

References

- Alosi, M. Carol; Robertson, Jacqueline L. 1992. Biochemical indicators of population status of bark beetles [this proceedings].
- Amman, G.D. 1982. Characteristics of mountain pine beetles reared in four pine hosts. *Environmental Entomology* 11: 590-593.
- Amman, G.D.; Cole, W.E. 1983. Mountain pine beetle dynamics in lodge-pole pine forest. Part II: population dynamics. Gen. Tech. Rep. WT-145. Ogden, UT: Intermountain Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 59 p.
- Amman, G.D.; Pasek, J.E. 1986. Mountain pine beetle in ponderosa: effects of phloem thickness and egg gallery density. Res. Paper INT-376. Ogden, UT: Intermountain Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 7 p.
- Amman, G.D.; Stock, M.W. Effect of phloem thickness on heterozygosity of laboratory-reared mountain pine beetles (*Dendroctonus ponderosae* Hopkins, Coleoptera: Scolytidae). Unpublished draft supplied by author.
- Anderson, W.W.; Berisford, C.W. 1992. Bark beetle genetics. [this Proceedings]
- Anderson, W.W.; Berisford, C.W.; Kimmich, R.H. 1979. Genetic differences among five populations of the southern pine beetle. *Annals of Entomological Society of America* 72: 323-327.
- Anderson, W.W.; Berisford, C.W.; Tumbow, R.H.; Brown, C.J. 1983. Genetic differences among populations of the black turpentine beetle, *Dendroctonus terebrans*, and an engraver beetle, *Ips calligraphus* (Coleoptera: Scolytidae). *Annals of Entomological Society of America* 76: 896-902.
- Arnheim, N.; White, T.; Rainey, W.E. 1990. Application of PCR: organismal and population biology. *BioScience* 40: 174-182.
- Bartlet, R.J.; Schaner, A.M.; Jackson, L.L. 1986. Aggregation pheromones in five taxa of the *Drosophila virilis* species group. *Physiological Entomology* 11: 367-376.
- Bentz, B.J.; Stock, M.W. 1986. Phenetic and phylogenetic relationships among ten species of *Dendroctonus* bark beetles (Coleoptera: Scolytidae). *Annals of Entomological Society of America* 79: 527-534.
- Berisford, C.W.; Payne, T.L.; Berisford, Y.C. 1990. Geographical variation in response of southern pine beetle (Coleoptera: Scolytidae) to aggregating pheromones in laboratory assays. *Environmental Entomology* 19: 1671-1674.
- Berryman, A.A. 1972. Resistance of conifers to invasion by bark beetles-fungus associations. *BioScience* 22: 598-602.
- Bigot, Y.; Hamelin, M. H.; Periquet, G. 1990. Heterochromatin condensation and evolution of unique satellite-DNA families in two parasitic wasp species: *Diadromus pulchellus* and *Eupelmus vuilleti* (Hymenoptera). *Molecular Biology and Evolution* 7: 351-364.
- Birch, M.C.; Light, D.M.; Wood, D.L.; Browne, J.E.; Silverstein, R.M.; Bergot, B.J.; Ohloff, G.; West, J.R.; Young, J.C. 1980. Pheromonal attraction and allomonal interruption of *Ips pini* in California by the two enantiomers of ipsdienol. *Journal of Chemical Ecology* 6(3): 703-717.
- Birgersson, G.; Schlyter, F.; Bergstrom, G.; Lofquist, J. 1988. Individual variation in the aggregation pheromone of the spruce bark beetle, *Ips typographus*. *Journal of Chemical Ecology* 14: 1737-1761.
- Birgersson, G.; Schlyter, F.; Lofqvist, J.; Bergstrom, G. 1984. Quantitative variation of pheromone components in the spruce bark beetle *Ips typographus* from different attack phases. *Journal of Chemical Ecology* 10: 1029-1055.
- Blanchetot, A. 1991. A *Musca domestica* satellite sequence detects individual polymorphic regions in insect genome. *Nucleic Acid Research* 19: 929-932.
- Blomquist, G.J.; Howard, R.W.; McDaniel, C.A. 1979. Structure of the cuticular hydrocarbons of the termite *Zootermopsis angusticollis* (Hagen). *Insect Biochemistry* 9:371-374.
- Bright, D.E. 1976. The insects and arachnids of Canada, Part 2. The bark beetles of Canada and Alaska. Publication 1576. Ottawa, Ontario, Canada: Canadian Department of Agriculture; 241 p.
- Bright, D.E. Systematics of bark beetles. In: Schowalter, T.D.; Filip, G.M., eds. Beetle-pathogen interactions in conifer forests. New York: Academic Press. [In press.]
- Bright, Donald E. 1992. Systematics research [this Proceedings]
- Bright, D.E., Jr.; Stark, R.W. 1973. The bark and ambrosia beetles of California: Scolytidae and Platypodidae. *Bulletin California Insect Survey* 16. Berkeley: University of California Press; 169 p.
