

David L. Wagner

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Education:

B. S. Degree: December 1978, magna cum laude, plant pathology with minor in entomology,
Colorado State University, Fort Collins, CO.
Ph. D. Degree: December 1985, Entomology, Univ. of California, Berkeley, CA.

Professional Experience:

6/79 to 3/82 Graduate Research & Teaching Assistantships, Univ. of California, Berkeley.
& 9/83 to 6/85
10/82 to 9/83 Assistant Curator, Essig Museum of Entomology, Univ. of California, Berkeley.
1/86 to 9/86 Staff Research Assistant, Univ. of California, Berkeley.
9/86 to 5/87 Tilton Fellow, Calif. Academy of Sciences, San Francisco.
5/87 to 9/88 Assistant Research Professor of Entomology, Univ. of Vermont, Burlington.
9/88 to 5/17 Research Associate, Museum of Comparative Biology, Harvard Univ.
9/89 to pres. Research Associate, American Museum of Natural History
9/88-9/95 Assistant Professor of Ecology and Evolutionary Biology, Univ. of Connecticut,
Storrs.
9/95-4/07 Associate Professor of Ecology and Evolutionary Biology, Univ. of Connecticut,
Storrs.
4/07- Professor of Ecology and Evolutionary Biology, Univ. of Connecticut, Storrs.

Honors and Awards:

Elected to Phi Beta Kappa, 1978.
Peterson Scholarship, Botany Dept., Colo. St. Univ., 1978.
Earle C. Anthony Fellowship, Univ. of California, Berkeley, 1979-80.
Regent's Fellowship, Univ. of California, Berkeley, 1980-81.
Regent's Fellowship, Univ. of California, Berkeley, 1981-82.
J. A. Comstock Award for outstanding student contributor, Lepidopterists' Soc., 1982.
J. A. Comstock Award for outstanding student contributor, Lepidopterists' Soc., Pacific Slope,
1983.
Power S. Messenger Memorial Award, Entomology Dept., U.C. Berkeley, 1984.
Student Paper Presentation Award, 2nd place, AAAS, Pacific Section, Entomological Symposium
sponsored by the Pacific Coast Entomol. Soc., 1984.
Elected to Sigma Xi, 1984.
Snodgrass Memorial Research Award, Entomol. Soc. Am., 1984
Tilton Fellowship, California Academy Sciences, 1986-1987.
Research Associate, American Museum of Natural History, 1989 to present

National Outdoor Book Award for Best Nature Guidebook, 2006
David Blick Science Education Award, Neag School of Education, University of Connecticut,
2007
Tanner Memorial Lecture Invitee, Bean Life Science Museum, Brigham Young University. March
2017
University of Connecticut Environmental Leadership Award (2017-2018)
National Museum Research Associate, Smithsonian Institution, May, 2018 to present
UConn Alumni Association Award for Research Excellence and Creativity, June 2021
Elected to Connecticut Academy of Science and Engineering (CASE), February, 2022
Banham Museum Lecturer, Tufts University, April, 2022
Al Boyce Lecture Award, University of California, Riverside, April, 2023

Professional Societies:

Association for Zoological Nomenclature	Sigma Xi
Entomological Society of America	Society of Systematic Biologists
Lepidopterists' Society	Willi Hennig Society
New York Entomological Society	Xerces Society

Society Involvement:

Lepidopterists' Society, Executive Council Members-at-large Committee, 1989-1992
Entomological Society of America, Standing Committee on the National Science Medal, 1990-
1993; Chair 1992-1993
Entomological Society of America, Section A Chairman (Systematics, Morphology, and
Evolution), Entomological Society of America, 1992-1993
Connecticut Entomological Society, Vice-president Elect, 1990-1991.
New York Entomological Society, Publications Committee, 1991-
Psyche, Associate Editor, Psyche, 1991-
Lepidopterists' Society, Karl Jordan Medal Committee Representative, 1992-1995
Society of Systematic Biologists, Council Member, 1993-1996
Cambridge Entomological Society, President, 1995-1996
Lepidopterists' Society, Associate Editor, 1996-
Society of Systematic Biologists, Endowment Committee, 1996-1998
Entomology Collection Network Steering Committee, 1996-1999
Organization for Tropical Studies, Board of Delegates, 1997-
Lepidopterists' Society, Vice-President Elect, 2001-2002
Discover Life in America, elected Board Member (DLIA is the steering entity for the "All Taxa
Biological Inventory," being carried out in the Great Smoky Mtns. Nat. Park), 2001-
Discover Life in America, Vice-chair 2004-2007
Thomas Say Award Committee, Chair, Entomological Society of America, 2001-2003
Wedge Entomological Foundation, elected Director, 2002-
Lepidopterists' Society, Membership Committee, 2004-
New York Entomological Society, Associate Editor, 2005-
Entomological Society of America, Associate Editor for Annuals, 2006-2008
Lepidopterists' Society, Conservation Committee, 2006-
Lepidopterists' Society, Conservation Committee Head, 2014-

Publications

Dissertation:

Wagner, D. L. 1985. The biosystematics of the Holarctic Hepialidae, with special emphasis on the *Hepialus californicus* species group. Ph. D. Dissertation. University of California, Berkeley, 395.

Books and Edited Volumes

1. Wagner, D. L., V. Giles, R.C. Reardon, and M. L. McManus. 1998. *Caterpillars of Eastern Forests*. USFS Technology Transfer Bulletin, FHTET-96-34. USDA Forest Service, Morgantown, West Virginia. 113 pp.
2. Wagner, D. L., D. C. Ferguson, T. L. McCabe, and R. C. Reardon. 2002. *Geometroid Caterpillars of Northeastern and Appalachian Forests*. USFS Technology Transfer Bulletin, FHTET-2001-10. USDA Forest Service, Morgantown, West Virginia. 239 pp.
3. Wagner, D. L. 2005. *Caterpillars of Eastern North America: A Guide to Identification and Natural History*. Princeton University Press. Princeton, New Jersey. 512 pp.
4. O'Donnell, L.F. Gall, and Wagner, D.L. (eds.). 2007. *The Connecticut Butterfly Atlas*. Connecticut Department of Environmental Protection, Hartford, CT. 368 pp.
5. Wagner, D. L., D. F. Schweitzer, J. B. Sullivan, and R. C. Reardon. 2011. *Owlet Caterpillars of Eastern North America*. Princeton University Press. Princeton, New Jersey. 576 pp.
6. Schweitzer, D. F., M. C. Minno, and D. L. Wagner. 2011. *Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands in the Eastern United States*. U.S. Forest Service, Forest Health Technology Enterprise Team, FHTET-2011-01. USDA Forest Service, Morgantown, West Virginia. 517 pp.
7. Van Driesche, R. G., D. Simberloff, B. Blossey, C. Causton, M. S. Hoddle, D. L. Wagner, C. Marks, K. Heinz, and K. Warner (eds.). 2016. *Integrating Biological Control into Conservation Practice*, Wiley, Oxford. 343 pp.
8. Miller, J. S., D. L. Wagner, P. A. Opler, and J. D. Lafontaine. 2018. *Drepanoidea, Doidae, and Noctuoidea, Notodontidae (part): Pygaerinae, Notodontinae, Cerurinae, Phalerinae, Periergosinae, Dudusinae, Hemiceratinae*. In Lafontaine, J. D., et al., *The Moths of North America*, fasc. 22.1A. The Wedge Entomological Foundation, Washington, DC. 348 pp.
9. Miller, J. S., D. L. Wagner, P. A. Opler, and J. D. Lafontaine. 2021. *Noctuoidea, Notodontidae (part): Heterocampinae, Nystaleinae, Dioptinae, and Dicranurinae*. In Lafontaine, J. D., et al., *The Moths of North America*, fasc. 22.1B. The Wedge Entomological Foundation, Washington, DC. 443 pp.
10. Wagner, D. L. and M. L. Forister (Editors). 2021. *Global Insect Decline*. Proceedings National Academy of Sciences. 118: No. 2. (Collection of 13 papers on status of global insect populations. 53 pp.)
11. Wagner, D. L., 2024. *Moths of the World*. Princeton University Press. Princeton, New Jersey (In review).

Popular Books:

1. Zim, H. S. and C. Cottam revised by J. Latimer, K.S. Nolting, and D. L. Wagner. 2000. *The Golden Guide to Insects: A Guide to Familiar American Insects*. St. Martin's Press, New York. St. Martin's Press, New York. 160 pp.
2. Sharpe, P. with R. S. Lewis, D. L. Wagner, and C. Lee. 2013. Trap Rock Ridges of Connecticut: Natural History and Land Use. Connecticut College Arboretum and Connecticut Department of Energy and Environmental Protection. 57 pp.

