

SIMON A. LEVIN

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EI = Electronic Link Provided

r = Paper Reprint

LIST OF PUBLICATIONS

2011

455. **e** Espenshade, T.J., Olgiati, AS, and S.A. Levin. 2011. On nonstable and stable population momentum. *Demography*. *To appear*.
454. **e** Ballantyne, F. IV, O.M.E. Schofield, and S.A. Levin. 2011. The emergence of regularity and variability in marine ecosystems: the combined role of physics, chemistry and biology. *Scientia Marina*. *To appear*.
453. **e** Levin, S.A. 2011. Complex adaptive systems and the challenge of sustainability. In *Sustainability Science: The Emerging Paradigm and the Urban Environment*, ed. M. Weinstein and R.E. Taylor, 168-174. New York: Springer. *To appear*.
452. Tavoni, A., M. Schlueter, S.A. Levin. 2011. The survival of the conformist: social pressure and renewable resource management. *Journal of Theoretical Biology*. *To appear*.
451. **E** Staver, A.C., S. Archibald, and S. Levin. 2011. Tree cover in sub-Saharan Africa: Rainfall and fire constrain forest and savanna as alternative stable states. *Ecology* 92(5): 1063-1072.
450. **e** Levin, S.A. 2011. Evolution at the ecosystem level: On the evolution of ecosystem patterns (Margalef Prize in Ecology Lecture 2010). *Contributions to Science*. *To appear*.
449. **E** Levin, S.A. 2011. *Building bridges between ecology and economics*. In *Bringing Ecologists and Economists Together: The Askö Meetings and Papers*, ed. T. Söderqvist, A. Sundbaum, C. Folk, and K-G. Mäler, 31-34. Dordrecht, Heidelberg, London, New York: Springer. Book webpage: www.springer.com/978-90-481-9475-9.
448. **E** Bonachela, J.A. *et al* (including S.A. Levin). 2011. Universality in bacterial colonies. *Journal of Statistical Physics* DOI: 10.1007/s10955-011-0179-x.
447. **E** Mari, L. *et al* (including S.A. Levin). 2011. Hydrologic controls and anthropogenic drivers of the zebra mussel invasion of the Mississippi-Missouri river basin. *Water Resources Research* 47, W03523, DOI: 1029/2010WR009920.
446. **E** Stock, C.A. *et al* (including S.A. Levin). 2011. On the use of IPCC-class models to assess the impact of climate on living marine resources. *Progress in Oceanography* 88: 1-27.
445. **E** Muneeppeerakul, R. *et al* (including S.A. Levin). 2011. Evolution of dispersal in explicitly spatial metacommunities. *Journal of Theoretical Biology* 269: 256-265.
444. **e** Levin, S.A. 2011. Comment on "Voluntary Pledges and Green Growth in the Post-Copenhagen Economy" by Thomas Sterner and "World Economic Crises: Commodity Prices and Environmental Scarcity as Missing Links" by Ramón López. ABDCE Stockholm, World Bank. *To appear*.

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443. **E** Nara, P.L. *et al* (including S.A. Levin). 2010. How can vaccines against influenza and other viral diseases be made more effective? *PLoS Biology* 8(12): e1000571.

