

Source material

Plant Population Biology (P BIO 435/535)

* Papers preceded by an asterisk include good summaries of recent literature.

Andersen, A.N. (1988). Dispersal distance as a benefit of myrmecochory. *Oecologia* 75: 507-511.

Andrewartha, H.G. and L.C. Birch. (1954). *The Distribution and Abundance of Animals*. University of Chicago Press, Chicago.

Ashmun, J.W., R.J. Thomas, and L.F. Pitelka. (1982). Translocation of photoassimilates between sister ramets in two rhizomatous herbs. *Annals of Botany* 49: 403-415.

Auguspurger, C.K. (1984). Seedling survival of tropical tree species: interactions of dispersal distance, light gaps, and pathogens. *Ecology* 65: 1705-1712.

Baker, H.G. (1974). The evolution of weeds. *Annual Review of Ecology and Systematics* 5: 1-25.

Bazzaz, F.A. and J.L. Harper. (1976). Relationship between plant weight and numbers in mixed populations of *Sinapis arvensis* (L.) Rabenh. and *Lepidium sativum* L. *Journal of Applied Ecology* 13: 211-216.

Bazzaz F A; R.W. Carlson; J.L. Harper. (1979). Contribution to reproductive effort by photosynthesis of flowers and fruits. *Nature* 279:554-555.

Bell, A.D. and P.B. Tomlinson. (1980). Adaptive architecture in rhizomatous plants. *Botanical Journal of the Linnean Society* 80: 125-160.

Bischoff, A. (2000). Dispersal and reestablishment of *Silaum silaus* (L.) in floodplain grassland. *Basic and Applied Ecology* 1: 125-131.

Cain, M.L., D.A. Dudle, and J.P. Evans. (1996). Spatial models of foraging in clonal plant species. *American Journal of Botany* 83: 76-85.

Cain, M.L., H. Damman, and A. Muir. (1998). Seed dispersal and the holocene migration of woodland herbs. *Ecological Monographs* 68: 325-347.

Caswell, H. (2001). *Matrix Population Models: Construction, Analysis, and Interpretation*. Sinauer Associates, Sunderland, Massachusetts.

- Chazdon, R.L. and R.W. Pearcy. (1986). Photosynthetic responses to light variation in rainforest species. I. Induction under constant and fluctuating light conditions. *Oecologia* 69: 571-523.
- Chippendale, H.O. and W.E. Milton. (1934). On the viable seeds present in the soil beneath pastures. *Journal of Ecology* 22: 508-531.
- * Clark, J.S., C. Fastie, G. Hurtt, S.T. Jackson, C. Johnson, G.A. King, M. Lewis, J. Lynch, S. Pacala, C. Prentice, E.W. Schupp, T. Webb, and P. Wyckoff. (1998). Reid's paradox of rapid plant migration. *BioScience* 48: 13-24.
- Clausen, J., D.D. Keck, and W.M. Hiesey. (1940). Experimental studies on the nature of species, I. The effect of varied environments on western North American plants. Carnegie Institution of Washington Publication 520. Washington, D.C., Carnegie Institution.
- Cloudsley-Thompson, J.L. and M.J. Chadwick (1964). *Life in Deserts*. Dufour, Philadelphia, Pennsylvania.
- Clauss, M.J. and D.L. Venable. (2000). Seed germination in desert annuals: an empirical test of adaptive bet hedging. *The American Naturalist* 155: 168-186.
- Clements, F.E. and J.E. Weaver. (1924). *Experimental vegetation*. Carnegie Institution of Washington Publication 242: 1-512.
- Coale, A.J. (1972). *The growth and structure of human populations: a mathematical approach*. Princeton University Press, Princeton, New Jersey, USA.
- Cook, R.E. (1979). Patterns of juvenile mortality and recruitment in plants. Pages 207-232 in *Topics in Plant Population Biology*, (ed. By O.T. Solbrig, S. Jain, G.B. Johnson, P.H. Raven), MacMillan, London.
- Davis, M.B. (1981). Quaternary history and the stability of forest communities. Pages 132-153 in West, D.C., H.H. Shugart, and D.B. Botkin (eds.) *Forest Succession: Concepts and Application*. New York, Springer Verlag.
- Deevey, E.S. (1947). Life tables for natural populations of animals. *Quarterly Review of Biology* 22: 283-314.
- DeWit, C.T. (1960). On Competition. *Verslagen Can Landbouwkundige Onderzoekingen* 66: 1-82.
- Donald, C.M. (1951). Competition among pasture plants I. Intraspecific competition among annual pasture plants. *Australian Journal of Agricultural Research* 2: 355-376.