- Bright, D.E.; Stock, M.W. 1982. Taxonomy and geographic variation. In: Mitton, J.B., Sturgeon, K.B., eds. Bark beetles in North American conifers. Austin: University of Texas Press; 46-73.
- Brillinger, D.R. 1990. Spatial-temporal modelling of spatially aggregate birth data. *Survey Methodology* 16: 255-269.
- Bush, G.L. 1969. Sympatric host race formation and speciation in frugivorous flies in genus *Rhagoletis* (Diptera, Tephritidae). *Evolution* 23: 237-251.
- Cane, J.H. 1983. Chemical evolution and chemosystematics of the Dufour's gland secretions of the lactone-producing bees (Hymenoptera: Colletidae, Halictidae, Oxaeidae). *Evolution* 37: 657-674.
- Cane, James H. 1992. Genetic characters for bark beetle phylogenies [this Proceedings].
- Cane, J.H.; Merrill, L.D.; Wood, D.L. 1990a. Attraction of pinyon pine bark beetle, *Ips hoppingi*, to conspecific and *I. confusus* pheromones (Coleoptera: Scolytidae). *Journal of Chemical Ecology* 16(10): 2791-2798.
- Cane, J.H.; Stock, M.W.; Wood, D.L.; Gast, S.J. 1990b. Phylogenetic relationships of *Ips* bark beetles (Coleoptera: Scolytidae): Electrophoretic and morphometric analyses of the *grandicollis* group. *Biochemical Systematics and Ecology* 18: 359-368.
- Cane, J.H.; Wood, D.L.; Fox, J.W. 1990c. Ancestral semiochemical attraction persists for adjoining populations of sibling *Ips* bark beetles (Coleoptera: Scolytidae). *Journal of Chemical Ecology* 16: 993-1013.
- Charlesworth, B.; Langley, C.H. 1989. The population genetics of *Drosophila* transposable elements. *Annual Review of Genetics* 23: 251-287.
- Clarke, Geoffrey M.; McKenzie, Leslie J. 1992. Fluctuating asymmetry as a quality control indicator for insect mass rearing processes. *Journal of Economic Entomology* 85: 2045-2050.
- Correll, J.C.; Gordon, T.R.; McCain, A.H. 1992. Genetic diversity in California and Florida populations of the pitch canker fungus *Fusarium subglutinans* f. sp. *pini*. *Phytopathology* 82: 415-420.
- Coyne, J.F.; Lott, L.H. 1976. Toxicity of substances in pine oleoresin to southern pine beetles. *Journal of Georgia Entomological Society* 11: 301-305.
- Cracraft, J.; Helm-Bychowski, K. 1991. Parsimony and phylogenetic inference using DNA sequences: some methodological strategies. In: Miyamoto, M.M.; Cracraft, J., eds. Phylogenetic analysis of DNA sequences. New York: Oxford University Press; 184-220.

- Dauterman, W.C.; Hodgson, E. 1978. Detoxification mechanisms in insects. In: Rockstein, M., ed. Biochemistry of insects. New York: Academic Press: 541-577.
- Diel, S.R.; Bush, G.L. 1984. An evolutionary and applied perspective of insect biotypes. Annual Review of Entomology 29: 471-504.
- Engels, W.R. 1983. The P family of transposable elements in *Drosophila*. Annual Review of Genetics 17: 315-344.
- Fish, R.H.; Browne, L.E.; Bergot, B.J. 1984. Pheromone biosynthetic pathways: conversion of ipsdienone to (-)-ipsdienol, a mechanism for enantioselective reduction in the male bark beetle, *Ips paraconfusus*. Journal of Chemical Ecology 10: 1057-1064.
- Fish, R.H.; Browne, L.E.; Wood, D.L.; Hendry, L.B. 1979. Pheromone biosynthetic pathways: Conversions of deuterium labelled ipsdienol with sexual and enantioselectivity in *Ips paraconfusus* Lanier. Tetrahedron Letters 17: 1465-1468.
- Florence, L.Z.; Johnson, P.C.; Coster, J.E. 1982. Behavioral and genetic diversity during dispersal: analysis of a polymorphic esterase locus in southern pine beetle, *Dendroctonus frontalis*. Environmental Entomology 11: 1014-1018.
- Florence, L.Z.; Kulhavy, D.L. 1981. Genetic variation and population structure of the southern pine beetle, *Dendroctonus frontalis*. In: Stock, M.W., ed. Application of genetics and cytology in insect systematics and evolution: proceedings of symposium, National ESA Meeting; December 1-2, 1980; Atlanta, GA. Moscow, ID: Forest, Wildlife, and Range Experiment Station, Univ. of Idaho; 141-152.
- Fox, J.W.; Wood, D.L.; Cane, J.H. 1991 a. Interspecific pairing between two sibling *Ips* species (Coleoptera: Scolytidae). Journal of Chemical Ecology 17: 1421-1435.
- Fox, J.W.; Wood, D.L.; Koehler, C.S. 1990. Distribution and abundance of engraver beetles (Scolytidae: *Ips* Species) on Monterey pines infected with pitch canker. Canadian Entomologist 122: 1157-1166.