442. **E** Torney, C.J., S.A. Levin, and I.D. Couzin. Specialization and evolutionary branching within migratory populations. *PNAS* 107(47): 20394-9.
441. **E** Levin, S.A. 2010. Complex adaptive systems and the challenge of sustainability. In *Toward a Science of Sustainability: Report from the NSF Toward a Science of Sustainability Conference, Warrenton, VA, November 29-December 9, 2009*, ed. S.A. Levin and W.C. Clark, 83-36. Princeton, NJ: Princeton University Printing and Mailing Services.
440. **E** Anderies, J.M. et al (including S.A. Levin). 2010. Working group II: Human-environment systems (HES) as complex adaptive systems. In *Toward a Science of Sustainability*, ed. S.A. Levin and W.C. Clark, 19-28. *Report from the NSF Toward a Science of Sustainability Conference, Warrenton, VA, November 29-December 9, 2009*. Princeton, NJ: Princeton University Printing and Mailing Services.
439. **E** Levin, S.A. and W.C. Clark. 2010. Executive Summary: Toward a science of sustainability. In *Toward a Science of Sustainability: Report from the NSF Toward a Science of Sustainability Conference, Warrenton, VA, November 29-December 9, 2009*, ed. S.A. Levin and W.C. Clark, 7-10. Princeton, NJ: Princeton University Printing and Mailing Services.
438. **E** Levin, S.A. and W.C. Clark, eds. 2010. *Toward a Science of Sustainability: Report from the NSF Toward a Science of Sustainability Conference, Warrenton, VA, November 29-December 9, 2009*. Princeton, NJ: Princeton University Printing and Mailing Services.
*** (Full report)***
437. **E** Levin, S.A. 2010. The evolution of ecology. *Chronicle of Higher Education* (August 13): B9-B11.
436. **E** Sagarin, R. et al (including S.A. Levin). 2010. Decentralize, adapt, and cooperate. *Nature* 465: 292-293.
435. **E** Levin, S.A. 2010. Prologue. In *Modeling Paradigms and Analysis of Disease Transmission Models*, ed. A.B. Gumel and S. Lenhart, xiii-xiv. *DIMACS Series in Discrete Mathematics and Theoretical Computer Science* 75. Providence, RI: American Mathematical Society.
434. **E** Komarova, N.L. and S.A. Levin. 2010. Eavesdropping and language dynamics. *Journal of Theoretical Biology* 264(1): 104-118.
433. **E** Gleick, P.H. et al (including S.A. Levin). 2010. Climate change and the integrity of science. *Science* 328: 689-670.
432. **E** Raghil, M., S.A. Levin, and I.G. Kevrekidis. 2010. Multiscale analysis of collective motion and decision-making in swarms: An advection-diffusion equation with memory approach. *Journal of Theoretical Biology* 264(3): 893-213.
431. **E** Bartumeus, F., L. Giuggiolli, M. Louzao, V. Bretagnolle, D. Oro, and S.A. Levin. 2010. Fishery discards impact on seabird movement patterns at regional scales. *Current Biology* 20: 1-6:
doi:10.1016/j.cub.2009.11.073.
430. **E** Levin, S.A. 2010. Crossing scales, crossing disciplines: Collective motion and collective action in the Global Commons. A special issue of *Philosophical Transactions of the Royal Society B* (Royal Society's 350th Anniversary) 365(1537): 13-17.

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429. **E** Levin, S.A. 2009. Preface. *Princeton Guide to Ecology*, pp. vii-viii in S.A. Levin, ed. *Princeton Guide to Ecology*. Princeton University Press, Princeton, New Jersey.
428. Levin, S.A., ed. 2009. *Princeton Guide to Ecology*. Princeton University Press, Princeton, NJ.
427. **E** Levin, S.A. 2009. Games, groups, norms, and societies, pp. 143-153 in S.A. Levin, ed. *Games, Groups, and the Global Good*. Springer, Berlin; London.