Refereed Papers:

1. Reeves, F. B., D. L. Wagner, T. Moorman, and J. Kiel. 1979. The role of endomycorrhizae in revegetation practices in the semi-arid West. I. A comparison of incidence of mycorrhizae in severely disturbed vs. natural environments. Amer. J. Bot. 66:6-13.
2. Kubo, I., T. Matsumoto, D. L. Wagner, and J. N. Shoolery. 1985. Isolation and structure of hepialone; principal component from male sex scales of *Hepialus californicus* Bdv. Tetra. Let. 26:563-566.
3. Wagner, D. L. and S. A. Cameron. 1985. *Bombus bifarius* foraging at aphid honeydew (Apidae). Pan-Pacific Entomol. 61:266.
4. Wagner, D. L. 1985. First California record and confirmation of a rosaceous hostplant for *Eriocrania* (Lepidoptera: Eriocraniidae). J. Lepid. Soc. 39:60-61.
5. Wagner, D. L. 1985. Biology and description of the larva of *Dicymolomia metaliferalis*: a case-bearing Glaphyriine (Lepidoptera: Pyralidae). J. Lepid. Soc. 39:39-47.
6. Wagner, D. L. 1987. Elachistidae. pp. 383-85. In F. W. Stehr [ed.], *An Introduction to Immature Insects of North America*. Kendall-Hunt Publishing Co., Dubuque, Iowa.
7. Wagner, D. L. 1987. Hepialidae. pp. 347-349. In F. W. Stehr [ed.], *An Introduction to Immature Insects of North America*. Kendall-Hunt Publishing Co., Dubuque, Iowa.
8. Wagner, D. L. 1987. A new *Microcalyptis* species from California (Lepidoptera: Nepticulidae). Pan-Pacific Entomol. 63:278-283.
9. Wagner, D. L. and J. A. Powell. 1988. A new *Prodoxus* from *Yucca baccata*: first report of a leaf-mining prodoxine (Lepidoptera: Prodoxidae). Ann. Entomol. Soc. Am. 81:547-553.
10. Whitfield, J. B. and D. L. Wagner. 1988. Patterns and host ranges within the parasitoid genus *Pholetesor* Mason (Hymenoptera: Braconidae). Environ. Entomol. 17:608-615.
11. Wagner, D. L. 1988. The taxonomic status of *Korscheltellus* Horner, 1925, in North America (Lepidoptera: Hepialidae). J. New York Entomol. Soc. 96:345-354.
12. Wagner, D. L. and N. B. Tindale. 1988. An appraisal of *Gazoryctra* Hubner (Hepialidae), with the description of a new species from Arizona. J. Lepid. Soc. 42:204-212.
13. McCabe, T. L. and D. L. Wagner. 1989. The biology of *Sthenopis auratus* (Lepidoptera: Hepialidae). J. New York Entomol. Soc. 97:1-10.
14. Wagner, D. L., D. R. Tobi, B. L. Parker, W. E. Wallner and J. Leonard. 1989. The immature stages and natural enemies of *Korscheltellus gracilis* (Lepidoptera: Hepialidae). Ann. Entomol. Soc. Amer. 82: 717-724.
15. Wagner, D. L. 1989. Rearing hepialid moths. Pan-Pac. Entomol. 65: 391-396.
16. DeBenedictis, J. A., D. L. Wagner, and J. B. Whitfield. 1990. Larval hosts of Microlepidoptera of the San Bruno Mountains, California. Atala 16: 14-35.
17. Wagner, D. L., D. R. Tobi, B. L. Parker, and W. E. Wallner. 1991. *Korscheltellus gracilis* (Grote): A pest of red spruce and balsam fir roots (Lepidoptera: Hepialidae). Can. Entomol. 123: 255-263.

18. Whitfield, J. B. and D. L. Wagner. 1991. Annotated key to the holarctic genera of Braconidae (Hymenoptera) attacking leafmining Lepidoptera. *J. of Nat. Hist.* 25: 733-754.
19. Wagner, D. L. and J. R. Rosovsky. 1991. Mating systems in primitive Lepidoptera, with emphasis on the reproductive behavior of *Korscheltellus gracilis* (Grote)(Hepialidae). *Zool. J. Linn. Soc.* 102: 277-303.
20. Wallner, W. E., D. L. Wagner, B. L. Parker, and D. R. Tobi. 1991. Bioecology of the conifer swift moth, *Korscheltellus gracilis*, tree decline and acidic deposition relationships. pp. 199-204. *In Forest Insect Guilds: Patterns of Interaction with Host Trees*, Baranchikov et al. (eds.). Abakan, USSR, August 13-17, 1989. General Technical Report NE-153.
21. Grehan, J. R., B. L. Parker, D. L. Wagner, J. Rosovsky, and J. Aleong. 1992. Seedling root damage by conifer swift moth larvae: a potential factor in high elevation red spruce decline. *Forest Science* 38:611-622.
22. Wagner, D. L. and J. K. Liebherr. 1992. Flightlessness in insects. *Trends in Ecology and Evolution*. 7: 216-220.
23. Wagner, D. L. 1992. Alexander Barrett Klots. *J. Lepid. Soc.* 46: 314-324.
24. Powell, J. A. and D. L. Wagner. 1993. Is the Microlepidoptera fauna of Santa Cruz Island less depauperate than that of butterflies and larger moths? pp.189-198. *In Proceedings from the Third Symposium on the Channel Islands*. Santa Barbara Mus. Nat. Hist., Santa Barbara, CA.
25. Kuenen, L. P. S., D. L. Wagner, W. S. Wallner, and R. Cardé. 1994. Female sex pheromone in *Korscheltellus gracilis* (Lepidoptera: Hepialidae). *Can. Entomol.* 126: 31-41.
26. Labandeira, C. C., D. L. Dilcher, D. R. Davis, and D. L. Wagner. 1994. 97 million years of generic longevity and angiosperm host-association in insects: Paleobiological insights into the meaning of coevolution. *Proc. Nat. Acad.* 91: 12278-12282.
27. Landry, J. F. and D. L. Wagner. 1995. Taxonomic review of apple-feeding species of *Phyllonorycter* (Lepidoptera, Gracillariidae) in North America. *Proc. Entomol. Soc. Wash.* 97: 603-625.
28. Reardon, R. C. and D. L. Wagner. 1995. Impact of *Bacillus thuringiensis* on non-target lepidopteran species in broadleaf forests. pp. 284-292. *In Biorational pest control agents: Formulation and delivery*. Amer. Chem. Soc. Symp. Series.
29. Wagner, D. L., J. W. Peacock, J. L. Carter, and S. E. Talley. 1995. The spring caterpillar fauna of oak and blueberry in a Virginia deciduous forest. *Ann. Entomol. Soc. Amer.* 88: 416-426.
30. Wagner, D. L., J. J. Henry, J. W. Peacock, M. L. McManus, and R.C. Reardon. 1995. Common caterpillars of eastern deciduous forests. USFS Technology Transfer Bulletin, FHM-NC-04-95. 32 pp.
31. Friedlander, T. P., J. C. Regier, C. Mitter, and D. L. Wagner. 1996. A nuclear gene for higher level phylogenetics: phosphoenolpyruvate carboxylase tracks mesozoic-age divergences within Lepidoptera (Insecta). *Mol. Biol. Evol.* 13: 594-604.
32. Wagner, D. L., D. M. Simmonds, and M. C. Thomas. 1996 [1995]. Three rare gomphids from the lower Connecticut River. *J. N. Y. Entomol. Soc.* 103: 334-336.
33. Wagner, D. L., J. W. Peacock, J. L. Carter, and S. E. Talley. 1996. Field assessment of *Bacillus thuringiensis* var. *kurstaki*. *Environ. Entomol. Soc. Amer.* 25: 1444-1454.

