HACETTEPE UNIVERSITY

FACULTY OF LETTERS

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Syllabus

Title of the Course: IED 392 Ecocriticism

Instructor: Prof. Dr. Serpil OPPERMANN

Year and Term: 2012 Spring

Class Hours and Rooms: Monday 13:00-15:45 B2/205

Office Hours:

*“Have pity on this small blue planet searching through time and space”*

Jeanette Winterson. *GUT SYMMETRIES*

**Course Aims and Contents**

With its emphasis on the relationship between humans and the natural environment ecocriticism is a recent form of literary and cultural interpretation. It studies the role of nonhuman nature in a wide range of texts, literary and otherwise, and interrogates the philosophical and cultural implications of human understanding of and impact on the natural environment and the ways that human interactions with nature (plants, animals, geology, landscapes, air, water) have affected both human and nonhuman life and the environments. (A series of questions about the relationship between the natural world and the human beings who have defined and affected that world are listed below).

Since ecocritics set literary works in dialogue with scientists and examine the current importance of ecological ideas, they emphasize the role played by literature in the development of human discourses, cultural practices, and ethical values about the natural world. Therefore, ecocriticism is a constitutively cross-disciplinary field of study

Some key theoretical movements in the method of ecocriticism include nature writing, place-based ecocritcism, bioregionalism, social ecology, deep ecology, ecofeminism, animal studies, queer ecology, postcolonial ecocriticism, environmental justice ecocriticism, and material ecocriticism and posthuman directions. These movements sometimes overlap and sometimes prove mutually exclusive, but they chart a critical genealogy of ecocriticism. After examining these and thumbing through the essays in the reading list, all of which provide solid backgrounds in ecocriticism, the final question we will address in class is “What are its future prospects?” This question for many ecocrtics today is the most imperative, as literary scholars are called upon ever more frequently to explicate their contribution to a world whose hallmarks are economic sustainability, impact quotients, and climate change. Some of the introductory essays are at [http://www.asle.org/site/resources/ecocritical-library/](http://www.asle.org/site/%20resources/ecocritical-library/). We’ll then discuss more recent and theoretical ecocritical texts by Stacy Alaimo, Jane Bennett, Timothy Morton, Patricia Yaeger, and Serenella Iovino and Serpil Oppermann.

Class sessions will feature a mixture of student presentations and free-flowing discussion on questions at issue for environmental thinking and literary study.  Although some understanding of literary theory will be helpful, it won't be necessary.  A basic knowledge of primary texts from the environmental literary canon is necessary but will not be imperative.  What will be necessary, however, is a willingness to read the course materials with an open mind, to discuss ideas from a wide range of disciplines (ecology, biology, philosophy, literary and cultural theory, etc.), and, most importantly, to come to class prepared to ask questions and make assertions. Also the films “The Inconvenient Truth,” “The Day After Tomorrow” and *The 11th Hour* will be helpful as visual material.

**Method of Instruction:** Interactive: comprised of discussions, student presentations and lectures.

**Course Requirements:** Attendance is obligatory. More than 12 hours of absence will result in F1. (Unexcused absences will be grounds for lowering your grade in the course).

Students will come to class prepared to discuss the assigned readings for each day. Discussion will form a central part of class work, and students will sign up for two (2) presentations based on our weekly reading schedule.

**Assessment:** Students will be evaluated on the basis of class participation, presentations, midterms, and a comprehensive final exam. Class participation will include presentations. In the grading of oral and written work 25% will be taken off for language mistakes. There will be two midterm exams (50% each, in this will be included 10 % of presentations), and a Final Exam (50 %). The passing grade in the Final is 50.

**Questions to Consider**

1.  What do you understand by the terms ‘nature’ and ‘culture’ and how are they interrelated?

2.  What is involved in studying ‘literature’ and ‘environment’?

3.  How do our underlying assumptions about knowledge (epistemology) and the nature of existence (ontology) shape our attitudes and actions towards 'nature'?

4.  What is the relationships among humans and between humans and the physical world, including human bodiliness?

5. Are human beings just the result of random evolutionary processes? Is that all they are?

6. Why has “nature” had such a powerful impact on poets and novelists over the past 150 years?

7. When do poets and scientists think in similar ways? When do they think in different ways?

8.  Are you familiar with recent utopian or dystopian projections of the future?

9. How effective is this dystopian vision as a critique of current tendencies?

10. “Be fruitful and multiply.”–Is that a good idea or a waste? Does evolution conflict with the religious teachings of major religions? Can the two viewpoints be reconciled?

