Plant Disease*** 87: 451.
74. NISCHWITZ, C. and NEWCOMBE, G. 2003. First report of powdery mildew (*Microsphaera palczewskii*) on Siberian pea tree (*Caragana arborescens*) in North America. ***Plant Disease*** 87: 451.
75. NEWCOMBE, G. 2003. Native *Venturia inopina* sp. nov., specific to *Populus trichocarpa* and its hybrids. ***Mycological Research*** 107: 108-116.
76. WOO, K.-S. and NEWCOMBE, G. 2003. Absence of residual effects of a defeated resistance gene in poplar. ***Forest Pathology*** 33: 81-89.
77. NEWCOMBE, G., and OSTRY, M. 2001. Recessive resistance to Septoria stem canker of hybrid poplar. ***Phytopathology*** 91:1081-1084.
78. NEWCOMBE, G., OSTRY, M., HUBBES, M., PERINET, P. and MOTTET, M.-J. 2001. Poplar Diseases. In ***Poplar Culture in North America***. Part A, Chapter 8. Edited by D.I. Dickmann, J.G. Isebrands, J.E. Eckenwalder, and J. Richardson. NRC Research Press, National Research Council of Canada, Ottawa, ON K1A 0R6, Canada. pp. 249-276.
79. NEWCOMBE, G., STIRLING, B., and BRADSHAW, H.D., Jr. 2001. Abundant pathogenic variation in the new hybrid rust population of *Melampsora x columbiana* on hybrid poplar. ***Phytopathology*** 91:981-985.
80. STIRLING, B., NEWCOMBE, G., VREBALOV, J., BOSDET, I., and H.D. BRADSHAW, JR. 2001. Suppressed recombination around the *MXC3* locus, a major gene for resistance to poplar leaf rust. ***Theoretical and Applied Genetics*** 103: 1129-1137.
81. JAMES, R.R., and NEWCOMBE, G. 2000. Defoliation patterns and genetics of insect resistance in cottonwoods. ***Canadian Journal of Forest Research*** 30: 85-90.
82. NEWCOMBE, G. 2000. First report of *Pestalotiopsis populi-nigrae* on poplar in North America. ***Plant Disease*** 84(5):595.
83. NEWCOMBE, G. 2000. Inheritance of resistance to *Glomerella cingulata* in *Populus*. ***Canadian Journal of Forest Research*** 30: 639-644.
84. NEWCOMBE, G., STIRLING, B., McDONALD, S.K., and BRADSHAW, H.D., Jr. 2000. *Melampsora x columbiana*, a natural hybrid of *M. medusae* and *M. occidentalis*. ***Mycological Research*** 104: 261-274.
85. NEWCOMBE, G., and THOMAS, P.L. 2000. Inheritance of carboxin resistance in a European field isolate of *Ustilago nuda*. ***Phytopathology*** 90:179-182.
86. FRITZ, R.S., MOULIA, C., and NEWCOMBE, G. 1999. Resistance of hybrid plants and animals to herbivores, pathogens, and parasites. ***Annual Review of Ecology and Systematics*** 30: 565-591.