- Fox, J.W.; Wood, D.L.; Koehler, C.S.; O'Keefe, S.T. 1991b. Engraver beetles (Scolytidae: *Ips* species) as vectors of the pitch canker fungus, *Fusarium subglutinans*. Canadian Entomologist 123: 1355-1367.
- Fuchs, A.G. 1913. Forstzoologische Ergebnisse einer Sommerreise ins Engadin. III. Die Arven, Larchen und Fichtenborkenkäfer des Engadin. Naturwissenschaftliche Zeitschrift für Forst- und Land-wirtschaft 11(2); 65-86.
- Furniss, M.M.; Schenk, J.A. 1969. Sustained natural infestations by the mountain pine beetle in seven new *Pinus* and *Picea* hosts. Journal of Economic Entomology 62: 518-519.
- Futura, K. 1989. A comparison of endemic and epidemic populations of the spruce beetle (*Ips typographus japonicus* Nijima) in Hokkaido. Journal of Applied Entomology 107: 289-295.
- Gast, S.J. 1987. Factors affecting host and pheromone attraction and a comparison of genetic diversity in consecutive generations of *Ips pini* (Say) (Coleoptera: Scolytidae) in Idaho. Moscow: Univ. of Idaho. M.S. Thesis.
- Gast, S.J.; Furniss, M.M. Electrophoretic comparison of *Dendroctonus punctatus* LeConte and *D. micans* (Kugelann) (Coleoptera: Scolytidae). Unpublished draft supplied by author.
- Gast, S.J.; Stock, M.W. Genetic diversity in consecutive generations of *Ips pini* (Say) (Coleoptera: Scolytidae) in Idaho. Unpublished draft supplied by author.
- Gittleman, J.L.; Kot, M. 1990. Adaptation: statistics and a null model for estimating phylogenetic effects. Systematic Zoology 39: 227-241.
- Green, M.M. 1980. Transposable elements in *Drosophila* and other Diptera. Annual Review of Genetics 14: 109-120.
- Greene, Lula E. 1992. Qualitative genetics of mountain pine beetle in central Oregon [this Proceedings].
- Haack, Robert A.; Herms, Daniel A.; Ayres, Bruce D.; Ayres, Matthew P.; Snider, M.L. Doozie. 1992. Genetic basis of semiochemically mediated bark beetle-predator coevolution: implications for developing mass-trapping technologies [this Proceedings].
- Hackett, K.J.; Lynn, D.E.; Williamson, D.L.; Ginsberg, A.S.; Whitcomb, R.H. 1986. Cultivation of the *Drosophila* sex-ratio spiroplasma. Science 232: 1253-1255.
- Haverty, M.I.; Page, M.; Blomquist, G.J. 1989. Value of cuticular hydrocarbons for identifying morphologically similar species of pine cone beetles. Proc. 3rd Cone and Seed Insect Working Party, IUFRO, Victoria, B.C., Canada. 50-62.
- Haverty, M.I.; Page, M.; Nelson, L.J.; Blomquist, G.J. 1988. Cuticular hydrocarbons of the dampwood termites, *Zootermopsis*: Intra- and intercolony variation and potential as taxonomic characters. Journal of Chemical Ecology 14: 1035-1058.
- Hayes, J.L.; Robertson, J.L. 1992. An (ecologically biased) view of the current status of bark beetle genetics and future research needs. [this Proceedings]
- Hendry, L.B.; Piatek, B.; Browne, L.E.; Wood, D.L.; Byers, J.A.; Fish, R.H.; Hicks, R.A. 1980. *In vivo* conversion of a labelled host plant chemical to pheromones of the bark beetle *Ips paraconfusus*. Nature 284: 485.
- Herms, D.A.; Haack, R.A.; Ayres, B.D. 1991. Variation in a semiochemical-mediated prey-predator interaction: *Ips pini* (Scolytidae) and *Thanosimus dubius* (Cleridae). Journal of Chemical Ecology 17: 1705-1714.
- Higby, P.K.; Stock, M.W. 1982. Genetic relationships between two sibling bark beetle species, the Jeffrey pine beetle and the mountain pine beetle, in northern California. Annals of Entomological Society of America 75: 668-674.
- Hillis, D.M.; Bull, J.J.; White, M.E.; Badgett, M.R.; Molineux, I.J. 1992. Experimental phylogenetics: generation of a known phylogeny. Science 255: 589-592.
- Hobson, K.R. 1992. Studies on host selection and biology of *Dendroctonus valens* and fungal host interactions of *Dendroctonus brevicornis*. Berkeley: University of California. Dissertation.
- Hobson, Ken; Edwards, Owain. 1992. Novel bark beetle research possible with new genetic techniques. [this Proceedings]
- Homvelt, R.; Christiansen, E.; Solheim, H.; Wang, S. 1983. Artificial inoculation with *Ips typographus*-associated fungi can kill Norway spruce trees. Meddelelser fra Norsk Institutt for Skogforskning 38(4): 1-20.