11. How did 'nature' figure in the literature/film/TV that you experienced as a child? How important is children's literature in shaping attitudes towards the more-than-human world?

12.  To what extent does this narrative advance an environmental ethic?

13.  To what extent are animals and the environment shown to be involved in communication in this text?

14.  What role does place play in human relationships with the non-human world?

15. How can the physical environment affect your mood or ‘disposition’?

16.  What might this suggest about the relationship between ‘mind’ and ‘body’?

17.  What kind of ‘atmosphere’ is conveyed by these texts, and how is this accomplished through the language used?

18.  How is the relationship between human social relations and the treatment of the environment configured in other science fiction texts with which you are familiar?

19.  What connections between social injustice (especially classism, racism, sexism) and environmental destruction are evident in this text?

20. Why is ecocriticism a useful method of literary criticism in the 21st century?

**What the Writers Have Said About Nature**

“In looking at the objects of Nature while I am thinking, as at yonder moon dim-gleaming through the dewy window-pane, I seem rather to be seeking, as it were asking for, a symbolical language for something within me that already and for ever exists, than observing anything new. Even when the latter is the case, yet still I have always an obscure feeling as if that new phenomena were a dim awakening of a forgotten or hidden truth of my inner nature.” (1805)–Coleridge, *Anima Poetae*

“A Poet is the most unpoetical of any thing in existence; because he has no Identity–he is continually in for–and filling some other Body–The Sun, the Moon, the Sea and Men and Women who are creatures of impulse are poetical and have about them an unchangeable attribute–the poet has none; no identity–” Keats, *Letters*

“How much virtue there is in simply seeing! . . . We are as much as we see . . . Every child begins the world again. . . I saw this familiar–too familiar–fact at a different angle, and I was charmed and haunted by it . . . Only what we have touched and worn is trivial,–our scurf, repetition, tradition, conformity. To perceive freshly, with fresh senses, is to be inspired . . . The age of miracles is each moment thus returned.” –Thoreau, *Works*

“In a Romantic poem the realm of the ideal is always observed as precarious–liable to vanish or move beyond one’s reach at any time. Central Romantic poems like “Ode to a Nightingale” or “La Belle Dame Sans Merci” typify this situation in the Romantic poem, which characteristically haunts, as Geoffrey Hartman has observed, borderlands and liminal territories. These are Romantic places because they locate areas of contradiction, conflict, and problematic alternatives.” –Jerome McGann, *The Romantic Ideology.*

**Course Outline:**

**Week 1-2**: Introduction to Ecocriticism and some basic concepts in ecological thought (environment, ecology, bioregionalism, biomes, ecosystems, climate change, place-consciousness, sustainability, deep and shallow ecology, ecocentrism, anthropocentrism, anthropocene, etc). Discussion of selected WLA position papers ([http://www.asle.org/site/resources/ ecocritical-library/intro/defining/](http://www.asle.org/site/resources/%20ecocritical-library/intro/defining/)) and PMLA letters (([http://www.asle.org/site/ resources/ecocritical-library/intro/forum](http://www.asle.org/site/%20resources/ecocritical-library/intro/forum)).

Main essay: Cheryll Glotfelty. “Introduction: Literary Studies in an Age of Environmental Crisis.” *The Ecocriticism Reader: Landmarks in Literary Ecology*. Eds. Cheryll Glotfelty and Harold Fromm. Athens: U of Georgia P, 1996.

**Week 3-4 :** The First and Second Waves of ecocrticism, place-based consciousness, .

1. Lawrence Buell. *The Future of Environmental Criticism.* Chapter 1: “The emergence of Environmental Criticism” (1-28)
2. Joni Adamson and Scott Slovic. “Guest Editors’ Introduction: The Shoulders We Stand On: An Introduction to Ethnicity and Ecocriticism.” Eds. Adamson and Slovic. Special issue of *MELUS* 34.2 (Summer 2009): 5-24.
3. Scott Slovic. “Love is Never Abstract.” *Watershed: Environment and Culture*. 2.1 (Spring/Summer 2008):17-23.
4. Jonathan Bate. “Poetry and Biodiversity.” Writing the Environment: Ecocriticism and Literature. Eds. Richard Kerridge and Neil Sammells. London: Zed Books, 1998. 53-70