- Donovan, T.M. and C.W. Weldon. (2002). Spread sheet exercises in Ecology and Evolution. Sinauer, Sunderland, Massachusetts, USA.
- Dow, B.D. and M.V. Ashley (1996). Microsatellite analysis of seed dispersal and parentage of saplings in bur oak, *Quercus macrocarpa*. *Molecular Ecology* 5: 615-627.
- * Ellstrand, N.C. (1992). Gene flow among seed plant populations. *New Forests* 6: 241-256.
- Ellstrand, N.C., D.R. Elam, D.G. Fautin. (1993). Population genetic consequences of small population size: Implications for plant conservation. *Annual Review of Ecology and Systematics* p.217-242
- Fisher, R.A. (1950). *The Genetical Theory of Natural Selection*. Clarendon Press, Oxford, UK.
- Fisher, R.A. (1937). The wave of advance of advantageous genes. *Annals of Eugenics* 7: 255-369.
- Fowells, H.A. (1965). *Silvics of Forest Trees of the United States*. Agriculture Handbook 271, Forest Service, US Department of Agriculture, Washington, D.C.
- Franco, M. and J. Silvertown. (1996). Life history variation in plants: an exploration of the fast-slow continuum hypothesis. *Philosophical Transactions of the Royal Society London B*. 351: 1341-1348.
- * Freckleton, R.P. and A.R. Watkinson (2002). Large-scale spatial dynamics of plants: metapopulations, regional ensembles, and patchy populations. *Journal of Ecology* 90: 419-434.
- Gadgil, M. (1971). Dispersal: Population consequences and evolution. *Ecology* 52: 253-261.
- Gadgil, M. and W.H. Bossert. (1970). Life history consequences of natural selection. *American Naturalist* 104: 1-24.
- Gadgil, M. and O.T. Solbrig. (1972). The concept of r- and K-selection: evidence from wildflowers and some theoretical considerations. *American Naturalist* 106: 14-31.
- * Goldberg, D.E. (1996). Competitive ability: definitions, contingency, and correlated traits. *Philosophical Transactions of the Royal Society London (B)*. 351: 1377-1385.

- Goldberg, D.E. and L. Fleetwood. (1987). Competitive effect and response in four annual plants. *Journal of Ecology* 75:1131-1143.
- Gorham, E. (1979). Shoot height, weight, and standing crop in relation to density of monospecific plant stands. *Nature* 279: 148-150.
- Green, D.S. (1980). The terminal velocity and dispersal of spinning samaras. *American Journal of Botany*. 67: 1218-1224.
- Halle, R., R.A. Oldeman, and P.B. Tomlinson. (1978). *Tropical Trees and Forests, An Architectural Analysis*. Springer Verlag, Berlin.
- Hamrick J.L., M.J. Godt; D.A. Murawski, M.D. Loveless. (1991). Correlations between species traits and allozyme diversity implications for conservation biology., Falk, p.75-86 in *Genetics and Conservation of Rare Plants*. D.A. and K.E. Holsinger (ed.). Oxford University Press: New York.
- Hamrick, J. L.; M.J. Godt, S.L. Sherman-Broyles, Susan L. (1992). Factors influencing levels of genetic diversity in woody plant species. *New Forests* 6: 95-124.
- Handel, S.N. (1983). Contrasting gene flow patterns and genetic subdivision in adjacent populations of *Cucumis sativus* (Cucurbitaceae). *Evolution* 37: 760-771.
- * Hanski, I. And M. Gilpin. (1991). Metapopulation dynamics: brief history and conceptual domain. *Biological Journal of the Linnean Society*. 42: 73-88.
- Harper, J.L. (1967). A Darwinian approach to plant ecology. *Journal of Ecology* 55: 247-270.
- Harper, J.L. (1977). *The Population Biology of Plants*. Academic Press, London.
- Harper, J.L., J.N. Clatworthy, I.H. McNaughton, and G.R. Sagar. (1965). The behavior of seeds in the soil, Part I. The heterogeneity of soil surfaces and its role in determining the establishment of plants from seeds. *Journal of Ecology* 53: 273-286.
- Harnett, D.C. and F.A. Bazzaz. (1983). Physiological integration among intracloonal ramets in *Solidago canadensis* L. *Ecology* 64: 779-788.
- He, F. and R.F. Duncan. (2000). Density-dependent effects on tree survival in an old-growth Douglas fir forest. *Journal of Ecology* 88: 676-688.
- Henry, J.D. and J.M. Swan. (1974). Reconstructing forest history from live and dead plant material – An approach to the study of forest succession in southwest New Hampshire. *Ecology* 55: 772-783.