34. Wagner, D. L., M. Wallace, J. Boettner, and J. Elkinton. 1997. Status update and life history studies on the regal fritillary (Lepidoptera: Nymphalidae). pp. 261-275. In The Ecology and Conservation of Grasslands and Heathlands in Northeastern North America. P. D. Vickery, P. Dunwiddie, and C. Griffin (eds.). Massachusetts Audubon, Lincoln, MA.
35. Wagner, D. L. and M. C. Thomas. 1999. The odonate fauna of Connecticut. Bull. Amer. Odonatology. 5:59-85.
36. Litvaitis, J. A., D. L. Wagner, J. L. Confer, M. D. Tarr, and E. J. Synder. 1999. Early-successional forests and shrub-dominated habitats: Land-use artifact or critical community in the northeastern United States? Northeast Wildlife 54: 101-118.
37. Wagner, D. L., J. L. Loose, T. D. Fitzgerald, J. A. DeBenedictis, and D. R. Davis. 2000. A hidden past: The hypermetamorphic development of *Marmara arbutiella* (Lepidoptera: Gracillariidae). Ann. Entomol. Soc. Amer. 93: 59-64.
38. Nielsen, E. S., G. S. Robinson, and D. L. Wagner. 2000. Ghost-moths of the world: A global inventory and bibliography of the Exoporia (Mnesarchaeoidea and Hepialoidea)(Lepidoptera). J. Nat. Hist. 34: 823-878.
39. Hohn, F. M., and D. L. Wagner. 2000. Larval substrates of herminiiine noctuids (Lepidoptera), macrodecomposers of leaf litter. Environ. Entomol. 29: 207-212.
40. Weigmann, B.M., C. Mitter, J. C. Regier, T. P. Friedlander, D. L. Wagner, and E. S. Nielsen. 2000. Nuclear genes resolve Mesozoic-aged divergences in the insect order Lepidoptera. Mol. Phylogen. and Evol. 15: 242-259.
41. Friedlander, T. P., J. C. Regier, C. Mitter, D. L. Wagner, and E. S. Nielsen. 2000. Evolution of heteroneuran Lepidoptera (Insecta) and the utility of dopa decarboxylase for Cretaceous-age phylogenies. Zool. J. Linn. Soc. 130: 1-22.
42. Wagner, D. L. 2000. The biodiversity of moths, pp. 249-270. In the Encyclopedia of Biodiversity, S. Levin et al. (eds.) Academic Press. San Diego, CA.
43. Gates, M., J. Heraty, M. Schauff, D.L. Wagner, J. B. Whitfield, and D. Wahl. 2002. Survey of the parasitic Hymenoptera on leafminers in California. J. Hymen. Res. 11: 213-270.
44. Wagner, D. L., E. W. Hossler, and F. E. Hossler. 2003. The larva of *Lytrosis permagnaria* (Family Geometridae). J. Lepid. Soc. 57: 107-112.
45. Wagner, D. L., M. W. Nelson, and D.F. Schweitzer 2003. Shrubland Lepidoptera of southern New England and southeastern New York: ecology, conservation, and management. J. For. Ecol. Manag. 185: 95-112.
46. Wagner, D. L., D. C. Ferguson, and J. D. Glaser. 2003. *Sclerocona acutella* (Eversmann) (Crambidae: Pyraustinae), naturalized along the eastern seaboard. J. Lepid. Soc. 57: 270-273.
47. Wagner, D. L., D. Adamski, and R. L. Brown. 2004. A new species of *Mompha* (Lepidoptera: Coleophoridae: Momphinae) from buttonbush (*Cephalanthus occidentalis* L.) with descriptions of the early stages. Proc. Entomol. Soc. Wash. 106: 1-18.
48. Davis, D. R. and D. L. Wagner. 2005. Biology and systematics of the neotropical leaf-mining genus *Eucosmophora* (Lepidoptera: Gracillariidae). Tropical Lepidoptera 13: 1-40.

49. Wagner, D. L., E. W. Hossler, and F. E. Hossler. 2006. Not a tiger but a dagger: The larva of *Comachara cadburyi* and reassignment of the genus to the Acronictinae (Lepidoptera: Noctuidae). *Ann. Entomol. Soc. Amer.* 99: 638–647.
50. Rota, J. R., and D. L. Wagner. 2006. Predator mimicry: metalmark moths mimic their jumping spider predators. *PLoS ONE* 1(1): e45. doi:10.1371/journal.pone.0000045.
51. Wagner, D. L. 2007a. The larva of *Cerma* Hübner and its enigmatic linkages to the Acronictinae (Lepidoptera: Noctuidae). *Proc. Entomol. Soc. Wash.* 109: 198-207.
52. Wagner, D.L. 2007b. Barking up a new tree: Ancient pupation behavior suggests *Cerma* Hübner is an acronictine noctuid (Lepidoptera). *Syst. Entomol.* 32: 407-419
53. Wagner, D. L. and L. F. Gall. 2007. History of Butterfly Study in Connecticut. pp. 12-22. *In* J.E. O'Donnell, L. F. Gall, and D. L. Wagner (eds.), Connecticut Butterfly Atlas. Connecticut Department of Environmental.
54. Wagner, D. L. 2007. Butterfly conservation. pp. 289-309. *In* J.E. O'Donnell, L. F. Gall, and D. L. Wagner (eds.), Connecticut Butterfly Atlas. Connecticut Department of Environmental Protection, Hartford, CT.
55. Wagner, D. L. and L. F. Gall. 2007. Studying butterflies. pp. 310-318. *In* J.E. O'Donnell, L. F. Gall, and D. L. Wagner (eds.), Connecticut Butterfly Atlas. Connecticut Department of Environmental Protection, Hartford, CT.
56. Dyer, L.A., M. S. Singer, J. T. Lill, J. O. Stireman III, G. L. Gentry, R. J. Marquis, R. E. Ricklefs, H. F. Greeney, D. L. Wagner, H. C. Morais, I. R. Diniz, T. A. Kursar, and P. D. Coley. 2007. Host specificity of Lepidoptera in tropical and temperate forests. *Nature* 448: 696-699.
57. Scholtens, B. and D. L. Wagner. 2007. Lepidopteran fauna of the GSMNP. *Southeastern Naturalist. Special Issue* 1: 193-206.
58. Wagner, D. L., J. R. Rota, and T. L. McCabe. 2008. Larva of *Abablemma* Nye (Lepidoptera: Noctuidae: Hypenodinae) with notes on lichenivory and algivory in Macrolepidoptera. *Ann. Entomol. Soc. Amer.* 101: 40-52.
59. Wagner, D. L., N. McFarland, J. D. Lafontaine, and B. Connolly. 2008. Early stages of *Miracavira brillians* (Barnes) and reassignment of the genus to the Amphipyrinae: Psaphidini: Feraliina (Noctuidae). *J. Lepid. Soc.* 62: 121-132.
60. Rota, J. and D. L. Wagner. 2008. Wormholes, sensory nets and hypertrophied tactile setae: the extraordinary defence strategies of *Brenthia* caterpillars. *Animal Behaviour*. 76:1709-1713.
61. Wagner, D. L. 2009. The immature stages: structure, function, behavior, and ecology. Pp. 31-53. *In* W. E. Conner (ed.), Tiger Moths and Woolly Bears: Behavior, Ecology, and Evolution of the Arctiidae. Oxford University Press.
62. Nagle, R. B. and Wagner, D. L. 2009. Sample species illustrating diversity within the Arctiidae. Pp. 233-250. *In* W. E. Conner (ed.), Tiger Moths and Woolly Bears: Behavior, Ecology, and Evolution of the Arctiidae. Oxford University Press.
63. Wagner, D. L. and B. Connolly. 2009. Pithing and mining by a punkie: The unusual feeding strategy of *Nola cilicoides* (Grote, 1873) (Noctuidae: Nolinae). *J. Lepid. Soc.* 63: 48-51.
64. Wagner, D. L. 2009. Ode to *Alabama*: The meteoric fall of a once extraordinarily abundant moth. *Amer. Entomol.* 55: 152-155.
65. Wagner, D. L. and R. G. Van Driesche. 2010. Threats posed to rare or endangered insects by invasions of non-native species. *Ann. Rev. Entomol.* 55:547-568.