426. **E** Levin, S.A. 2009. Preface. *Games, Groups, and the Global Good*, pp. v-vi in S.A. Levin, ed. *Games, Groups, and the Global Good*. Springer, Berlin; London.
425. Levin, S.A., ed. 2009. *Games, Groups, and the Global Good*. Springer, Berlin; London.
424. **E/EI** Johnson, D. and S. Levin. 2009. The tragedy of cognition: Psychological biases and environmental inaction. *Current Science* 97(11). Available from: <http://www.ias.ac.in/currsci/>.
423. **E** Walker, B., S.A. Levin *et al.* 2009. Looming global-scale failures and missing institutions. *Science* 235: 1345-1346.
422. **E** Menge, D.N.L. and S.A. Levin. 2009. Facultative versus obligate nitrogen fixation strategies and their ecosystem consequences. *The American Naturalist* 4(174): 466-477.
421. **E** Gross, T., L. Rudolf, S.A. Levin, and U. Dieckmann. 2009. Generalized models reveal stabilizing factors in food webs. *Science* 325 (5941): 747-750.
420. **E** Arrow, K and S.A. Levin. 2009. Intergenerational resource transfers with random offspring. *Proceedings of the National Academy of Sciences* 106(33): 13702-13706.
419. **E** Muneepeerakul, R., E. Bertuzzo, S.A. Levin, A. Rinaldo, and I. Rodríguez-Iturbe. 2009. River networks as ecological corridors: a complex system perspective for integrating hydrologic geomorphic and ecological dynamics. *Water Resources Research* 45, W01413, doi:10.1029/2008WR007124.
418. **E** Schlueter, M., H. Leslie, and S.A. Levin. 2009. Managing water use tradeoffs in a semi-arid river delta – a modeling approach. *Ecological Research* 24: 491-503.
417. **E** Leslie H., Schlueter, M., Cudney-Bueno, R., and S.A. Levin. 2009. Modeling responses of coupled social-ecological systems of the Gulf of California to anthropogenic and natural perturbations. *Ecological Research* 24: 505-519.
416. **E** Nabet, B., N. Leonard, I.D. Couzin, and S.A. Levin. 2009. Dynamics of decision making in animal group motion. *Journal of Nonlinear Science* 19(4): 399-345.
415. **E** Ndifon, W., J. Dushoff, and S.A. Levin. 2009. On the use of hemagglutination-inhibition for influenza surveillance: surveillance data are predictive of influenza vaccine effectiveness. *Vaccine* 27(2009): 2447-2452.
414. **E** Ndifon, W., Wingreen, N.S., and S.A. Levin. 2009. Differential neutralization efficiency of hemagglutinin epitopes, antibody interference, and the design of influenza vaccines. *PNAS* 106(21): 8701-8706.
413. **E** Takeshi, M., L. Giuggioli, Y. Kobayashi, T. Nagata, and S.A. Levin. 2009. Vertically-structured prokaryotic community can control the efficiency of the biological pump in the oceans. *Theoretical Ecology Theoretical Ecology* 2:199-216.
412. **E** Moore, S.A., T.J. Wallington, R.J. Hobbs, P.R. Ehrlich, C.S. Holling, S. Levin, D. Lindenmayer, C. Pahl-Wostl, H. Possingham, M.G. Turner, M. Westoby. 2009. Diversity in current ecological thinking: implications for environmental management. *Environmental Management* 43:17-27.

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411. **E** Lu, J., J. Liu, I.D. Couzin, and S.A. Levin. 2008. Emerging collective behaviors of animal groups. *Proceedings of the 7th World Congress on Intelligent Control and Automation, June 25-27, 2008, Chongqing, China*.
410. **E** Bartumeus, F. and S.A. Levin. 2008. Fractal reorientation clocks: linking animal behavior to statistical properties of search. *PNAS* 105(49): 19072-19077.
409. **E** Nadell, C.D., B.L. Bassler, and S.A. Levin. 2008. Minireview: Observing bacteria through the lens of social evolution. *Journal of Biology* 7: 27.1-27.4.