- Hynum, B.G. 1978. Migration phase interactions between the mountain pine beetle and lodgepole pine. Pullman: Washington State University. Dissertation.
- Ikeda, H. 1965. Interspecific transfer of the "sex-ratio" agent of *Drosophila willistoni* in *Drosophila bifasciata* and *Drosophila melanogaster*. Science 147: 1147-1148.
- Jeffreys, A.J.; Wilson, V.; Thein, S.L. 1985. Hypervariable "minisatellite" regions in human DNA. Nature 314: 67-73.
- Johnson G.B. 1974. Enzyme polymorphism and metabolism. Science 184: 283-292.
- Kaneshiro, K.Y. 1988. Speciation in the Hawaiian *Drosophila*. BioScience 38: 258-263.
- Kemp, W.P.; Kalaris, T.M.; Quimby, W.F. 1989. Rangeland grasshopper (Orthoptera: Acrididae) spatial variability: Macroscale population assessment. Journal of Economic Entomology 82: 1270-1276.

- Langor, D.W. 1989. Host effects on the phenology, development, and mortality of field populations of the mountain pine beetle, *Dendroctonus ponderosae* Hopkins (Coleoptera: Scolytidae). Canadian Entomologist 121: 149-157.
- Langor, D.W.; Spence, J.R. 1991. Host effects on allozyme and morphological variation of the mountain pine beetle, *Dendroctonus ponderosae* Hopkins (Coleoptera: Scolytidae). Canadian Entomologist 123: 395-410.
- Langor, D.W.; Spence, J.R.; Pohl, G.R. 1990. Host effects on fertility and reproductive success of *Dendroctonus ponderosae* Hopkins (Coleoptera: Scolytidae). Canadian Entomologist 121: 149-157.
- Lanier, G.N. 1967. Biosystematic, cytological, and sex ratio studies of closely related bark beetles (Coleoptera: Scolytidae). Berkeley: University of California; 110 pp. Dissertation.
- Lanier, G.N. 1970a. Biosystematics of the genus *Ips* (Coleoptera: Scolytidae) in North America. Hopping's group III. Canadian Entomologist 102: 1404-1423.
- Lanier, G.N. 1970b. Biosystematics of North American *Ips* (Coleoptera: Scolytidae): Hopping's group IX. Canadian Entomologist 102: 1139-1163.
- Lanier, G.N. 1970c. Sex pheromones: abolition of specificity in hybrid bark beetles. Science 169: 71-72.
- Lanier, G.N. 1972. Biosystematics of the genus *Ips* (Coleoptera: Scolytidae) in North America. Hopping's groups IV and X. Canadian Entomologist 104: 361-388.
- Lanier, G.N. 1981. Cytotaxonomy of *Dendroctonus*. In: Stock, M.W., ed. Application of genetics and cytology in insect systematics and evolution. proceedings of symposium, National ESA Meeting; December 1-2, 1980; Atlanta, GA. Moscow, ID: Forest, Wildlife, and Range Experiment Station, University of Idaho; 33-66.
- Lanier, G.N.; Birch, M.C.; Schmitz, R.F.; Furniss, M.M. 1972. Pheromones of *Ips pini* (Coleoptera: Scolytidae): variation in response among three populations. Canadian Entomologist 104: 1917-1923.
- Lanier, G.N.; Claesson, A.; Stewart, T.; Piston, J.; Silverstein, R.M. 1980. *Ips pini*: the basis for interpopulational differences in pheromone biology. Journal of Chemical Ecology 6: 677-687.
- Lanier, G.N.; Oliver, J.H. 1966. Sex-ratio condition: unusual mechanisms in bark beetles. Science 153: 208-209.
- Lanier, G.N.; Wood, D.L. 1975. Specificity of response to pheromones in the genus *Ips* (Coleoptera: Scolytidae). Journal of Chemical Ecology 1(1): 9-13.
- Leary, R.F.; Allendorf, F.W. 1989. Fluctuating asymmetry as an indicator of stress: implications for conservation biology. Trends in Ecology & Evolution 4: 214-217.
- Leitinger, R. 1991. Populationsgenetische Untersuchungen an *Ips typographus* (Col., Scolytidae) outer geographischem and verhaltens-biologischem Aspekt. Dipl. Thesis BOKU Vienna.
- Leitinger R.; Stauffer, Ch.; Fuehrer, E. 1992. Postglacial remigration of the European *Ips typographus* (Col.: Scolytidae) populations from three refugial areas. Entomologia generalis. Unpublished draft supplied by author.
- Lewis, E.E.; Cane, J.H. 1990a. Stridulation as a primary antipredator defence of a beetle. Animal Behavior 40: 1003-1004.
- Lewis, E.E.; Cane, J.H. 1990b. Pheromonal specificity of Southeastern *Ips* pine bark beetles reflects phylogenetic divergence (Coleoptera: Scolytidae). Canadian Entomologist 122: 1235-1238.