66. Van Driesche, R.G., Carruthers, R.I., Center, T., Hoddle, M.S., Hough-Goldstein, J., Morin, L., Smith, L., Wagner, D.L. et al., 2010. Classical biological control for the protection of natural ecosystems: past achievements and current efforts. *Biological Control* Supplement 1, S2-S33.
67. Wagner, D. L. and S. Binns. 2010. Larva and pupa of *Amyna axis* (Guenée, 1852) and affirmation of its placement in Bagisarinae (Lepidoptera: Noctuidae). *ZooKeys*. 37: 107-116.
68. Davis, D. R. and D. L. Wagner. 2011. Biology and systematics of the New World *Phyllocnistis* Zeller leafminers of the avocado genus *Persea* (Lepidoptera: Gracillariidae). *ZooKeys*. 97: 37-93, doi: 10.3897/zookeys.97.753.
69. Kawahara, A. Y., I. Ohshima, A. Kawakita, J. C. Regier, C. Mitter, M. P. Cummings, D. R. Davis, D. L. Wagner, J. De Prins, and C. Lopez-Vaamonde. 2011. Increased gene sampling provides stronger support for higher-level groups within gracillariid leaf mining moths and relatives (Lepidoptera: Gracillariidae). *BMC Evol. Biol.* 11: 18 doi: 10.1186/1471-2148-11-182.
70. Wagner, D. L. and T. L. McCabe. 2011. A new *Zanclognatha* from eastern North America and preliminary key to the larvae of the genus (Lepidoptera: Noctuidae: Herminiinae). *ZooKeys* 49: 89-101.
71. Bartomeus, I., J. S. Ascher, D. L. Wagner, B. N. Danforth, S. R. Colla, S. Kornbluth, and R. Winfree. 2011. Climate-associated phenological advances in bee pollinators and bee-pollinated plants. *Proc. Nat. Acad. Sci.* 108: 20645–20649. DOI: 10.1073/pnas.1115559108.
72. Dyer, L. A., D. L. Wagner, H.F. Greeney, A. M. Smilanich, T. J. Massad, M. Robinson, M. Fox, R. Hazen, A. Glassmire, N. Pardikes, K. Fredrickson, C. Pearson, G. Gentry, and J. O. Stireman III. 2012. Novel insights into tritrophic interaction diversity and chemical ecology using 16 years of volunteer supported research. *Amer. Entomol.* 58:15-19.
73. van Nieukerken, E. J., D. L. Wagner, M. Baldessari, L. Mazzon, G. Angeli, V. Girolami, C. Duso, and C. Doorenweerd. 2012. *Antispila oinophylla* new species (Lepidoptera, Heliozelidae): a new North American grapevine leafminer invading Italian vineyards: taxonomy, DNA barcodes and life cycle. *ZooKeys* 170: 29-77.
74. Szarbo, N. D., S. R. Colla, D. L. Wagner, L. F. Gall, and J. T. Kerr. 2012. Do pathogen spillover, pesticide use, or habitat loss explain recent North American bumblebee declines? *Conserv. Lett.*, 5: 232-239. DOI: 10.1111/j.1755-263X.2012.00234.x.
75. Colla, S. R., F. Gadallah, L. Richardson, D. Wagner, and L. Gall. 2012. Assessing declines of North American bumble bees (*Bombus* spp.) using museum specimens. *Biodivers. Conserv.* 21: 3585-3595. DOI 10.1007/s10531-012-0383-2.
76. Wagner, D. L. 2013. The biodiversity of moths, pp. 384-403. *In* the Encyclopedia of Biodiversity, S. Levin et al. (eds.) Academic Press. San Diego, CA.
77. Bartomeus, I., J. S. Ascher, J. Gibbs, B. N. Danforth, D. L. Wagner, S. S. Hettke, and R. Winfree. 2013. Historical changes in northeastern United States bee pollinators related to shared ecological traits. *Proc. Nat. Acad. Sci.* 110: 4656–4660. DOI:10.1073/pnas.1218503110.
78. Getty, P. R., R. Sproule, D. L. Wagner, and A. M. Bush. 2013. Variation in wingless insect trace fossils: insights from neochnology and the Pennsylvanian of Massachusetts. *Palaios* 28: 243-258.

79. Zacharczenko, B., D. L. Wagner, and M. J. Hatfield. 2014. A new cryptic *Sympistis* from eastern North America revealed by novel larval phenotype and hostplant association (Lepidoptera, Noctuidae, Oncocnemidinae). *ZooKeys* 379: 93-107.
80. Herlihy, M. V., R. G. Van Driesche, and D. L. Wagner. 2014. Persistence in Massachusetts of the veined white butterfly due to use of the invasive form of cuckoo flower. *Biological Invasions* 16:2713-2724.
81. Schmidt, B. C., D. L. Wagner, B. V. Zacharczenko, Reza Zahiri, and G. G. Anweiler. 2014. Polyphyly of lichen-cryptic dagger moths: synonymy of *Agriopodes* Hampson and a new basal acronictine genus, *Chloronycta* gen. nov. (Noctuidae, Acronictinae). *ZooKeys* 421: 115–137, doi: 10.3897/zookeys.421.7424.
82. Wagner, D. L., K. J. Metzler, S. A. Leicht-Young, and G. Motzkin. 2014. Vegetation composition along a New England transmission line corridor and its implications for other trophic levels. *For. Ecol. Manag.* 327: 231–239, DOI: 10.1016/j.foreco.2014.04.026
83. Wagner, D. L. and E. C. Knudson. 2014. Description of *Apatelodes auduboni* n. sp. from Texas (Bombycidae: Apatelodidae), with a query as to whether apatelodid larvae are Batesian mimics. *J. Lepid. Soc.* 68: 211-217.
84. Wagner, D. L., J. S. Ascher, and N. Bricker. 2014. A powerline right-of-way as habitat for wild bees in southern New England (Hymenoptera: Apoidea: Anthophila). *Ann. Entomol. Soc. Amer.* 107: 1110-1120.
85. Haber, W. A. and D. L. Wagner. 2015. A new species of *Erythrodiplax* breeding in bromeliads in Costa Rica (Odonata: Libellulidae) *ZooTaxa*. 6;3947(3):386-96. doi: 10.11646/zootaxa.3947.3.5.
86. Forister, M. L., Y. Basset, P. D. Coley, I. R. Diniz, P. Drozd, M. Fox, A. Glassmire, H. R. Hazen, J. Hrcek, J. P. Jahner, T. J. Kozubowski, T. A. Kursar, J. Lill, R. J. Marquis, S. E. Miller, H. C. Morais, M. Murakami, V. Novotny, A. K. Panorska, N. Pardikes, R. E. Ricklefs, M. S. Singer, A. M. Smilanich, J. O. Stireman, D. L. Wagner, T. Walla, G. D. Weiblen, and L. A. Dyer. 2015. The global distribution of diet breadth in insect herbivores. *Proc. Natl. Acad. Sci.* 112: 442-447.
87. Gallinat, A., R. Primack, and D. L. Wagner. 2015. Autumn, the neglected season: five crucial topics in autumn phenology. *Trends in Ecology and Evolution*. TREE-1899. <http://dx.doi.org/10.1016/j.tree.2015.01.004>
88. Wagner, D. L. and K. Todd. 2015. Ecological impacts of the emerald ash borer. Pp. 15-63. *In* R. G. Van Driesche (ed.), *Biology and Control of Emerald Ash Borer*, USDA Technical Bulletin FHTET-2014-09. Morgantown, WV.
89. Wagner, D. L. and B. L. Gagliardi. 2015. Hairstreaks (and other insects) feeding at galls, honeydew, extrafloral nectaries, sugar bait, cars, and other routine substrates. *American Entomologist*. 61: 160-167.
90. Kerr, J. T., A. Pindar, P. Galpern, L. Packer, S. G. Potts, S. M. Roberts, P. Rasmont, O. Schweiger, S.R. Colla, L. L. Richardson, D. L. Wagner, L. F. Gall, D. S. Sikes, and A. Pantoja. 2015. Cross-continental convergence of climate change impacts on bumblebees. *Science* 349: 177-180.
91. Rota, J., B. Zacharczenko, N. Wahlberg, R. Zahiri, B. C. Schmidt, and D. L. Wagner. 2016. Phylogenetic relationships of the Acronictinae with discussion of the abdominal courtship brush in Noctuidae (Lepidoptera). *Syst. Ent.* 41: 416-429. doi:10.1111/syen.12162