**Week 5-6**: Postcolonial Ecocriticism. Postmodern Ecocriticism, ecocritical theory.

1. Graham Huggan and Helen Tiffin. *Postcolonial Ecocriticism: Literature, Animals, Environment*. London: Routledge, 2010. “Introduction.”,
2. Susie O’Brien. “Back to the World: Reading Ecocriticism in a Postcolonial Context.” *Five Emus to the King of Siam: Environment and Empire.* Ed Helen Tiffin. Amsterdam: Rodopi, 2007. 177-99.
3. Serpil Oppermann. “The Rhizomic Trajectory of Ecocriticism.” *Ecozon*@ 1.1(2010): 17- 21. Web
4. ---.“Theorizing Ecocriticism: Towards a Postmodern Ecocritical Practice.” *ISLE: Interdisciplinary Studies in Literature and Environment.* 13.2 (Summer 2006): 103-128.
5. ---.“Ecocriticism’s Theoretical Discontents.” *Mosaic: A Journal fort he Indterdisciplinary Study of Literature*. 44. 2 (June 2011): 153- 169.
6. ---.“Rethinking Ecocriticism in an Ecological Postmodern Framework.” *Ecology, Ethics: Recent Trends in European Ecocriticism*. Eds. Timo Müller, Michael Sauter. Heidelberg: Winter Verlag,2012. 35-50.
7. Student presentations. Reading a literary text ecocriticially.

**Week 7:** Midterm I (end of April)

**Week 8-9:**  Material Ecocriticism.

1. Serenella Iovino and Serpil Oppermann. "Material Ecocriticism: Materiality, Agency, and Models of Narrativity." *Ecozon@*. 3.1 (2012): 75-91. Web.
2. ---"Theorizing Material Ecocriticism: A Diptych." *ISLE*. Spec. issue on Material Ecocriticism. Eds. Heather Sullivan and Dana Phillips. 19.3 (Summer 2012): 448-475.
3. Alaimo, Stacy. "Trans-corporeal Feminisms and the Ethical Space of Nature." *Material Feminisms*. Eds. Stacy Alaimo and Susan Hekman. Bloomington: Indiana University Press, 2008. 237-64.
4. The Majestic Plastic Bag: A Mocumentary <http://www.youtube.com/watch?v=GLgh9h2ePYw>. You Tube video.

**Week 10**: Posthumanism and Animal Studies

1. Yaeger, Patricia. "The Death of Nature and the Apotheosis of Trash." *PMLA* 123.2 (March 2008): 321-39.
2. ---. "Literature in the Ages of Wood, Tallow, Coal, Whale Oil, Gasoline, Atomic Power, and Other Energy Sources." *PMLA* 126.2 (March 2011): 305-326.
3. ---. "Sea Trash, Dark Pools, and the Tragedy of Commons." *PMLA* 125.3 (May 2010): 523-45.
4. Jane Bennett. Vibrant Matter: *: A Political Ecology of Things*. Durham: Duke University Press, 2010. Preface and Introduction.
5. Donna Haraway. Excerpts from *When Species Meet:* Minneapolis: U of Minnesota P, 2008.
6. Paola Cavalieri. *The Animal Question: Why Nonhuman Animals Deserve Human Rights.* Trans. Catherine Woollard. New York: Oxford UP, 2001. Introduction.

**Week 11: Midterm II** (May)

**Week 13-14:**  Feminist Ecocriticism.

1. Plumwood, Val. *Feminism and the Mastery of Nature.* New York: Routledge, 1994. Excerpts.
2. Gaard, Greta. “Ecofeminism’ Revisited: Rejecting Essentialism and Re-Placing Species in a Material Feminist Environmentalism.” *Feminist Formations.* 23.2 (Summer 2011): 26–53.
3. ---. New Directions for Ecofeminsm: Toward a More Feminist Ecocriticism.” *ISLE* 17.4 (Autumn 2010): 643–665.
4. Serpil Oppermann. “Feminist Ecocriticism: A Posthumanist Direction in Ecocriticial Trajectory.” *International Perspectives in Feminist Ecocriticism*. Eds. Greta Gaard, Simon C. Estok and Serpil Oppermann. New York: Routledge, 2013.

**One of your choice from the following novels will be include in discussions**

Yann Martel. *Beatrice and Virgil*. London: Canongate, 2010.