- Lewis, E.E.; Cane, J.H. 1992. Inefficacy of courtship stridulation as a premating ethological barrier for *Ips* bark beetles (Coleoptera: Scolytidae). Annals of Entomological Society of America 85(4): 517-524.
- Liebhold, A.M.; Elkinton, J.S. 1989. Characterizing spatial patterns of gypsy moth regional defoliation. Forest Science 35: 557-568.
- Linton, D.A.; Safranyik, L.; Whitney, H.S.; Spanier, O.J. 1984. Possible genetic control of color morphs of spruce beetles. Research Notes 4: 53. Victoria, B.C., Canadian Forest Service.
- McCambridge, W.F. 1975. Scotch pine and mountain pine beetles. Green Thumb 32: 87.
- Merriam, J.; Ashburner, M.; Hard, D.L.; Kafatos, F.C. 1991. Toward cloning and mapping the genome of *Drosophila*. Science 254: 221-225.
- Merrill, L.A. 1991. Biological barriers to hybridization in closely related species of *Ips* (Coleoptera: Scolytidae). Berkeley: University of California; 121 p. Dissertation.
- Miller, D.R. 1990. Reproductive and ecological isolation: community structure in the use of semiochemicals by pine bark beetles (Coleoptera: Scolytidae). Burnaby, B.C., Canada: Simon Fraser University; 166 p. Dissertation.
- Miller, D.R.; Borden, J.H.; Slessor, K.N. 1989. Inter- and intrapopulation variation of the pheromone ipsdienol produced by male pine engravers, *Ips pini* (Say) (Coleoptera: Scolytidae). Journal of Chemical Ecology 15(1): 233-247.
- Mitchell, R.G.; Preisler, H.K. 1991. Analysis of spatial patterns of lodgepole pine attacked by outbreak populations of the mountain pine beetle. Forest Science 37: 1390-1408.
- Mitter, C.; Farrell, B.; Futuyma, D.J. 1991. Phylogenetic studies of insect-plant interactions: insights into the genesis of diversity. Tree 6: 290-293.
- Mitton, C.; Schneider, J.C. 1987. Genetic change and insect outbreaks. In: Barbosa, P.; Schultz, J.C., eds. Insect outbreaks. New York: Academic Press; 505-532.
- Mitton, J.B.; Sturgeon, K.B. 1982. Bark beetles in North American conifers: a system for the study of evolutionary biology. Austin: University of Texas Press; 527 p.
- Moritz, R.F.A.; Meusel, M.S.; Haberl, M. 1991. Oligonucleotide DNA fingerprinting discriminates super- and half-sisters in honeybee colonies (*Apis mellifera* L.). Naturwissenschaften 78: 422-424.
- Namkoong, G.; Roberds, J.H.; Nunnally, L.B.; Thomas, H.A. 1979. Isozyme variations in populations of southern pine beetles. Forest Science 25: 197-203.
- Novitski, E.; Peacock, W.J.; Engel, J. 1965. Cytological basis of "sex ratio" in *Drosophila pseudoobscura*. Science 148: 516-517.
- Owen, D.R.; Lindahl, K.Q., Jr.; Wood, D.L.; Parmeter, J.R., Jr. 1987. Pathogenicity of fungi isolated from *Dendroctonus valens*, *D. brevicornis*, *D. ponderosae* to ponderosa pine seedlings. Phytopathology 77: 631-636.
- Page, Marion. 1992. Cuticular hydrocarbon research [this Proceedings].
- Page, M.; Nelson, L.J.; Blomquist, G.J.; Seybold, S.J. 1992. Cuticular hydrocarbons as chemosystematic characters of pine engraver beetles (*Ips* sp.) (Coleoptera: Scolytidae) in the *Grandicollis* subgeneric group. Unpublished draft supplied by author.
- Page, M.; Nelson, L.J.; Haverty, M.I.; Blomquist, G.J. 1990a. Cuticular hydrocarbons of eight species of North American cone beetles, *Conophthorus* Hopkins. Journal of Chemical Ecology 16: 1178-1193.
- Page, M.; Nelson, L.J.; Haverty, M.I.; Blomquist, G.J. 1990b. Cuticular hydrocarbons as chemotaxonomic characters for bark beetles: *Dendroctonus*

- ponderosae* Hopkins, *D. jeffreyi* Hopkins, *D. brevicornis* LeConte and *D. frontalis* Zimmerman (Coleoptera: Scolytidae). Annals of Entomological Society of America 83: 892-901.
- Pajares, J.A.; Lanier, G.N. 1990. Biosystematics of the turpentine beetles *D. terebrans* and *D. valens* (Coleoptera: Scolytidae). Annals of Entomological Society of America 83: 171-188.
- Palmer, A.R.; Strobeck, C. 1986. Fluctuating asymmetry: measurement, analysis, patterns. Annual Review of Ecology and Systematics 17: 391-421.