92. Nall, B. and D. L. Wagner. 2016. Larval key and life histories for four North American *Rifargia* species (Notodontidae: Heterocampinae). *J. Lepid. Soc.* 70: 15-19.
93. Anderson, J. C. and D. L. Wagner. 2016. Systematics and biological control. Pp. 105-129, *In* R. Van Driesche et al. (eds.), *Integrating Biological Control into Conservation Practice*. Oxford Press.
94. Wagner, D. L. and K. Todd. 2016. New ecological assessment for the emerald ash borer; a cautionary tale about unvetted host-plant literature. *Amer. Ent.* 62: 26-35.
95. Gagliardi, B. L. and D. L. Wagner. 2016. ‘Northern’ Oak Hairstreak (*Satyrium favonius ontario*) (Lepidoptera: Lycaenidae): status survey in Massachusetts, false rarity, and its use of non-nectar sugar resources. *Ann. Ent. Soc. Amer.* 109: 503-512.
96. Lavitt, T. and D. L. Wagner. 2016. A new cryptic *Eupsilia* from northeastern North America (Noctuidae). *J. Lepid. Soc.* 70: 238-248.
97. Levy, F., D. L. Wagner, and E. S. Walker. 2016. Lettered sphinx moth (*Deidamia inscriptum*) caterpillars feeding on sourwood (*Oxydendrum arboreum*) and their predation by black bears in northeast Tennessee. *Southeast. Nat.* 15: 394-402.
98. Anderson, T. J., D. L. Wagner, B. R. Cooper, M. E. McCarthy, and J. M. Zaspel. 2016. HPLC-MS of lichen-derived metabolites in the life stages of *Crambodia cephalica* (Grote & Robinson) (Lepidoptera: Erebidae: Arctiinae: Lithosiini). *Chem. Ecol.* doi:10.1007/s10886-016-0799-3.
99. Oswald, W. W., E. D. Doughty, D. R. Foster, B. N. Shuman, and D. L. Wagner. 2017. Evaluating the role of insects in the middle-Holocene *Tsuga* decline. *J. Torrey Bot. Soc.* 144: 35-39.
100. Wagner, D. L. and J. K. Adams. 2017. Rarity and apparent or false rarity. *News Lepid. Soc.* 59: 20-26.
101. Gagliardi, B. L., D. L. Wagner, J. M. Allen. 2017. Climate niche model for the ‘Northern’ oak hairstreak (*Satyrium favonius ontario*) with comments on its conservation status in the Northeast. *Ins. Conserv.* DOI: 10.1007/s10841-017-0001-4
102. Wagner, D. L. 2017. Trends in Biodiversity: Insects. Pp. 131-143. *In*: D. A. DellaSala, and M. I. Goldstein (eds.) *The Encyclopedia of the Anthropocene*, Vol. 3, Oxford: Elsevier.
103. Eiseman, C. S., D. R. Davis, J. A. Blyth, D. L. Wagner, M. W. Palmer, and T. S. Feldman. 2017. A new species of *Marmara* (Lepidoptera: Gracillariidae: Marmarinae), with an annotated list of known hostplants for the genus. *ZooKeys*. 4337: 198-222.
104. Laurent, R. A., D. L. Wagner, L. E. Reeves, and A. Y. Kawahara. 2017. Notes on the natural history of *Lacosoma arizonicum* Dyar (Mimallonidoidea, Mimallonidae) with new host and parasitoid records. *J. Lepid. Soc.* 71: 177-181.
105. Matson, T. A. and D. L. Wagner. 2017. A new cryptic *Lactura* from Texas (Lepidoptera: Zygaenoidea: Lacturidae). *ZooKeys* 711: 141-150.
106. Wagner, D. L. and L. L. Crabtree. 2018. Rediscovery of *Gazoryctra mcglashani* (Lepidoptera: Hepialidae) in the central Sierra Nevada of California. *J. Lepid. Soc.* 72: 241-143.
107. Bagchi, R., L. M. Brown, C. S. Elphick, D. L. Wagner, and M. S. Singer. 2018. Anthropogenic fragmentation of landscapes: mechanisms for eroding the specificity of plant-herbivore interactions. *Oecologia*. doi.org/10.1007/s00442-018-4115-5

108. Keegan, K. L., J. D. Lafontaine, N. Wahlberg, and D. L. Wagner. 2018. Towards resolving and redefining Amphyrrinae (Lepidoptera, Noctuoidea, Noctuidae): a massively polyphyletic taxon. *Syst. Ent.* 44: 451–464.
<https://doi.org/10.1111/syen.12336>
109. Wagner, D. L., K. L. Keegan, B. N. Nall, V. Bugh, and J. Rota. 2019. A tale of two caterpillars and reclassification of *Cerathosia* Smith and *Cydosia* Duncan [& Westwood] (Lepidoptera: Noctuidae). *J. Lepid. Soc.* 73: 1–4.
110. Dussourd, D. E., M. Van Valkenburg, K. Rajan, D. J. Carrier, and David L. Wagner. 2019. A notodontid novelty: *Theroa zethus* caterpillars co-opt and optimize their anti-predator weaponry to disarm plant defense. *PLoS ONE*.
<https://doi.org/10.1371/journal.pone.0218994>.
111. Matson, T. A., D. L. Wagner, and S. E. Miller. 2019. Revision of American *Lactura* North of Mexico, with a preliminary phylogeny for Nearctic taxa (Lepidoptera, Zygaenoidea, Lacturidae). *Zookeys*. 846: 75–116. doi: 10.3897/zookeys.846.31953.
112. Wagner, D.L., K.J. Metzler, and H. Frye. 2019. Importance of transmission line corridors for conservation of native bees and other wildlife. *Biol. Conserv.* 235: 147–156.
113. Bruzzese, D. J., D. L. Wagner, T. Harrison, T. Jogesh, R. P. Overson, N. J. Wickett, R.A. Rugaso, and K. A. Skoggen. 2019. Phylogeny, host use, and diversification in the microlepidopteran family Momphidae (Lepidoptera: Gelechioidea). *PLoS ONE*.
<https://doi.org/10.1371/journal.pone.0207833>.
114. Heikkilä, M. A. A., T. Simonsen, and D. L. Wagner. 2019. Ghosts from the past: A review of fossil Hepialoidea. *PeerJ* 7:e7982 <https://doi.org/10.7717/peerj.7982>.
115. Wagner, D. L. 2020. Insect declines in the Anthropocene. *Ann. Rev. Entomol.* 65: 457–480.
116. Montgomery, G., R. Fox, E. Jongejans, S. Leather, M. E. Saunders, C. R. Shortall, M. W. Tingley, and D. L. Wagner. 2019. Is the insect apocalypse upon us? How to find out. *Biol. Conserv.* <https://doi.org/10.1016/j.biocon.2019.108327>
117. Seifert, C. L., G. P. A. Lamarre, M. Volf, L. R. Jorge, S. E. Miller, D. L. Wagner, and V. Novotny. 2020. Vertical stratification structure of a temperate forest caterpillar community in north-eastern North America. *Oecologia* doi: 10.1007/s00442-019-04584-w.
118. Harvey, J. A., R. Heinen, I. Armbrect, Y. Basset...69 others. 2020. International scientists formulate a roadmap for insect conservation and recovery. *Nat. Ecol. Evol.* 4, 174–176. <https://doi.org/10.1038/s41559-019-1079-8>
119. Matson, T. A. and D. L. Wagner. 2020. A new *Stamnodes* from the southwestern United States (Lepidoptera, Geometridae, Larentiinae). *ZooKeys*. 923: 79–90.
120. García-Robledo, C. E. K. Kuprewicz, C. S. Baer, E. Clifton, G. G. Hernández, and D. L. Wagner. 2020. The Erwin Equation of Biodiversity: From little steps to quantum leaps in the discovery of tropical diversity. *Biotropica*. 52: 590–597.
121. Wagner, D. L., W. Tschinkel, J. Traniello, B. L. Thorne, S. M. Schuster. 2020. In Memoriam: Eldridge S. Adams (1957 – 2019). *Behavioral Ecology and Sociobiology* 74, 140 (2020). <https://doi.org/10.1007/s00265-020-02911-3>
122. Seifert, C., M. Volf, L. Jorge, T. Abe, C. Grace, P. Drozd, R. Kumar, G. Lamarre, M. Libra, M. Losada, S. Miller, M. Murakami, G. Nichols, P. Pyszko, M Sigut, D. L. Wagner, and V. Novotny. 2020. Plant phylogeny drives the structure of arboreal