408. **E** Satake, A., Y. Iwasa, and S.A. Levin. 2008. Comparison between perfect information and passive-adaptive social learning models of forest harvesting. *Theoretical Ecology*. DOI 10.1007/S12080-008-0019-z.
407. **E** Bartumeus, F., P. Fernandez, M.G.E. daLuz, J. Catalan, R.V. Sole and S. Levin. 2008. Superdiffusion and encounter rates in diluted, low dimensional worlds. *European Physics Journal Special Topics* 157: 157-166.
406. **E** Levin, S. A. and J. Lubchenco. 2008. Resilience, robustness, and marine ecosystem-based management. *Bioscience* 58 (1): 27-32.
405. **E** Buchman, T.G., J. Dushoff, M.B. Effron, P.R. Ehrlich, S. Fitzpatrick, R. Laxminarayan, B. Levin, S.A. Levin, M. Lipsitch, A. Malani, C. Nemeroff, S.P. Otto, V.L. Patel, and J.S. Solomkin. 2008. Antibiotic overuse: the influence of social norms. *Journal of the American College of Surgeons* 207(2): 265-275.
404. **E** May, R.M., S.A. Levin, and G. Sugihara. 2008. Ecology for bankers. *Nature* 451: 893-895.
403. **E** Klausmeier, C.A., E. Litchman, T. Daufresne, and S.A. Levin. 2008. Phytoplankton stoichiometry. *Ecological Research* 23: 479-485.
402. **E** Menge, D.N.L., S.A. Levin, and L.O. Hedin. 2008. Evolutionary tradeoffs can select against nitrogen fixation and thereby maintain nitrogen limitation. *PNAS* 105(5): 1573-1578.
401. **E** Nadell, C.D., J. Xavier, S.A. Levin, and K.R. Foster. 2008. The evolution of quorum sensing in bacterial biofilms. *PLoS Biology* 6(1): 171-179.
400. **E** Perring, M.P., L. Hedin, S.A. Levin, M. McGroddy, and C. de Mazancourt. 2008. Increased plant growth from nitrogen addition should conserve phosphorus in terrestrial ecosystems. *PNAS*. 105(6): 1971-1976.
399. **E** Stock, C.A., T.M. Powell, and S.A. Levin. 2008. Bottom-up and top-down forcing in a simple size-structured plankton dynamics model. *Journal of Marine Systems* 74(1-2): 134-152.
398. **E** Wiegand, K., D. Saltz, D. Ward, and S.A. Levin. 2008. The role of size inequality in self-thinning: a pattern-oriented simulation model for arid savannas. *Ecological Modelling* 210: 431-445.

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397. **E** Arrow, Kenneth et al (including S.A. Levin). 2007. Consumption, Investment, and Future well-being: Reply to Daily et al. *Conservation Biology* 21 (5): 1363-1365.
396. **E** Baskett, M., J. Weitz and S.A. Levin. 2007. The evolution of dispersal in reserve networks. *American Naturalist* 170 (1): 59-78.
395. **E** Baskett, M., F. Micheli, and S.A. Levin. 2007. Designing marine reserves for interacting species: Insights from theory. *Biological Conservation* 137(2): 163-179.
394. **E** Cullen, J.J., W.F. Doolittle, S.A. Levin, and W.K.W. Li. 2007. Patterns and predictions in microbial oceanography. *Oceanography* 20(2): 32-44.
393. **E** Klausmeier, C.A., E. Litchman, and S.A. Levin. 2007. A model of flexible uptake of two essential resources. *Journal of Theoretical Biology* 246(2): 278-289.
392. **E** Kryazhimskiy, S., U. Dieckmann, S.A. Levin, and J. Dushoff. 2007. On state-space reduction in multi-strain pathogen models, with an application to antigenic drift in influenza A. *PLoS Computational Biology*. <http://compbiol.plosjournals.org/perlserv/?request=getdocument&doi=10.1371/journal.pcbi.0030159&ct=1>.
391. **E** Levin, S.A. 2007. Introduction: Infectious diseases. *Environment and Development Economics* 12: 625-626.