- Parmeter, J.R., Jr.; Slaughter, G.W.; Chen, M.-M.; Wood, D.L. 1992. Rate and depth of sapwood occlusion following inoculation of pines with bluestain fungi. Forestry Science 38: 34-44.
- Parmeter, J.R., Jr.; Slaughter, G.W.; Chen, M.-M.; Wood, D.L.; Stubbs, H.A. 1989. Single and mixed inoculations of ponderosa pine by fungal associates of *Dendroctonus* sp. Phytopathology 79: 768-772.
- Parsons, P.A. 1990a. Fluctuating asymmetry: an empigenetic measure of stress. Biological Reviews 65: 131-145.
- Parsons, P.A. 1990b. Fluctuating asymmetry and stress intensity. Trends in Ecology & Evolution 5: 97-98.
- Payne, T.L.; Dickens, J.C.; Richerson, J.V. 1984. Insect predator-prey coevolution via enantiomeric specificity in a kairomone-pheromone system. Journal of Chemical Ecology 10: 487-491.
- Piazza, A.; Menozzi, P.; Cavalli-Sforza, L. 1981. The making and testing of geographic gene-frequency maps. Biometrics 37: 635-659.
- Piston, J.J.; Lanier, G.N. 1974. Pheromones of *Ips pini* (Coleoptera: Scolytidae). Response to interpopulational hybrids and relative attractiveness of males boring in two host species. Canadian Entomologist 106: 247-251.
- Preisler, Haiganoush K. 1992. Spatial analysis in bark beetle research [this Proceedings].
- Preisler, H.K. Modeling spatial patterns of trees killed in clusters by an epidemic population of bark beetle. Applied Statistics [In Press].
- Preisler, H.K.; Mitchell, R.G. 1992. Colonization patterns of the mountain pine beetle in thinned and unthinned lodgepole pine stands. Unpublished draft supplied by author.
- Raffa, K.F. 1988. Host orientation behavior of *Dendroctonus ponderosae*: integration of token stimuli and host defenses. In: Mattson, W.J.; Leveux, J.; Bernard-Dagan, C., eds. Mechanisms of woody plant resistance to insects and pathogens. New York: Springer-Verlag; 369-390.
- Raffa, Kenneth F. 1992. Current status and critical research needs in scolytid genetics [this Proceedings].
- Raffa, K.F.; Berryman, A.A. 1983. The role of host plant resistance in the colonization behavior and ecology of bark beetles. Ecological Monographs 53: 27-49.
- Raffa, K.F.; Berryman, A.A. 1987. Interacting selective pressures in conifer-bark beetle systems: a basis for reciprocal adaptations. American Naturalist 129: 234-262.
- Raffa, K.F.; Klepzig, K.D. 1989. Chiral escape of bark beetles from predators responding to a bark beetle pheromone. Oecologia 80: 556-569.
- Riedy, M.F.; Hamilton, W.J.; Aquadro, C.F. 1992. Excess of non-parental bands in offspring from known primate pedigrees assayed using RAPD PCR. Nucleic Acid Research 20: 918.
- Riley, M.A.; Goyer, R.A. 1986. Impact of beneficial insects on *Ips* sp. (Coleoptera: Scolytidae) bark beetles in felled loblolly and slash pines in Louisiana. Environmental Entomology 15: 1220-1224.
- Roberds, J.H.; Hain, F.P.; Nunnally, L.B. 1987. Genetic structure of southern pine beetle populations. Forest Science 33: 52-69.
- Rubin, G.M.; Spradling, A.C. 1982. Genetic transformation of *Drosophila* with transposable element vectors. Science 218: 348-353.
- Sakaguchi, B.; Oishi, K.; Kobayashi, S. 1965. Interference between "sex-ratio" agents of *Drosophila willistoni* and *Drosophila nebulosa*. Science 147: 160-162.
- Samollow, P.B.; Soule, M.E. 1983. A case of stress-related heterozygote superiority in nature. Evolution 37(3): 646-649.
- Schmid, J.M. 1972. Emergence, attack densities and seasonally trends of mountain pine beetle (*Dendroctonus ponderosae*) in the Black Hills. Res. Note RM-21. Fort Collins, CO: Rocky Mountain Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 4 p.
- Schowalter, T.D.; Filip, G.M. 1992. Beetle-pathogen interactions in conifer forests. New York: Academic Press. [In press].
- Seybold, Steven J. 1992. The status of scolytid genetics—a reductionist's view. [this Proceedings]
- Seybold, S.J.; Milstead, J.E.; Wood, D.L. 1992a. Notes on the co-colonization of Monterey pine, *Pinus radiata* by *Ips* sp. (Coleoptera: Scolytidae) and new host associations for *Ips mexicanus*, *I. paraconfusus*, *I. plastographus maritimus* and *Dendroctonus valens*. Unpublished draft supplied by author.
- Seybold, S.J.; Ohtsuka, T.; Wood, D.L.; Kubo, J. 1992b. The enantiomeric composition of ipsenol and ipsdienol from species in the subgeneric groups of *Ips* (Coleoptera: Scolytidae). Unpublished draft supplied by author.