Yann Martel. *Life of Pi.* London: Canongate Books, 2003.

Ian McEwan. *Solar.* London: Jonathan Cape, 2010.

Jeanette Winterson. *The Stone Gods*. London: Harcourt, 2007.

Latife Tekin. *Berci Kristin Çöp Masalları*. İstanbul: Everest, 2001.

Paul Auster. *Timbuktu*. New York: Picador,1999.

Yaşar Kemal. *The Birds Have Also Gone*. London: Minerva, 1987

DonDelillo. *White Noise*. New York: Penguin Books, 1986.

Graham Swift*. Waterland*. London: Picador, 1984.

**Selected Ecocritical Texts to be consulted:**

Adamson, Joni, and Scott Slovic. “Guest Editors’ Introduction: The Shoulders We Stand On: An Introduction to Ethnicity and Ecocriticism.” Eds. Adamson and Slovic. Special issue of *MELUS* 34.2 (Summer 2009): 5-24.

Alaimo, Stacy.”Eluding Capture: The Science, Culture, and Pleasure of ‘Queer’ Animals.” *Queer Ecologies: Sex, Nature, Politics, Desire*. Eds. Catriona Mortimer-Sandilands and Bruce Erickson. Bloomington: Indiana UP, 2010. 51-72.

Alaimo, Stacy. “Material Engagements: Science Studies and the Environmental Humanities.” Ecozon@ 1.1 (2010): 69-73

Alaimo, Stacy and Susan Hekman. “Introduction: Emerging Models of Materiality in Feminist Theory.” *Material Feminisms*. Eds. Stacy Alaimo and Susan Hekman. Bloomington: Indiana UP, 2010. 1-19.

Armbruster, Karla. “Thinking with Animals: Teaching Animal Studies-Based Literature Courses.” *Teaching North American Environmental Literature.* Eds. Laird Christensen, Mark C. Long, and Fred Waage. New York: MLA, 2008. 72-90.

Balaev, Michelle. “The Formation of a Field: Ecocriticism in America. Interview with Cheryll Glotfelty.” *PMLA* 17.3 (May 2012): 607-616.

Barad, Karen. “Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter.” *Material Feminisms*. Eds. Stacy Alaimo and Susan Hekman. Bloomington: Indiana UP, 2010. 120-154.

Barry, Peter. “Ecocriticism.” *Beginning Theory: An Introduction to Literary and Cultural Theory*. Manchester, UK: U of Manchester P, 2002. 248-71.

Buell, Lawrence. “Toxic Discourse.” Chapter 1 of *Writing for an Endangered World: Literature, Culture, and Environment in the U.S. and Beyond.* Cambridge, Mass., The Belknap P of Harvard UP, 30-54. For notes. Pp.276-289.

Buell, Lawrence. “The Emergence of Environmental Criticism.” Chapter 1 of *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination.* Blackwell, 2005. 1-28.For notes. Pp.150-154.

Buell, Lawrence. “The Ethics and Politics of Environmental Criticism.” Chapter 4 of *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination.* Blackwell, 2005. 97-127. For notes.Pp.164-169.

Cavalieri, Paola. “The Cultural Premises.” Chapter 2 in *The Animal Question: Why Nonhuman Animals Deserve Human Rights.* Trans. Catherine Woollard. New York: Oxford UP, 2001. 3-22.

Clark, Timothy. The Cambridge Introduction to Literature and the Environment. Cambridge: Cambridge UP, 2011

Cohen, Michael P. “Blues in Green: Ecocriticism Under Critique.” 9.1 *Environmental History* (January 2004): 9-36.

Cohen, Michael P. ”Reading After Darwin: A Prospectus.” *Coming into Contact: Explorations in Ecocritical Theory and Practice*. Eds. Annie Merrill Ingram, Ian Marshall, Daniel J. Phillippon, and Adam W. Sweeting. Arhens: The U of Georgia P, 2007. 221-233.

Deitering, Cynthia. “The Postnatural Novel: Toxic Consciousness in Fiction of the 1980s.” *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: U of Georgia P, 1996.196-203.

Estok, Simon C. “A Report Card on Ecocriticism.” *Journal of the Australasian Universities Language and Literature Association* 96 (November 2001): 220-38.

Estok, Simon.. “Theorizing in a Space of Ambivalent Openness: Ecocriticism and Ecophobia.” *ISLE* 16.2 (2009): 203-25.