390. **E** Levin, S.A. 2007. Book review. Remodeled Foundations. *Theoretical ecology: principles and applications*. 3rd ed. Bob May and Angela McClean, eds. *Science* 316: 1699-1700.
389. **E** Levin, S.A. 2007. Book review. *Evolutionary Dynamics: Exploring the Equations of Life*, by M.A. Nowak. *Quarterly Review of Biology*.
388. **E** Lichstein, J.W., J. Dushoff, S. A. Levin, and S.W. Pacala. 2007. Intraspecific variation and species coexistence. *American Naturalist* 170: 807-818.
387. **E** Ma, J., L. Worden and S.A. Levin. 2007. Evolutionary branching of single traits. (K. McCann, D. Noakes, N. Rooney, eds.). *From Energetics to Ecosystems: The Dynamics and Structure of Ecological Systems*. Chapter 10, p. 191-212.
386. **E** Moon, S.J., B. Nabet, N. E. Leonard, S.A. Levin, and I.G. Kevrekidis. 2007. Heterogeneous animal group models and their group-level alignment dynamics; an equation-free approach. *Journal of Theoretical Biology* 246: 100-112.
385. **E** Muneeppeerakul, R., S.A. Levin, A. Rinaldo, and I. Rodriguez-Iturbe. 2007. On biodiversity in river networks: a trade-off metapopulation model and comparative analysis. *Water Resources Research* 43(7): W07426, doi:10.1029/2006WR005857.
384. **E** Muneeppeerakul, R., J. S. Weitz, S.A. Levin, A. Rinaldo, and I. Rodriguez-Iturbe. 2007. A neutral metapopulation model of biodiversity in river networks. *Journal of Theoretical Biology* 245 (2): 351-363.
383. **E** Pulliam, J.R.C., J. Dushoff, S.A. Levin, and A.P. Dobson. 2007. Epidemic enhancement in partially immune populations. *PLoS ONE* 2(1): e165. doi:10.1371/journal.pone.0000165.
382. **E** Satake, A., M. A. Janssen, S. A. Levin, and Y. Iwasa. 2007. Synchronized deforestation induced by social learning under uncertainty of forest-use value. *Ecological Economics* 63(2-3): 452-462.
381. **E** Satake, A., H.M. Leslie, Y. Iwasa, and S. A. Levin. 2007. Coupled ecological-social dynamics in a forested landscape: spatial interactions and information flow. *Journal of Theoretical Biology* 246(4): 695-707.
380. **E** Scanlon, T., K. Caylor, S.A. Levin, and I. Rodriguez-Iturbe. 2007. Positive feedbacks promote power-law clustering of Kalahari vegetation. *Nature* 449: 209-212 (doi:10.1038/nature06060).
379. **E** Worden, L. and S.A. Levin. 2007. Evolutionary escape from the prisoner's dilemma. *Journal of Theoretical Biology* 245: 411-422.

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378. **E** Bazykin, G.A., J. Dushoff, S.A. Levin, and A.S. Kondrashov. 2006. Bursts of non-synonymous substitutions in HIV-1 evolution reveal instances of positive selection at conservative protein sites. *Proceedings of the National Academy of Sciences, USA* 103 (51): 19396-19401.
377. **E** Buchman, T.G., V.L. Patel, J. Dushoff, P.R. Ehrlich, M. Feldman, M. Feldman, B. Levin, D.T. Miller, P. Rozin, S.A. Levin, and S. Fitzpatrick. 2006. Enhancing the use of clinical guidelines: A social norms perspective. *Journal of the American College of Surgeons*. 202 (5): 826-836.
376. **E** Buchman, T.G., J. Dushoff, P.R. Ehrlich, M. Feldman, M. Feldman, S. Fitzpatrick, B. Levin, S.A. Levin, D.T. Miller, V.L. Patel, and P. Rozin. 2006. Battling bad behavior: how do you convince people to do what's in their best interest? *The Scientist*. 20 (2): 51-57.
375. **E** Casagrandi, R., L. Bolzoni and S. A. Levin. 2006. The SIRC model for the ecology and evolution of drifting influenza A in seasonal environments. *Mathematical Biosciences*. 200 (2): 152-169.
374. **E** Chapin, F.S., Hoel, Michael, Carpenter, Steven R., Lubchenco, Jane, Walker, Brian, Callaghan, Terry V., Folke, Carl, Levin, Simon A., Mäler, Karl-Göran, Nilsson, Christer, Barrett, Scott, Berkes, Fikret, Crépin, Anne-Sophie, Danell, Kjell, Rosswall, Thomas, Starrett, David, Xepapadeas, Anastasios, Zimov, Sergey