- Huffaker, C.B. (1958). Experimental studies on predation: dispersion factors and predator-prey oscillations. *Hilgardia* 27: 343-383.
- D'Hertefeldt, T. and I.S. Jonsdottir. (1999). Extensive physiological integration in intact clonal systems of *Carex arenaria*. *Journal of Ecology* 87: 258-264.
- * Horvitz, C.C. and D.W. Schemske. (1995). Spatiotemporal variation in demographic transitions for a tropical understory herb: projection matrix analysis. *Ecological Monographs* 65: 155-192.
- Huffman, D.W., J.C. Zasada, J.C. Tappeiner (1994). Growth and morphology of rhizome cuttings and seedlings of salal (*Gaultheria shallon*): effects of four light intensities. *Canadian Journal of Botany* 72: 1702-1708.
- Husband, B.C. and S.C. Barrett (1998). Spatial and temporal variation in population size of *Eichhornia paniculata* in ephemeral habitats: implications for metapopulation dynamics. *Journal of Ecology* 86: 1021-1031.
- Iwasa, Y. (2000). Dynamic optimization of plant growth. *Evolutionary Ecology Research* 1:437-455.
- Kershaw, K.A. (1962). Quantitative ecological studies from Landmannahellir, Iceland II. The rhizome behavior of *Carex bigelowii* and *Calamagrostis neglecta*. *Journal of Ecology* 50: 171-179.
- Kuser, J.E. and F.T. Ledig. (1987). Provenance and progeny variation in pitch pine from the Atlantic coastal plain. *Forest Science* 33: 558-564.
- Janzen, D.H. (1970). Herbivores and the number of tree species in tropical forests. *The American Naturalist* 104: 501-528.
- Jones M, J.L. Harper (1987). The influence of neighbors on the growth of trees I. The demography of buds in *Betula pendula*. *Proceedings of the Royal Society of London Series B Biological Sciences* 232:1-18
- Jonsdottir, I.S. and T.V. Callaghan. (1989). Localized defoliation stress and the movement of C^{14} photoassimilates between tillers of *Carex bigelowii*. *Oikos* 54: 211-219.
- Kleijn, D. and J.M. Van Groenendael. (1999). The exploitation of heterogeneity by a clonal plant in habitats with contrasting productivity. *Journal of Ecology* 87: 873-884.
- Law R.; A.R. Watkinson. (1989). Competition. Pages 243-284 in *Ecological concepts: the contribution of ecology to an understanding of the natural world*; 29th symposium of the British Ecological Society, Cherrett, J. M. (ed.). Blackwell