- caterpillar assemblages across the Holarctic. *Frontiers of Ecology and Evolution*. 10.1002/ece3.7005.
123. Swing, K., E. Braker, P. Fiedler, I. Billick, C. Lorentz, and D.L. Wagner. 2021. Growing threats to the scientific and educational legacies of research stations and field courses. *BioScience* 71: 213–215.
124. Wagner, D. L., E. Grames, M. L. Forister, M. R. Berenbaum, and D. Stopak. 2021. Insect decline in the Anthropocene: Death by a thousand cuts. *PNAS*. 118 (2) e2023989118; DOI: 10.1073/pnas.2023989118
125. Raven, P. H. and D. L. Wagner. 2021. Agricultural intensification and climate change are rapidly decreasing insect biodiversity. *PNAS*. 118 (2) e2002548117; DOI: 10.1073/pnas.2002548117.
126. Wagner, D. L., R. Fox, D. Salcido, and L. A. Dyer. 2021. A window to the world of global insect declines: moth biodiversity trends are complex and heterogeneous. *PNAS*. 118 (2) e2002549117; DOI: 10.1073/pnas.2002549117.
127. Pasquerella, V. J., J. G. Mickley, A. Barker Plotkin, R. G. MacLean, R. M. Anderson, L. M. Brown, D. L. Wagner, M. S. Singer, R. Bagchi. 2021. Assessing a Landsat-based harmonic modeling approach for forest condition monitoring using defoliator abundance and defoliation measurements. *Remote Sensing in Ecology and Conservation*. <https://doi.org/10.1002/rse2.211>
128. Seifert, C. L., L. R. Jorge, M. Volf, D. L. Wagner, G. P.A. Lamarre, S. E. Miller, E Gonzalez-Akre, K. J. Anderson-Teixeira, and V. Novotný. 2021. Seasonality affects specialisation of a temperate forest herbivore community. *Oikos*. 130: 1450-1461 <https://doi.org/10.1111/oik.08265>
129. Gruber, J. W., T. A. Matson, and D. L. Wagner. 2021. *Alypiodes flavilinguis* Grote, 1883 as a valid species (Noctuidae, Agaristinae). *J. Lepid. Soc.* 75: 81-87.
130. Keegan, K. L., J. Rota, R. Zahiri, A. Zilli, B. C. Schmidt, J. D. Lafontaine, P. Z. Goldstein, N. Wahlberg, D. L. Wagner. 2021. Toward a stable global Noctuidae (Lepidoptera) Taxonomy. *Insect Systematics and Diversity*, 5(3): 1-24.
131. Likens, G and D. L. Wagner. 2021. Save Earth's global observatories. *Science* 373:135.
132. Wagner, D. L., D. G. Barker, and S. Jaffe. 2021. New life histories and expanded treatment of Eastern *Datana* larvae. In Lafontaine, J. D., et al., *The Moths of North America*, fasc. 22.1A.
132. Wagner, D. L., T. A. Matson, and J. D. Palting. 2022. A new *Norape* from the southwestern United States (Lepidoptera, Megalopygidae, Trosiinae). *J. Lepid. Soc.* 76: 1-9.
134. Wagner, D. L. and A. Hoyt. 2022. On being a caterpillar: Structure, function, ecology, and behavior, pp. 11-62. In *Caterpillars in the Middle: Tritrophic Interactions in a Changing World*, R. Marquis and S. Koptur (eds.). Springer.
135. Henry, W., H., K. Omland, H. A. Frye, and D. L. Wagner. 2022. Mark-recapture study and habitat assessment for the northern metalmark butterfly, *Calephelis borealis* (Lepidoptera: Riodinidae). *Journal of Insect Conservation*. 1-12. 10.1007/s10841-022-00372-9.
136. Wagner, D. L. and B. Nall. 2022. *Syssphinx* larvae of the Lower Rio Grande Valley of Texas with emphasis on the life history of *Syssphinx tamaulipasiana*. *Journal of the Lepidopterist's Society*. In press.

137. Grames, E. M., G.A. Montgomery, D. H. Boyes, L. V. Dicks, M. L. Forister, T.A. Matson, S. Nakagawa, K. S. Prendergast, N. G. Taylor, M. W. Tingley, D. L. Wagner, T.E. White, P. Woodcock, and C.S. Elphick. 2022. A framework and case study to systematically identify long-term insect abundance and diversity datasets. *Conservation Science and Practice*, 4(6), e12687.
138. Keegan, K. L. and D. L. Wagner. 2022. Molecular phylogeny of *Stiria* (Lepidoptera, Noctuidae) with description of a new species from Texas. *Journal of the Lepidopterist's Society*. In press.
139. Wagner, D. L., D. A. Grimaldi, L. A. Dyer, A.Y. Kawahara. 2022. In Memoriam: James S. Miller (1953 – 2022). *American Entomologist*. In press.
140. Harvey et al., K. Tougeron, R. Gols, R. Heinen, M. Abarca....and 65 others. 2022. Scientists' warning of climate change and insects. *Ecological Monographs*, doi.org/10.1002/ecm.1553
141. Cardoso, P., C. S. Fukushima, E. M. Grames, M. Kwak, M. Milicic, and D. L. Wagner.. Global threats to insects. In *Routledge Handbook of Insect Conservation*. Eds J. Pryke, M. Samways, T. New, T. Geigher, and P. Cardoso. (In press)
142. Forister, M.L., S. H. Black, C. S. Elphick, E. M. Grames, C. A. Halsch, C. B. Schultz, and D. L. Wagner. Missing the bigger picture: why insect monitoring programs are limited in their ability to document the effects of habitat loss. *Conservation Letters*. In press).

In Review:

- Wagner, D. L. and D. R. Davis. First report of the family Micropterigidae (Lepidoptera). from Central America with descriptions of two new genera and five new species. *Ann. Entomol. Soc. Amer.* 59 manuscript pages.

In Preparation:

- Wagner, D. L., K. J. Metzler, and R. A. Askins. New England transmission line corridors as habitat for rare and endangered species. *Conservation Biology*.
- Wagner, D. L. and S. R. Shaw. A new ghost moth from Wyoming: *Gazoryctra nordini* n. sp. (Lepidoptera, Hepialidae).
- Getty, P. R., D. L. Wagner, and A. Bush. Hiding and seeking: Reassessing the behavior of *Treptichnus* tracemakers.

Shorter Publications, Reviews, and Abstracts:

- Wagner, D. L. 1985. Book Review. *Ghost Moths of Southern South America*. E. S. Nielsen and G. Robinson. Scandinavian Science Press Ltd., Copenhagen. p. 192. *In Bull. Entomol. Soc. Am.* 31:50-51.
- Wagner, D. L., B. L. Parker and W. E. Wallner. 1987. Red spruce decline in New England: Are swift moths the culprits? *Vermont Science* 11:1 & 4.
- Wagner, D. L. 1990. Phylogenetic relationships and the distribution of reproductive structures and behaviors in the Hepialidae (Lepidoptera: Exoporia). *Fourth Intern. Congr. Syst. Evol. Biol.* p. 291.
- Wagner, D. L. 1991. Book Review. *Primitive Ghost Moths. Morphology and Taxonomy of the Australian Genus Fraus Walker (Lepidoptera: Hepialidae s. lat.)*. E. S. Nielsen and N. P. Kristensen. 206 pp. *In J. Lepid. Soc.*, 45(3):243-244.