- A. 2006. Building Resilience and Adaptation to Manage Arctic Change. *AMBIO: A Journal of the Human Environment*: 35(4): 198–202.
373. **E** De Leenheer, P., S. A. Levin, E. D. Sontag and C. A. Klausmeier. 2006. Global stability in a chemostat with multiple nutrients. *J. Mathematical Biology* 52 (4): 419-438.
372. **E** Earn, D.J.D. and S. A. Levin. 2006. Global asymptotic coherence in discrete dynamical systems. *Proceedings of the National Academy of Sciences, USA* 103 (11): 3968-3971. Erratum December 19, 2006, 103 (51) 19605; originally published December 8, 2006.
371. **E** Levin, S.A. 2006. On Karl Hadelar becoming 70. *Journal of Mathematical Biology* 53 (4): 496-498.
370. **E** Levin, S.A. 2006. Kyoto International Culture Forum. Unity from Division: In search of a collective Kokoro. *In quest of Kokoro/Human Minds for this planet*. October 2006.
369. **E** Levin, S.A. 2006. Learning to live in a global commons: socioeconomic challenges for a sustainable environment. *Ecological Research*. Special Feature. 21 (3): 328-333.
368. **E** Levin, S.A. 2006, Fundamental questions in biology. *PLoS Biology* 4(9): 1471-1472.
367. **E** Ma, J. and S.A. Levin. 2006. The evolution of resource adaptation: How generalist and specialist consumers evolve. *Bulletin of Mathematical Biology*. 68: 1111-1123.
366. **E** Nabet, B., Leonard, N.E., Couzin, I. and S.A. Levin. 2006. Leadership in animal group motion: A bifurcation analysis. *Proceedings of the 17th International Symposium on Mathematical Theory of Networks and Systems* (MTNS), Kyoto, Japan, July 24-28, 2006.
365. **E** Pascual, M., J. A. Dunne and S. A. Levin, 2006. Challenges for the future: Integrating ecological structure and dynamics. *Ecological Networks: Linking Structure to Dynamics in Food Webs*. Pp. 351-371eds. M. Pascual and J.A. Dunne. Oxford University Press, New York.
364. **E** Ruan, S., W. Wang, and S.A. Levin. 2006. The effect of global travel on the spread of SARS. *Mathematical Biosciences and Engineering* 3(1): 205-218.
363. **E** Sterner, T., M. Troell, J. Vincent, S. Aniyar, S.Barrett, W. Brock, S. Carpenter, K. Chopra, P. Ehrlich, M. Hoel, S. Levin, K. Goran Maler, J. Norberg, L. Pihl, T. Soderquist, J. Wilen and A. Xepapadeas. 2006. Quick Fixes for environment: part of the solution, or part of the problem? *Environment* 48 (10): 20-27.
362. **E** Weitz, J. and S.A. Levin. 2006. Size and scaling of predator-prey dynamics. *Ecology Letters* 9: 548-557.
361. **E** Wingreen, N.S. and S.A. Levin. 2006. Cooperation among Microorganisms. *PLoS Biology* 4 (9): 1486-1488.
360. **E** Zea-Cabrera, E., Y. Iwasa, S. Levin and I. Rodriguez-Iturbe. 2006. Tragedy of the commons in plant water use. *Water Resources Research*. 42, W06D02, doi:10.1029/2005WR004514. (figure correction)

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359. **E** Baskett, M. L., S. A. Levin, S. D. Gaines and J. Dushoff. 2005. Marine reserve design and the evolution of size at maturation in harvested fish. *Ecological Applications* 15(3): 882-901.
358. **E** Chan, K.M.A. and S. A. Levin. 2005. Leaky prezygotic isolation and porous genomes: Rapid introgression of maternally inherited DNA. *Evolution* 59(4): 720-729.
357. **E** Couzin, I. D., J. Krause, N.R. Franks, and S.A. Levin. 2005. Effective leadership and decision-making in animal groups on the move. *Nature* 433: 513-516.
356. **E** Durrett, R. and S.A. Levin. 2005. Can stable social groups be maintained by homophilous imitation alone? *Journal of Economic Behavior and Organization* 57(3): 267-286.