- Oxford, UK.
- Larcher, W. (1995). *Physiological Plant Ecology: Ecophysiology and Stress Physiology of Functional Groups*. Third Edition. Springer Verlag, New York.
- Ledig, F.T. (1986). Conservation strategies for forest gene resources. *Forest Ecology and Management* 14:77-90.
- Levins, R. (1970). Extinction. *Some Mathematical Questions in Biology* (ed. M. Gerstenhaber). Pp. 77-107. American Mathematical Society, Providence.
- Livingston, R.B. and M. Alessio. (1968). Buried viable seed in successional field and forest stands, Harvard Forest, Massachusetts. *Bulletin of the Torrey Botanical Club* 95: 58-69.
- Lonsdale W M; A.R. Watkinson . (1982). Light and self thinning *New Phytologist* 90:431-446
- Lonsdale W.M.; A.R. Watkinson. (1983). Plant geometry and self thinning. *Journal of Ecology* 71:285-298
- Lovett Doust, L. (1981). Population dynamics and local specialization in a clonal perennial (*Ranunculus repens*). I. The dynamics of ramets in contrasting habitats. *Journal of Ecology* 69: 743-755.
- MacArthur, R.H. and E.O. Wilson. (1967). *The Theory of Island Biogeography*. Princeton University Press, Princeton, New Jersey.
- Mack, R.N. and D.A. Pyke. (1983). The demography of *Bromus tectorum*: variation in time and space. *Journal of Ecology* 71: 69-93.
- Marks, P.L. (1974). The role of pin cherry (*Prunus pensylvanica*) in the maintenance of stability in Northern hardwood ecosystems. *Ecological Monographs* 44: 73-88.
- Marquis, D.A. (1975). Seed storage and germination under northern hardwood forests. *Canadian Journal of Forest Research* 5: 478-484.
- Matlack, G.R. (1997). Resource allocation among clonal shoots of a fire-tolerant shrub (*Gaylussacia baccata*). *Oikos* 80: 509-518.
- Matlack, G.R. (1994). Plant species migration in a mixed-history forest landscape in eastern North America. *Ecology* 75: 1491-1502.
- Matlack, G.R. (1987). Comparative demographies of four adjacent populations of the perennial herb *Silene dioica* (Caryophyllaceae). *Journal of Ecology* 75: 113-135.

- Matlack, G.R. and J.L. Harper. (1986). Spatial distribution and performance of individual plants in a natural population of the herb *Silene dioica*. *Oecologia* 70: 121-127.
- Matlack, Glenn R., David J. Gibson, and Ralph E. Good. (1993). Clonal growth, physical heterogeneity, and the structure of vegetation; Ericaceous shrubs in the Pine Barrens of New Jersey. *Biological Conservation* 63: 1-8.
- McCauley, D.E. (1997). The relative contributions of seed and pollen movement to the local genetic structure of *Silene alba*. *Journal of Heredity* 88: 257-263.
- McCauley, D.E., J. Raveill, and J. Antonovics. (1995). Local founding events as determinants of genetic structure in plant metapopulations. *Heredity* 75: 630-636.
- Mead, R. (1966). A relationship between individual plant spacing and yield. *Annals of Botany* 30: 301-309.
- Meagher, T.R. (1986) *American Naturalist* 128: 199
- Meagher, T.R. and E. Thomson. 1987. Analysis of parentage for naturally established seedlings of *Chamaelirium luteum* (Liliaceae). *Ecology* 68: 803-812.
- Meyer, A.H., B. Schmid, (1999). Seed dynamics and seedling establishment in the invading perennial *Solidago altissima* under different experimental treatments *Journal of Ecology* 87:28-41
- Morgan, J.W. (2001). Seedling recruitment patterns over four years in an Australian perennial grassland community with different fire histories. *Journal of Ecology* 89: 908-919.
- Morris, A.B., R.S. Bancom, and M.B. Cruzan (2002). Stratified analysis of the soil seed bank in the cedar glade endemic *Astragalus bibulatus*: Evidence for historical changes in genetic structure. *American Journal of Botany* 89: 29-36.
- Nathan, R., G.G. Katul, H.H. Horn, S.M. Thomas, R. Oren, R. Avissar, S.W. Pacala, and S.A. Levin. 2002. Mechanisms of long-distance dispersal of seeds by wind. *Nature* 418: 409-413.
- Oinonen, E. (1967). Spore regeneration of bracken in Finland in the light of the dimensions and age of its clones. *Acta Forest Fennlandica* 83: 3-96.
- Okubo, A. and S.A. Levin. (1989). A theoretical framework for data analysis of wind dispersal of seeds and pollen. *Ecology* 70: 329-338.