**Refereed Publications [prior to 1999]:**

1. NEWCOMBE, G. 1998. A review of exapted resistance to diseases of *Populus*. ***European J. Forest Pathology*** 28: 209-216.
2. NEWCOMBE, G. 1998. Southerly extension of poplar leaf blight (*Linospora tetraspora*) in the Pacific Northwest. ***Plant Disease*** 82:590.
3. NEWCOMBE, G. 1998. Association of *Mmd1*, major gene for resistance to *Melampsora medusae* f.sp. *deltoidae*, with quantitative traits in poplar rust. ***Phytopathology*** 88: 114-121.
4. NEWCOMBE, G. and CALLAN, B.E. 1997. First report of *Marssonina brunnea* f.sp. *brunnea* on hybrid poplar in the Pacific Northwest. ***Plant Disease*** 81:231.
5. NEWCOMBE, G. and VAN OOSTEN, C. 1997. Variation in resistance to *Venturia populina*, the cause of poplar leaf and shoot blight in the Pacific Northwest. ***Canadian Journal of Forest Research*** 27:883-889.
6. NEWCOMBE, G. 1996. The specificity of fungal pathogens of *Populus*. In *Biology of Populus and its Implications for Management and Conservation*. Part I, Chapter 10. Edited by R.F. Stettler, H.D. Bradshaw, Jr., P.E. Heilman, and T.M. Hinckley. NRC Research Press, National Research Council of Canada, Ottawa, ON. pp. 223-246.
7. NEWCOMBE, G. and BRADSHAW, H.D. 1996. Quantitative trait loci conferring resistance in hybrid poplar to *Septoria populicola*, the cause of leaf spot. ***Canadian Journal of Forest Research*** 26:1943-1950.
8. NEWCOMBE, G., H.D. BRADSHAW, JR., G.A CHASTAGNER, and R.F. STETTLER. 1996. A major gene for resistance to *Melampsora medusae* f.sp. *deltoidae* in a hybrid poplar pedigree. ***Phytopathology*** 86:87-94.
9. NEWCOMBE, G., CHASTAGNER, G.A, CALLAN, B., and OSTRY, M.E. 1995. An epidemic of *Septoria* leaf spot on *Populus trichocarpa* in the Pacific Northwest in 1993. ***Plant Disease*** 79:212.
10. NEWCOMBE, G., G.A CHASTAGNER, and S.K. McDONALD. 1994. Additional coniferous aecial hosts of the poplar leaf rusts, *Melampsora larici-populina* and *M. medusae* f.sp. *deltoidae*. ***Plant Disease*** 78: 1218.
11. NEWCOMBE, G., G.A CHASTAGNER, W. SCHUETTE, and B.J. STANTON. 1994. Mortality among hybrid poplar clones in a stool bed following leaf rust caused by *Melampsora medusae* f.sp. *deltoidae*. ***Canadian Journal of Forest Research*** 24: 1984-1987.
12. PINON, J., NEWCOMBE, G. and CHASTAGNER, G. 1994. Identification of races of *Melampsora larici-populina*, the Eurasian poplar leaf rust fungus, in California and Washington. ***Plant Disease*** 78:101.
13. NEWCOMBE, G. and G.A CHASTAGNER. 1993. A leaf rust epidemic of hybrid poplar along the Lower Columbia River caused by *Melampsora medusae*. ***Plant Disease*** 77: 528-531.
14. NEWCOMBE, G. and G.A CHASTAGNER. 1993. First report of the Eurasian poplar leaf rust fungus, *Melampsora larici-populina*, in North America. ***Plant Disease*** 77: 532-535.
15. NEWCOMBE, G. and THOMAS, P.L. 1991. The incidence of carboxin resistance in *Ustilago nuda*. ***Phytopathology*** 81: 247-250.
16. NEWCOMBE, G., STALEY, J.M. and CHASTAGNER, G.A 1991. *Glomerella cingulata* associated with leaf and shoot blight of hybrid poplar. ***Plant Disease*** 75: 1286.
17. NEWCOMBE, G., LEE, B., and ROBB, J. 1990. Early vascular sporulation: its role in the virulence of *Verticillium albo-atrum* in wilt of alfalfa. ***Physiological and Molecular Plant Pathology*** 36: 441-449.

18. NEWCOMBE, G. and THOMAS, P.L. 1990. The use of polyacrylic acid to prevent mycelial aggregation of *Ustilago nuda* in agitated liquid culture. *Mycological Research* 94: 1141-1144.
19. NEWCOMBE, G. and THOMAS, P.L. 1990. Fungicidal and fungistatic effects of carboxin on *Ustilago nuda*. *Phytopathology* 80: 509-512.
20. NEWCOMBE, A.G., PAPADOPOULOS, Y.A., ROBB, J., and CHRISTIE, B.R. 1989. The colonization ratio: a measure of pathogen invasiveness and host resistance in Verticillium wilt of alfalfa. *Canadian Journal of Botany* 67: 365-370.
21. NEWCOMBE, G., and ROBB, J. 1989. An improved method of determining the colonization ratio in *Verticillium*-infected alfalfa plants. *Canadian Journal of Plant Pathology* 11: 60-64.
22. NEWCOMBE, G., and ROBB, J. 1989. The chronological development of a lipid-to-suberin response at spore trapping sites in Verticillium wilt of alfalfa. *Physiological and Molecular Plant Pathology* 34: 55-73.
23. NEWCOMBE, G., and ROBB, J. 1988. The function and relative importance of the vascular coating response in highly resistant, moderately resistant and susceptible alfalfa infected by *Verticillium albo-atrum*. *Physiological and Molecular Plant Pathology* 33: 47-58.
24. ELANGO, D., ROBB, J., NEWCOMBE, G., and BUSCH, L.V. 1986. Growth pouch technique for the observation of cellular interactions between alfalfa seedling roots and *Verticillium albo-atrum*. *Canadian Journal of Plant Pathology* 8: 78-84.

#### **Selected Synergistic Activities:**

- Instructor of two undergraduate courses [*Forest and Plant Pathology*, and *Environmental Science Senior Project*].
- Invited to speak on ecological roles of plant endophytes and pathogens at venues in the U.S. and internationally.
- Senior Editor of *Plant Disease*, December 2003 to December 2006.
- Co-Director of the Center for Research on Invasive Species and Small Populations of the U. of Idaho, 2005-2007.
- Member of the Ecology and Evolution Review Panel of Canada's NSERC, 2015-2017.
- Current member of the Editorial Boards of *Forests* and *Frontiers in Microbiology*.
- Current member of the Advisory Board of the *New Phytologist*.
- Reviewer for University of Idaho Extension/Idaho Agricultural Experiment Station.