5. Wagner, D. L. 1991. Book Review. *Fauna of New Zealand. No. 16, Nepticulidae*. H. Donner and C. Wilkinson. p.88. In Annals Entomol. Soc. Amer. 85:105-106.
6. Wagner, D. L. 1991. Book Review. *The Moths of Australia*. I. F. B. Common. 505 pp. In Quart. Rev Biol. 66:499.
7. Liebherr, J. K. and D. L. Wagner. 1992. Flightlessness: A reply. 7:421.
8. Wagner, D. L. 1993. Donald Paul Frechin. Obituary. J. Lepid. Soc. 47:83-84.
9. Wagner, D. L. 1993. More on collecting and endangered species: A reply to Ziegler. Lepid. News. Number 4, 1993, pp. 99-100.
10. Wagner, D. L. and J. W. Peacock. 1993. Preliminary results of *Bacillus thuringiensis* field studies in Rockbridge County, Virginia. pp. 112-113. In Proceedings USDA Interagency Gypsy Moth Research Forum 1993. General Technical Report NE-179.
11. Peacock, J. W., D. L. Wagner, and D. F. Schweitzer. 1993. Impacts of Bt on non-target Lepidoptera. Newsl. Mich. Entomol. Soc., 38:1,4-5.
12. Peacock, J. W., D. L. Wagner, D. F. Schweitzer, and S. E. Talley. 1993. pp.10-12. Impacts of Bt on non-target Lepidoptera. Proceedings Combined Meeting NE Forest Pest Council and 25th Annual NE Forest Insect Work Conference, Latham, NY.
13. Wagner, D. L. Book Review. 1994. *Caterpillars. Ecological and Evolutionary Constraints on Foraging*. N. E. Stamp & T. M. Casey. 587 pp. In N. Y. Entomol. Soc. 102:122-124.
14. Peacock, J. W., D. L. Wagner, D. F. Schweitzer, S. E. Talley, R. C. Reardon, N. R. Dubois, and J. L. Carter. 1994. pp. 77-80. Impacts of Bt on non-target Lepidoptera. Proceedings of the 1993 National Gypsy Moth Review. Harrisburg, PA.
15. Wagner, D. L., J. L. Carter, J. W. Peacock, and S. E. Talley. 1994. A field assessment of the effects of *Bacillus thuringiensis* on non-target Lepidoptera, pp. 84-85, In Proceedings USDA Interagency Gypsy Moth Research Forum 1994. General Technical Report NE-188.
16. Wagner, D. L. 1995. Rearing regals for reintroduction: Playing the odds but still losing ground. American Butterflies 3(2):19-23.
17. Wagner, D. L. and J. C. Miller 1995. Must butterflies die for the gypsy moths' sins? American Butterflies 3(3):19-23.
18. Carter, J. L., D. L. Wagner, and R. M. Muzika. 1996. The effect of two applications of *Bacillus thuringiensis* on non-target Lepidoptera. USDA Interagency Gypsy Moth Research Forum. General Technical Report. Abstract.
19. Wagner, D. L. 1996. Connecticut River. Argia 8:3.
20. Wagner, D. L. & M. C. Thomas. 1996. Odonate husbandry. Argia 8:18-19.
21. Wagner, D. L. & M. C. Thomas. 1996. Big days on the big river. Ode News 3:6-8.
22. Wagner, D. L. 2000. Book Review. *Lepidoptera, Moths and Butterflies. Volume 1: Evolution, Systematics, and Biogeography*. Handbook for Zoology. Volume IV Arthropoda: Insecta. N. P. Kristensen (ed.). 491 pp. In Quart. Rev Biol. 75: 65.
23. Conniff, R. & D. L. Wagner. 2000. Save Connecticut's Bug Life Before It Vanishes. (1200 word editorial.) The Hartford Courant, 2 May 2000.
24. Wagner, D. L., D. Paulson, P. Naskrecki, C. Esquivel, and A. Ramirez. 2001. Dragonflies and damselflies of La Selva, Costa Rica, Website. Argia 13:12-13.
25. Wagner, D. L. 2001. Las granjas de mariposas: un colorido ejemplo de manejo sustentable. In. *Elementos de Conservación Biológica: Perspectivas Latinoamericanas*. R Primack, R. Rozzi, P. Feinsinger, R. Dirzo, and F. Massardo (eds.) Fondo de Cultura Económica, Ciudad de Mexico, Mexico. pp. 267-268.

26. Wagner, D. L. Book Review. 2002. *Enjoying Moths*. R. Leverton. In Quart. Rev Biol. 77: 72.
27. Wagner, D. L. Comments on the proposed precedence of Nymphulinae Duponchel, 1845 over Acentropinae Stephens, 1835 (Insecta, Lepidoptera). BZN 59: 38-39.
28. Wagner, D. L. and B. Scholtens. 2002. Lepidoptera blitz nets 860 and counting. ATBI Quarterly. 3:6-8.
29. Wagner, D. L. 2002. Ghost moth. Knoxville News Sentinel. October 2002.
30. Wagner, D. L. and B. Scholtens. 2002. Great Smoky Mountains lep blitz. Lepid. News. 44: 110-112.
31. Wagner, D. L. and B. Scholtens. 2003. Great Smoky Mountains lep blitz. Southeastern Biology. 50: 26-28. (reprinted from ATBI Quarterly 3:6-8, 2002).
32. Wagner, D.L. 2004. Intertwined fates. Review of *Tangled Trees. Phylogeny, Cospeciation, and Coevolution* edited by Roderic D.M. Page. In Trends in Ecology and Evolution. 19: 291-292.
33. Glaudas, X. and D.L. Wagner, D. L. 2004. *Agkistrodon piscivorus piscivorus* (Eastern Cottonmouth). Diet. Herpetological Review – Natural History Notes. 35: 272.
34. Wagner, D. L and B. Scholtens. 2004. 2004 moth and butterfly blitz. ATBI Quarterly. 5 (Spring): 4.
35. Wagner, D. L. 2004. Results of the Smokies 2004 Lepidoptera blitz . ATBI Quarterly. 5: 6-7.
36. Wagner, D. L. 2005. 2004 moth and butterfly blitz. Southeastern Biology. 52: 39-41. (Reprinted from ATBI Quarterly 5:4).
37. Wagner, D. L. 2005. Butterfly attack. ATBI Quarterly. 6 (Spring): 6.
38. Thomas, M. C. and D. L. Wagner. 2005. Connecticut Highlights – 2004. Ode News 12: 4-6.
39. Thomas, M. C. and D. L. Wagner. 2005. Connecticut's Rare and Endangered Odonates. Ode News 12: 6.
40. Wagner, D. L. 2006. Book Review. Lepidoptera, Moths and Butterflies. Volume 2: Morphology, Physiology, and Development. Handbook for Zoology. Volume IV Arthropoda: Insecta. R. Leverton. In Quart. Rev Biol. 81: 70-71.
41. Wagner, D. L. 2006. A precautionary tale about rarity: On the larva and life history of *Lithophane joannis* (Lepidoptera: Noctuidae). ATBI Quarterly. 7: 3.
42. Wagner, D. L. 2006. Another view of recreational collecting. News Lepid. Soc. 48: 7, 9.
43. Wagner, D. L. 2006. A precautionary tale about rarity: On the larva and life history of *Lithophane joannis* (Lepidoptera: Noctuidae). J. Lepid. Soc. 60: 174-176.
44. Thomas, M. C. and D. L. Wagner. Connecticut Highlights – 2005. Ode News. 13(1): 4-5.
45. Wagner, D.L. 2006. The ESA weighs in on the ESA. Entomol. Soc. Amer. Newsletter. September 29(9): 1.
46. Wagner, D. L. and K. Langdon. 2006. Sourwood defoliation by Lettered Sphinx (*Deidamia inscripta*) in southern Appalachians (Lepidoptera: Sphingidae). J. Lepid. Soc. 60: 230-232.
47. Wagner, D. L. and J. Rota. 2006. Evasive prey mimicry in a tropical tortricid? News Lepid. Soc. 48: 115.
48. Wagner, D. L. 2007. Emerald ash borer threatens ash-feeding Lepidoptera. News Lepid. Soc. 49: 10-11.