- * Ouberg, N.J., Y. Piquot, and J.M. Van Groenendael (1999). Population genetics, molecular markers, and the study of dispersal in plants. *Journal of Ecology* 87: 551-568.
- Paine, R.T. (1974). Intertidal community structure: experimental studies on the relationship between a dominant competitor and its principal predator. *Oecologia* 15:93-120.
- Platt, W.J. and I.M. Weis. 1977. Resource partitioning and competition within a guild of fugitive plants. *American Naturalist* 111: 479-513.
- Purves, D.W. and R. Law. 2002. Fine-scale spatial structure in a grassland community: quantifying the plant's eye view. *Journal of Ecology* 90: 121-129
- Raunkier, C. (1934). *The Life Forms of Plants and Statistical Plant Geography*. Clarendon Press, Oxford.
- Reid, C. (1899). *The Origin of the British Flora*. Dulau, London.
- Reinartz, J.A. (1984). Life history variation of common mullein (*Verbascum thapsus*). I. Latitudinal differences in population dynamics and timing of reproduction. *Journal of Ecology* 72: 897-912.
- Ross, M.A. and J.L. Harper (1972). Occupation of biological space during seedling establishment. *Journal of Ecology* 60: 77-88.
- Saitoh, T., K. Seiwa, and A. Nishiwaki. (2002). Importance of physiological integration of a dwarf bamboo to persistence in the forest understory: a field experiment. *Journal of Ecology* 90: 78-85.
- Sarukhan, J. (1974). Studies on plant demography: : *Ranunculus repens* L., *R. bulbosus* L., and *R. acris* L. II. Reproductive strategies and seed population dynamics. *Journal of Ecology* 62: 151-177.
- Sarukhan, J. and J.L. Harper. (1973). Studies on plant demography: *Ranunculus repens* L., *R. bulbosus* L., and *R. acris* L. I. Population flux and survivorship. *Journal of Ecology* 61: 675-716.
- Scanlan, M.J. (1981). Biogeography of forest plants in the prairie-forest ecotone of western Minnesota. Pages 97-124 in R.L. Burgess and D.M. Sharpe, editors. *Forest Island Dynamics in Man-dominated Landscapes*. Springer Verlag, New York.
- * Scheiner, S.M. (1993) Genetics and evolution of phenotypic plasticity. *Annual Review of Ecology and Systematics*. 24: 35-68.
- Schieling, C.D. (1986). The evolution of phenotypic plasticity in plants. *Annual Review of Ecology and Systematics* 17: 667-693.

- Schneider R L; R.R. Sharitz. (1986). Seed bank dynamics in a southeastern usa riverine swamp. *American Journal of Botany* 73:1022-1030
- Schneider R L; R.R. Sharitz. (1988). Hydrochory and regeneration in a bald cypress-water tupelo swamp forest. *Ecology* 69:1055-1063
- Seabloom, E.W., K.A. Maloney, and A.G. Vandervalk. (2002). Constraints on the establishment of plants along a fluctuating water-depth gradient. *Ecology* 82: 2216-2232.
- Verkaar H J; A J Schenkeveld. (1984). On the ecology of short lived forbs in chalk grasslands seedling development under low photon flux density conditions. *Flora* 175:135-141
- Schichtling, C.D. (1989). Phenotypic integration and environmental change. *BioScience* 39: 460-464.
- Shinozaki, K. and T. Kira. (1961). The C-D rule, its theory and practical uses (Intraspecific competition among higher plants X.). *Journal of Biology of Osaka City University* 12: 69-82.
- * Silvertown, J. and J. Lovett Doust. (2002). *Introduction to Plant Population Biology*. Fourth Edition. Blackwell Scientific Publications, Oxford.
- Silvertown, J., M.Franco, I. Pisanty, and A. Mendoza (1993). Compariative plant demography – relative importance of life-cycle componants to the fintite rate of increase in woody and herbacesou perennials. *Journal of Ecology* 81: 465-476.
- Skellam, J.G. (1951). Random dispersal in theoretical populations. *Biometrika* 39: 196-218.
- Slade, A.J. and M.J. Hutchings. (1987a). The effects of nutirent availabiltiy on foraging in the clonal herb *Glechoma hederacea*. *Journal of Ecology* 75: 95-112.
- Slade, A.J. and M.J. Hutchings. (1987b). The effects of light intensity on foraging in the clonal herb *Glechomas hederacea*. *Journal of Ecology* 75: 639-650.
- Smouse, P. E. and T.R. Meagher (1994). Genetic analysis of male reproductive contributions in *Chamaelirium luteum* (L.) gray (Liliaceae). *Genetics* 136(1) 1994. 313-322.
- Stehlik, I. And R. Holderegger. (2000). Spatial genetic structure and clonal diversity of *Anemone nemerosa* in late successional dceiduous woodlands of central Europe. *Journal of Ecology* 88: 424-435.
- de Steven, D. (1982). Seed production and seed mortality in a temperate forest shrub witch-hazel *Hamamelis virginiana*. *Journal of Ecology* 70:437-444