Estok, Simon. “Reading Ecophobia: A Manifesto.” *Ecozo*n@ 1.1 (2010): 75-79

Feder, Feder. “Rethinking Multiculturalism: Theory and Nonhuman Cultures*.” ISLE* Special Forum on Ecocriticism and Theory. 17.4 (Autumn 2010):775-777.

Fox, Michael Allen and Lesley McLean. “Animals in Moral Space.” Chapter 7 in *Animal Subjects: An Ethical Reader in a Posthuman World*. Ed. Jodey catricano. Waterloo, Ontorio: Wifrid Laurier UP, 2008. 145-175.

Gaard, Greta. “Women, Water, Energy: An Ecofeminist Approach.” *Organization and Environment.* 14.2(June 2001): 157-172.

Gaard, Greta. New Directions for Ecofeminism: Toward a More Feminist Ecocriticism. *ISLE.* 17.4 (Autumn 2010):643-665.

Gaard, Greta. “Strategies for a Cross-Cultural Ecofeminist Literary Criticism.” Ecozon@ 1.1 (2010): 47-52.

Gifford, Terry. “Recent Critiques of Ecocriticism.” *New Formations*. 64 (Spring 2008): 15-24.

Glotfelty, Cheryll. “Introduction: Literary Studies in an Age of Environmental Crisis.” *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: U of Georgia P, 1996. xv-xxxii.

Guattari, Felix. *The Three Ecologies*. London: Continuum, 2000. Pp. 19-45.

Heise, Ursula. “The Hitchhiker’s Guide to Ecocriticism.” PMLA 121.2 (2006). 503-16.

Haraway, Donna. *When Species Meet*. Minneapolis: Uof Minnesota P, 2008.

Hawkins, Gay. "Plastic Materialities." *Political Matters: Technoscience, Democracy, and Public Life*. Eds. Bruce Braun and Sarah J. Whatmore. Minneapolis: U of Minnesota P, 2010. 119-138.

Hayles, Katherine N. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: The University of Chicago Press, 1999.

Heise, Ursula K. “Teaching Ecocritical Theory.” *Teaching North American Environmental Literature.* Eds. Laird Christensen, Mark C. Long, and Fred Waage. New York: MLA, 2008. 44-57.

Heise, Ursula K. “From the Blue Planet to Google Earth: Environmentalism, Ecocriticism, and the Imagination of the Global.” Chapter 1 of *Sense of Place and Sense of Planet: The Environmental Imagination of the Global.* New York: Oxford UP, 2008. 17-67. For notes. Pp.211-216.

Hird, Myra J.. “Feminist Engagements with Matter.” *Feminist Studies*. 35.2 (Summer 2009): 329-346.

Huggan, Graham and Helen Tiffin. “Introduction.” *Postcolonial Ecocriticism: Literature, Animals, Environment*. New York: Routledge, 2010.1-24.

Iovino, Serenella. “Ecocriticism, Ecology of Mind, and Narrative Ethics: A Theoretical Ground for Ecocriticism as Educational Practice.” *ISLE* Special Forum on Ecocriticism and Theory. 17.4 (Autumn 2010):759-762.

Iovino, Serenella. "Keyword: Pollution." *Keywords in the Study of Environment and Culture*. Eds. Joni Adamson, Bill Gleason, and David Pellow. New York: New York University Press, forthcoming.

 Iovino,Serenella "Material Ecocriticism: Matter, Text, and Posthuman Ethics." *Literature, Ecology, Ethics: Recent Trends in European Ecocriticism*. Eds. Timo Müller and Michael

 Sauter. Heidelberg: Winter Verlag, 2012. 51-68.

Iovino, Serenella. "Steps to a Material Ecocriticism. The Recent Literature About the 'New

 Materialisms' and Its Implications for Ecocritical Theory." *Ecozon*@ 3.1 (2012): 134-4

 Web.

 Iovino, Serenella. "Stories from the Thick of Things: Introducing Material Ecocriticism." Part One

 of Serenella Iovino and Serpil Oppermann, "Theorizing Material Ecocriticism: A

 Dipthych." *ISLE*. Spec. issue on Material Ecocriticism. 19.3 (2012): 448-460.

Iovino, Serenella and Serpil Oppermann. "Material Ecocriticism: Materiality, Agency, and Models of Narrativity." *Ecozon@*. 3.1 (2012): 75-91. Web. 10 December 2012.