- Seybold, S.J.; Teale, S.A.; Wood, D.L.; Zhang, A.; Webster, F.X.; Lindahl, K.Q., Jr.; Kubo, I. 1992c. The role of lanierone in the chemical ecology of *Ips pini* (Say) (Coleoptera: Scolytidae) in California. Unpublished draft supplied by author.
- Seybold, S.J.; Wood, D.L.; Ohtsuka, T.; Nomura, M.; Kubo, I.; Schultz, M.E. 1992d. The response of the pine engraver, *Ips pini* (Say) (Coleoptera: Scolytidae) and its insect associates of the pure enantiomers of ipsdienol in California. Unpublished draft supplied by author.
- Singh, R.S. 1989. Population genetics and evolution of species related to *Drosophila melanogaster*. Annual Review of Genetics 23: 425-453.
- Slatkin, M. 1987. Gene flow and the geographic structure of natural populations. Science 236: 787-792.
- Smith, R.H. 1963. Toxicity of pine resin vapors to three species of *Dendroctonus* bark beetles. Journal of Economic Entomology 56: 827-831.
- Smith, R.H. 1972. Xylem resin in the resistance of the Pinaceae to bark beetles. Gen. Tech. Rep. PSW-1. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 7 p.
- Smith, R.H. 1975. Formula for describing effect of insect and host tree factors on resistance to western pine beetle attack. Journal of Economic Entomology 68: 841-844.
- Smith, R.H.; Cramer, J.P.; Carpender, E.J. 1981. New record of introduced hosts for the mountain pine beetle in California. Res. Note PSW-354. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 3 p.
- Stauffer Ch.; Huang, W.; Harshman, L.; Hammock, B.D. 1992b. Characterization of the juvenile hormone metabolites of *Ips typographus* (Col., Scolytidae) and *Tenebrio molitor* (Col., Tenebrionidae). Unpublished draft supplied by author.

- Stauffer, Christian; Leitingner, Renate-, Fuehrer, Erwin. 1992a. Population genetics of *Ips typographus* (Col., Scolytidae) and related *Ips* species [this Proceedings].
- Stauffer, Ch.; Leitingner, R.; Simsek, Z.; Schreiber, J.; Fuehrer, E. 1992. Allozyme variation among nine Austrian *Ips typographus* populations. *Journal of Applied Entomology* 114: 17-25.
- Stock, M.W.; Amman, G.D. 1980. Genetic differentiation among mountain pine beetle populations from lodgepole pine and ponderosa pine in north-east Utah. *Annals of Entomological Society of America* 73: 472-478.
- Stock, M.W.; Amman, G.D. 1985. Host effects on the genetic structure of mountain pine beetle, *Dendroctonus ponderosae*, populations. In: Safranyik, L., ed. The role of the host in the population dynamics of forest insects. Victoria, B.C., Canada: Pacific Forest Research Centre; 83-95.
- Stock, M.W.; Amman, G.D. Genetic diversity in early and late-emerging mountain pine beetle. Unpublished draft supplied by author.
- Stock, Molly W.; Amman, Gene D.; Bentz, Barbara J. 1992. Isozyme studies of bark beetle population genetics and systematics [this Proceedings].
- Stock, M.W.; Amman, G.D.; Higby, P.K. 1984. Genetic variation among mountain pine beetle (*Dendroctonus ponderosae*) (Coleoptera: Scolytidae) populations from seven western states. *Annals of Entomological Society of America* 77: 760-764.
- Stock, M.W.; Gregoire, J.C.; Furniss, M.M. 1987. Electrophoretic comparison of European *Dendroctonus micans* and ten North American *Dendroctonus* species. *Pan-Pacific Entomologist* 63(4): 353-357.
- Stock, M.W.; Guenther, J.D. 1979. Isozyme variation among mountain pine beetle (*Dendroctonus ponderosae*) populations in the Pacific Northwest. *Environmental Entomology* 8: 889-893.
- Stock, M.W.; Guenther, J.D.; Pitman, G.B. 1978. Implications of genetic differences between mountain pine beetle populations to integrated pest management. In: Berryman, A.A.; Amman, G.D.; Stark, R.W.; Kibbee, D.L., eds. Theory and practice of mountain pine beetle management in lodgepole pine forests—a symposium; April.25-27, 1978. Moscow, ID: University of Idaho, College of Forest Resources; 197-204.
- Stock, M.W.; Robertson, J.L. 1977. Genetic polymorphism in the Douglas-fir tussock moth. USDA Forest Service Expanded Douglas-Fir Tussock Moth Program, Final Report, December 31, 1977. Unpublished draft supplied by author.
- Stock, M.W.; Pitman, G.B.; Guenther, J.D. 1979. Genetic differences between Douglas-fir beetles (*Dendroctonus pseudotsugae*) from Idaho and coastal Oregon. *Annals of Entomological Society of America* 72: 394-397.