- Stoll, P., P. Egli, and B. Schmid. (1998). Plant foraging and rhizome growth patterns of *Solidago altissima* in response to mowing and fertilizer application. *Journal of Ecology* 86: 341-354.
- * Stoll, P. and J. Weiner (2000). A neighborhood view of interactions among individual plants. Pages 11-27 in U. Dieckmann, R. Law, and J.A. Metz (eds.). *The Geometry of Ecological Interactions; Simplifying Spatial Complexity*. Cambridge University Press, Cambridge, UK.
- Suding, K.N. and D. Goldberg. (2001). Do disturbances alter competitive hierarchies? Mechanisms of change following gap creation. *Ecology* 82: 2133-2149.
- Sukatschew, W.N. (1928). *Plant Communities*. Nauk, Moscow (In Russian).
- Sutherland, W.J. and R.A. Stillman. (1988). The foraging tactics of plants. *Oikos* 52: 239-244.
- Tansley, A.G. and R.S. Adamson. (1925). Studies of the vegetation of the English chalk. III. The chalk grasslands of the Hampshire-Sussex border. *Journal of Ecology* 13: 177-223.
- Taylor, F. (1979). Convergence to stable age distributions in populations of insects. *American Naturalist* 113: 511-530.
- Thompson, K. and J.P. Grime. (1980). Seasonal variation in the seed banks of herbaceous species in ten contrasting habitats. *Journal of Ecology* 67: 893-921.
- Tietema, T. (1980). Ecophysiology of the sand sedge, *Carex arenaria* L. II. The distribution of ^{14}C assimilates. *Acta Botanica Neerlandica* 29: 165-178.
- * Turchin, P. 1998. *Quantitative analysis of movement: measuring and modeling population redistribution in animals and plants*. Sinauer, Sunderland, Massachusetts, USA.
- Turkington, R. and J.L. Harper. (1979). The growth, distribution, and neighbor relations of *Trifolium repens* in a permanent pasture. IV. Inter- and intraspecific contact. *Journal of Ecology* 67: 219-230.
- Turkington, R. and E. Klein. 1993. Influence of neighbors on nod reproduction, stolon growth, and branching of *Trifolium repens* transplants in a pasture. *Canadian Journal of Botany* 71: 1266-1269.
- Verhulst, P.F. (1844). Recherches mathématiques sur la loi d'accroissement de la population. *Mem. Acad. R. Bruxelles* 18: 1-58.
- Watkinson A R. (1984). Yield density relationships the influence of resource availability on growth and self thinning in populations of *Vulpia fasciculata*. *Annals of Botany* 53:469-482

- Watson, M.A. (1986). Integrated physiological units in plants. *Trends in Ecology and Evolution* 1: 119-123.
- Weiner, J. (1986). How competition for light and nutrients affects size variability in *Ipomoea tricolor* populations. *Ecology* 67: 1425-1427.
- Weiner, J., P. Stoll, H. Muller-Landau, and A. Jasentuliyana. (2001). The effects of density, spatial pattern, and competitive symmetry on size variation in simulated plant populations. *American Naturalist* 158: 438-450.
- Weller, D.E. (1987a). A reevaluation of the $-3/2$ power law of self-thinning. *Ecological Monographs* 57: 23-43.
- Weller, D.E. (1987b). Self-thinning exponent correlated with allometric measures of plant geometry. *Ecology* 68: 813-821.
- Werner, P.A. and H. Caswell. (1977). Population growth rates and age versus stage-distribution models for teasel (*Dipsacus sylvestris* Hud.). *Ecology* 58: 1103-1111.
- Wright, S. (1931). Evolution in Medelian populations. *Genetics* 16: 97-159.
- Wright, S. (1943). Isolation by distance. *Genetics* 28: 114-138.
- Yoda, K., T. Kira, H. Ogawa, and K. Hozumi. (1963). Self thinning in overcrowded pure stands under cultivated and natural conditions. *Journal of Biology of Osaka City University* 14: 107-129.