49. Wagner, D.L. 2007. Cascading consequences of introduced and invasive species on imperiled invertebrates, pp. 1-5 *In Proceedings*, 18th U.S. Department of Agriculture Interagency Research Forum on Gypsy Moth and Other Invasive Species. 9-12 January, 2007, Annapolis, MD. Gen. Tech. Rep. NRS-P-28. U.S. Department of Agriculture, Forest Service, Northern Research Station.
50. Wagner, D. L. 2007. A beetle's last stand. Hartford Courant. Op-ed. Sunday 15 April, 2007.
51. Wagner, D. L. 2007. Dead bugs do tell tales. News Lepid. Soc. 49: 50-51, 67.
52. Wagner, D. L. 2008. Book Review. 100 Butterflies and Moths. *In Quart. Rev Biol.* 83: 120-121.
53. Wagner, D. L. and J. S. Ascher. 2008. Rediscovery of *Epeoloides pilosula* (Cresson) (Hymenoptera: Apidae) in New England. *J. Kansas Entomol. Soc.* 81: 81-83.
54. Hossler, E. W., D. M. Elston, and D. L. Wagner. 2008. What's eating you? Io moth (*Automeris io*). *Cutis* 82:21-4.
55. Peacock, J. W. and D. L. Wagner. 2009. *Catocala benjamini ute* n. ssp. from East-central Utah Noctuidae: Catocalinae). *J. Lepid. Soc.* 63: 89-92
56. Wagner, D. L. and J. Slotten. 2010. Life history of the Double Tufted Wasp Moth, *Didasys belae* Grote (Erebidae: Arctiinae). *J. Lepid. Soc.* 64: 219-221.
57. Wagner, D. L., S. Miller, L. Gall, and K. Richers. 2010. The biodiversity crisis, charitable giving, and estate planning. *News Lepid. Soc.* 55: 134-135.
58. Hodges, R. W., D. L. Wagner, and O. Dominick. 2010. Wedge Entomological Research Foundation. *News Lepid. Soc.* 55: 136-137.
59. Wagner, D. L. 2011. The Society honors eight Charter Members. *News Lepid. Soc.* 53: 8-14.
60. Wagner, D. L. 2012. Paul A. Opler: Our Society's newest Honorary Life Member. *News Lepid. Soc.* 54: 16-17.
61. Wagner, D. L. 2012. Moth decline in the Northeastern United States. *News Lepid. Soc.* 54: 52-56.
62. Wagner, D. L. 2012. On the future of lepidopteran systematics and estate planning. *News Lepid. Soc.* 54: 108-109.
63. Wagner, D. L. 2013. Insects of trap rock ridges, pp. 23-27. *In Trap Rock Ridges of Connecticut: Natural History and Land Use*, P. Sharp, R. S. Lewis, D. L. Wagner, and C. Lee. Connecticut College Arboretum and Connecticut Department of Energy and Environmental Protection.
64. Colla, S. R., N. D. Szarbo, D. L. Wagner, L. F. Gall, and J. T. Kerr. 2013. Response to Stevens and Jenkins' pesticide impacts on bumblebees: a missing piece. *Biodivers. Conserv.* Pending. DOI: 10.1111/conl.12019.
65. Nall, B., and D. L. Wagner. 2013. Life History of the Texas Wasp Moth, *Horama panthalon texana* Grote (Erebidae: Arctiinae). *News Lepid. Soc.* 55: 51-53, 57.
66. Collins, M. M. and D. L. Wagner 2014. Caterpillars, crypsis and context: Interpreting the adaptive significance of larval patterns requires viewing at appropriate distance in natural lighting and against natural background. *News Lepid. Soc.* 56: 3-9.
67. Wagner, D. L. 2014. Mo Nielsen. *Newsletter of the Michigan Entomol. Soc.* 59: 3.
68. Wagner, D. L. and J. S. Ascher. 2014. In remembrance of Gerald Irving Stage (June 26, 1935-January 23, 2014). *J. Kansas Entomol. Soc.* 87: 318-323.

69. Wagner, D. L., J. A. Shuey, and T. M. Gilligan. 2014. The Conservation Committee's thoughts on the "Petition to Protect the Monarch Butterfly (*Danaus plexippus plexippus*) as a Threatened Species Under the Endangered Species Act." NewsL Lepid. Soc. 56: 190-191.
70. Gallinat, A., R. Primack, and D. L. Wagner. 2015. Autumn is getting later – just ask the trees, birds and butterflies. Elsevier Connect. <https://www.elsevier.com/connect/autumn-is-getting-later-just-ask-the-trees-birds-and-butterflies#comment-2327971239>
71. Kerr, J. T., A. Pindar, P. Galpern, L. Packer, S. G. Potts, S. M. Roberts, P. Rasmont, O. Schweiger, S.R. Colla, L. L. Richardson, D. L. Wagner, L. F. Gall, D. S. Sikes, and A. Pantoja. 2015. Relocation risky for bumblebees. Response. Science. 350: 287.
72. Van Driesche, R. G., D. Simberloff, B. Blossey, C. Causton, M. S. Hoddle, C. Marks, K. Heinz, D. L. Wagner, and K. Warner. 2016. Preface. In Van Driesche, R. G., D. Simberloff, B. Blossey, C. Causton, M. S. Hoddle, C. Marks, K. Heinz, D. L. Wagner, and K. Warner (eds.), *Integrating Biological Control into Conservation Practice*, Wiley, Oxford.
73. Van Driesche, R. G., D. Simberloff, and D. L. Wagner. 2016. P. 329. Concluding thoughts on future actions. Pp. In Van Driesche, R. G., D. Simberloff, B. Blossey, C. Causton, M. S. Hoddle, D. L. Wagner, C. Marks, K. Heinz, and K. Warner (eds.). *Integrating Biological Control into Conservation Practice*, Wiley, Oxford.
74. Haddad, N. and D. L. Wagner. 2017. Persistent decline in the abundance and diversity of Lepidoptera. NewsL Lepid. Soc. 2: 94-95, 101.
75. Wagner, D. L. 2018. Cracking the life history of Noel McFarland. NewsL Lepid. Soc. 60: 46-49.
76. Wagner, D. L. and D. Rubinoff. 2018. Butterfly wrangler, moth-seeking mountaineer, gold hound - Ronald Wielgus. NewsL Lepid. Soc. 60: 118-122.
77. Wagner, D. L. Global insect decline: Comments on Sánchez-Bayo and Wyckhuys. 2019. Biological Conservation. 233: 332-333.
78. Wagner, D. L., J. Palting, and C. Garvey. 2019. The Chiricahuas Mountains, sky islands, and climate change. NewsL Lepid. Soc. 61: 100-103.
79. Grames, E. M., G. A. Montgomery, N. R. Haddaway, L. Dicks, C. S. Elphick, T. A. Matson, S. Nakagawa, M. E. Saunders, M. W. Tingley, T. E. White, P. Woodcock, and D. L. Wagner 2019. Trends in global insect abundance and biodiversity: A community-driven systematic map draft protocol.
80. Wagner, D. L. and H. Frye. 2019. New England power line corridors harbor rare bees and other wild things. The Conversation. October 3, 2019. <https://phys.org/news/2019-10-england-power-line-corridors-harbor.html>
81. Grames, E. M., T. Amano, D. Wagner, and C. S. Elphick. 2020. Global syntheses of biodiversity are hampered by biases introduced by information retrieval methods. Science e-Letter (7 May 2020): <https://science.sciencemag.org/content/368/6489/417/tab-e-letters>
82. Wagner, D. L. and W. J. Henry. 2020. Big lessons and questions from a little butterfly: The northern metalmark. NewsL Lepid. Soc. 62: 134-137.
83. Wagner, D. L. and R. Bailowitz. 2021. The 2020-2021 Megadrought and Southeastern Arizona's butterflies. NewsL Lepid. Soc. 63: 202-205.

Recent Media and Press:

The Washington Post (15 October 2018) “[Hyperalarming’ study shows massive insect loss](#)” - Insects around the world are in a crisis, according to a small but growing number of long-term studies showing dramatic declines in invertebrate populations. A new report suggests that the problem

Ensia (29 October, 2018):

[Insect populations are declining around the world. How worried should we be?](#)

NPR (Wisconsin) “A Look At The Huge Declines Of Global Invertebrate Populations” (29 October, 2018):

[<https://www.wpr.org/look-huge-declines-global-invertebrate-populations>](#)

Scientific American picked up the Ensia article and posted it (1 November 2018):

[<https://www.scientificamerican.com/article/as-insect-populations-decline-scientists-are-trying-to-understand-why/>](#)

New York Times Feature on “The Insect Apocalypse Is Here” (27 November 2018):

[<https://www.nytimes.com/2018/11/27/magazine/insect-apocalypse.html>](#)

Leonard Lopate at Large Show on “The Insect Apocalypse Is Here” (11 December 2018):

[<https://robinhoodradioondemand.com/podcast/leonard-lopate-at-large-brooke-jarvis-dr-arthur-shapiro-of-uc-davis-and-dr-david-wagner-of-the-university-of-ct/>](#) (60-minute program; technical problems for first 15 minutes; second half of program strong)

WHYY Philadelphia NPR on “Insect Armageddon” (12 December 2018):

[<https://whyy.org/episodes/insect-armageddon/>](#) (20-minute segment)

National NPR Science Friday on “The Secret Lives of Caterpillars” (14 December 2018):

[<https://www.sciencefriday.com/segments/dear-science-friday-can-you-study-the-asp-caterpillar/>](#)

This program on caterpillars. Second grader Nina Del Bosque and Ira Flatow co-host a discussion on caterpillars. Winner of a 2018 Best-of-Year Award.

National Geographic. Central persona in Elizabeth Kolbert’s featured article “You’ll Miss Them When Their Gone.” May 2020.

More than 20 media interviews in 2021 anchored to Wagner, D. L., E. Grames, M. L. Forister, M. R. Berenbaum, and D. Stopak. 2021. Insect Decline in the Anthropocene: Death by a thousand cuts. PNAS. 118 (2) e2023989118; DOI: 10.1073/pnas.2023989118. Picked up by 52 media outlets; >40,000 downloads; Altmetric score 1109 (presently in top 5% of all research outputs). Worked appeared on Assoc. Press, Nat Geo, CBS, Guardian, NPR.