355. **E** Ehrlich, P.R. and S.A. Levin. 2005. The evolution of norms. *PLoS Biology* 3(6): 943-948.
354. **E** Jolles, A.E., D.V. Cooper and S.A. Levin. 2005. Hidden effects of chronic Tuberculosis in African buffalo. *Ecology* 86(9): 2358-2354.
353. **E** Katul, G. G., A. Porporato, R. Nathan, M. Siqueira, M.B. Soons, D. Poggi, H. S. Horn and S. A. Levin. September 2005. Mechanistic analytical models for long-distance seed dispersal by wind. *American Naturalist* 166(3): 368-381.
352. **E** Laxminarayan, R., D.L. Smith, L. A. Real, S.A. Levin. 2005. On the importance of incentives in hospital infection control spending. *Discovery Medicine* 5(27): 303-308.
351. **E** Levin, S. A. 2005. Self-organization and the emergence of complexity in ecological systems. *BioScience* 55(12): 1075-1079.
350. **E** Levin, S. A. 2005. The ecology of complexity and the complexity of ecology. In: (Royal Netherlands Academy of Arts and Sciences, ed). *Dr A H Heineken Prize 2004 Lecture for Environmental Sciences*. Royal Netherlands Academy of Arts and Sciences, Amsterdam, The Netherlands. Pp. 31. http://www.knaw.nl/heinekenprizes/prizes_env.html
349. **E** Livnat, A., S.W. Pacala and S.A. Levin. 2005. The evolution of intergenerational discounting in offspring quality. *American Naturalist* 165(3): 311-321.
348. **E** Nathan, R., N. Sapir, A. Trakhtenbrot, G. G. Katul, G. Bohrer, M. Otte, R. Avissar, M. B. Soons, H. S. Horn, M. Wikelski and S. A. Levin. 2005. Long-distance biological transport processes through the air: can nature's complexity be unfolded *in silico*? *Diversity and Distributions* 11: 131-137.
347. **E** Peters, H. A., N. R. Chiariello, H. A. Mooney, S. A. Levin and A. E. Hartley. 2005. Native harvester ants threatened with widespread displacement exert localized effects on serpentine grassland plant community composition. *Oikos* 109: 351-359.
346. **E** Scanlon, T.M., K. K. Caylor, S. Manfreda, S. A. Levin, and I. Rodriguez-Iturbe. 2005. Dynamic response of grass cover to rainfall variability: Implications for the function and persistence of savanna ecosystems. *Advances in Water Resources* 28: 291-302.
345. **E** Sherman, K., M. Sissenwine, V. Christensen, A. Duda, G. Hempel, C. Ibe, S. Levin, D. Lluich-Belda, G. Matishov, J. McGlade, M. O'Toole, S. Seitzinger, R. Serra, H.-R. Skjoldal, Q. Tang, J. Thulin, V. Vandeweerd, K. Zwanenburg 2005. A global movement toward an ecosystem approach to management of marine resources. *Marine Ecology Progress Series* 300: 241-296.
344. **E** Smith, D. L., S. A. Levin and R. Laxminarayan. 2005. Strategic interactions in multi-institutional epidemics of antibiotic resistance. *Proceedings of the National Academy of Sciences, USA* 102(8): 3153-3158.
343. **E** van der Meulen, A. J., P. Peláez-Campomanes and S. A. Levin. 2005. Age structure, residents, and transients of Miocene rodent communities. *The American Naturalist* 165(4): E108-E125.
342. **E** Webb, C. T. and S. A. Levin. 2005. Cross-system perspectives on the ecology and evolution of resilience. Pp. 151-172. In: (E. Jen, ed.), *Robust Design: A Repertoire of Biological, Ecological, and Engineering Case Studies, SFI Lecture Note Series*. Oxford University Press.
341. **E** Weitz, J. S., H. Hartman and S. A. Levin. 2005. Co-evolutionary arms races between bacteria and bacteriophage. *Proceedings of the National Academy of Sciences, USA* 102(27): 9535-9540.
340. **E** Williams, J., C.S. ReVelle and S. A. Levin. 2005. Spatial attributes and reserve design models: A Review. *Environmental Modeling and Assessment* (Special Issue). 10(3): 161-162.

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338. **E** Cisternas, J., C. W. Gear, S. Levin and I. G. Kevrekidis. 2004. Equation-free modeling of evolving diseases: Coarse-grained computations with individual-based models. *Proceedings of the Royal Society: Mathematical, Physical and Engineering Science* 460: 2761-79.
337. **E** Dushoff, J., J.B. Plotkin, S.A. Levin and D.D.J. Earn. 2004. Dynamical resonance can account for seasonality of influenza epidemics. *Proceedings of the National Academy of Sciences, USA* 101: 16915-16.
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