- Stock, M.W.; Schmitz, R.F.; Amman, G.D. Heterozygosity and density change in mountain pine beetle (*Dendroctonus ponderosae*) (Coleoptera: Scolytidae) populations. Unpublished draft supplied by author.
- Sturgeon, K.B. 1980. Evolutionary interactions between the mountain pine beetle, *Dendroctonus ponderosae* Hopkins, and its host trees in the Colorado Rocky Mountains. Boulder: University of Colorado, Dissertation.
- Sturgeon, K.B.; Mitton, J.B. 1986. Allozyme and morphological differentiation of mountain pine beetles *Dendroctonus ponderosae* Hopkins (Coleoptera: Scolytidae) associated with host tree. *Evolution* 40: 290-302.
- Sturgeon, K.B.; Robertson, J.L. 1985. Microsomal polysubstrate monooxygenase activity in western and mountain pine beetles. *Annals of Entomological Society of America* 78: 1-4.
- Teale, S.A. 1990. Ecology and evolution of pheromone communication in *Ips pini* (Coleoptera: Scolytidae). New York: State University of New York; 109 p. Dissertation.
- Teale, Stephen A.; Hager, Barbara. 1992. Bark beetle genetics—an overview [in Proceedings].
- Teale, S.A.; Lanier, G.N. 1991. Seasonal variability in response of *Ips pini* (Coleoptera: Scolytidae) to ipsdienol in New York. *Journal of Chemical Ecology* 17: 1145-1158.
- Teale, S.A.; Webster, F.X.; Zhang, A.; Lanier, G.N. 1991. Lanierone: a new pheromone component from *Ips pini* (Coleoptera: Scolytidae) in New York. *Journal of Chemical Ecology* 17: 1159-1176.
- Thorne, B.L.; Haverty, M.I. 1989. Accurate identification of *Zootermopsis* species (Isoptera: Termitidae) based on a mandibular character of nonsoldier castes. *Annals of Entomological Society of America* 82: 262-266.
- Vanderwel, D. 1991. Pheromone biosynthesis by selected species of grain and bark beetles. Simon Fraser University; 230 p. Dissertation.
- Vanderwel, D.; Oehlschlager, A.C. 1987. Biosynthesis of pheromones and endocrine regulation of pheromone production in Coleoptera. In: Prestwich, G.D.; Blomquist, G.J., eds. Pheromone biochemistry. Orlando, FL: Academic Press; 175-215.
- Wadleigh, R.W.; Yu, S.J. 1987. Glutathione transferase activity of fall armyworm larvae toward alpha, beta-unsaturated carbonyl allelochemicals and its induction by allelochemicals. *Insect Biochemistry* 17: 759-764.
- Wanntorp, H.-E.; Brooks, D.R.; Nilsson, T.; Nylin, S.; Ronquist, F.; Steams, S.C.; Wedell, N. 1990. Phylogenetic approaches in ecology. *Oikos* 57: 119-132.
- Whitney, H.S. 1982. Relationships between bark beetles and symbiotic organisms. In: Mitton, J.B.; Sturgeon, K.B., eds. Bark beetles in North American conifers: a system for the study of evolutionary biology. Austin: University of Texas Press; 183-211.
- Wiley, E.O. 1981. Phylogenetics. New York: John Wiley and Sons; 439 p.
- Williams, J.K.G.; Kubelik, A.R.; Livak, K.J.; Rafalski, J.A.; Tingey, S.V. 1990. DNA polymorphisms amplified by arbitrary primers are useful as genetic markers. *Nucleic Acid Research* 18: 6531-6535.
- Wood, D.L. 1982. The role of pheromones, kairomones, and allomones in the host selection and colonizations behavior of bark beetles. *Annual Review of Entomology* 27: 411-446.
- Wood, David L.; Storer, Andrew J.; Gordon, Thomas R.; Seybold, Steven J.; Page, Marion. 1992. Biosystematics of *Ips mexicanus* and *Ips plastographus* (Coleoptera: Scolytidae) and their fungal symbionts [this Proceedings].
- Wood, S.L. 1963. A revision of the bark beetle genus *Dendroctonus* Erichson (Coleoptera: Scolytidae). *Great Basin Naturalist* 23: 1-117.
- Wood, S.L. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. Great Basin Naturalist Memoirs No. 6. 1359 p.
- Wood, T.K. 1980. Divergence in the *Enchenop binotata* Say complex (Homoptera: Membracidae) effected by host plant adaptation. *Evolution* 34: 147-160.
- Yearian, W.C.; Gouger, R.J.; Wilkinson, R.C. 1972. Effects of the bluestain fungus, *Ceratocystis ips*, on development of *Ips* bark beetles in pine bolts. *Annals of Entomological Society of America* 65: 481-487.
- Zuber, M.; Stauffer, Ch.; Leitingner, R.; Nelson, L.; Page, M.; Bright, D. 1992. Biochemical, morphological and behavioural analysis of the relationship between *Ips amitinus* and *Ips amitinus* var. *montana* (Col., Scolytidae). Unpublished draft supplied by author.