Iovino, Serenella and Serpil Oppermann. "Theorizing Material Ecocriticism: A Diptych." *ISLE*. Spec. issue on Material Ecocriticism. Eds. Heather Sullivan and Dana Phillips. 19.3 (Summer 2012): 448-475.

Iovino, Serenella and Serpil Oppermann. "Onword. After Green Ecologies: Prismatic Visions." *Prismatic Ecology: Ecotheory Beyond Green*. Ed. Jeffrey J. Cohen. U of Minnesota P, forthcoming 2013.

Kerridge, Richard and Neil Sammells. Eds. *Writing the Environment: Ecocriticism and Literature*. London: Zed Books, 1998.

Kheel, Marti . "From Heroic to Holistic Ethics: The Ecofeminist Challenge.” Chapter 10 in *Ecofeminism: Women, Animals, Nature.* Ed. Greta Gaard. Philadelphia: Temple University P, 1993. 243-271.

Kirby, Vicki. “Natural Convers(at)ions: Or, What if Culture was really Nature All Along?” Chapter 7 in *Material Feminisms*. Eds. Stacy Alaimo and Susan Hekman. Bloomington: Indiana UP, 2010. 214-236.

Love, Glen, A. “Revaluing Nature: Toward an Ecological Criticism.” *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: U of Georgia P, 1996. 225-240.

Mazel, David. *American Literary Environmentalism*. Athens: The U of Georgia P, 200.

Morton, Timothy. “Introduction: Toward a Theory of Ecological Criticism and The Art of Environmental Language.” *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge: Harvard UP, 2007. 1-28 and 29-78.

Morton, Timothy. “Ecology as Text, Text as Ecology.” *The Oxford Literary Review*. 32.1 (2010): 1-17.

Morton, Timothy. “Guest Column: Queer Ecology.” *PMLA.* 125.2 (2010): 273-282.

Murdy, W. H. “Anthropocentrism: A Modern View.” *Environmental Ethics: Divergence and Convergence*. Eds. Susan J. Armstrong and Richard G. Botzler. New York: McGraw-Hill,1993. 302-309.

Murphy, Patrick D. “Introduction: The Four Elements and the Recovery of Referentiality in Ecocriticism.” *Ecocritical Explorations in Literary and Cultural Studies: Fences, Boundaries, and Fields.* Boulder: Lexington Books, 2009. 1-13.

Naess, Arne. “Culture and Environment.” *The Trumpeter.* 21. 1. (2005): 53-58.

Naess, Arne. “The Deep Ecological Movement: Some Philosophical Aspects.” *Environmental Ethics: Divergence and Convergence* 411-421.

O’Brien, Susie. “Back to the World: Reading Ecocriticism in a Postcolonial Context.” *Five Emus to the King of Siam: Environment and Empire.* Ed Helen Tiffin. Amsterdam: Rodopi, 2007. 177-99.

Oppermann, Serpil. “The Rhizomic Trajectory of Ecocriticism.” *Ecozon*@ 1.1(2010): 17-21.

Oppermann, Serpil .“Feminist Ecocriticism: A Posthumanist Direction in Ecocriticial Trajectory.” *International Perspectives in Feminist Ecocriticism*. Eds. Greta Gaard, Simon C. Estok and Serpil Oppermann. New York: Routledge, 2013.

Oppermann, Serpil. “Theorizing Ecocriticism: Towards a Postmodern Ecocritical Practice.” *ISLE: Interdisciplinary Studies in Literature and Environment.* 13.2 (Summer 2006): 103-128.

Oppermann, Serpil. Ecocriticism’s Theoretical Discontents.” *Mosaic: A Journal fort he Indterdisciplinary Study of Literature*. 44. 2 (June 2011): 153- 169.

Oppermann, Serpil.“Rethinking Ecocriticism in an Ecological Postmodern Framework.” *Ecology, Ethics: Recent Trends in European Ecocriticism*. Eds. Timo Müller, Michael Sauter. Heidelberg: Winter Verlag, 2012. 35-50.

Oppermann, Serpil. "A Lateral Continuum: Ecocriticism and Postmodern Materialism." Part Two of Serenella Iovino and Serpil Oppermann, "Theorizing Material Ecocriticism: A Dipthych." *ISLE*. Spec. issue on Material Ecocriticism. 19.3 (2012): 460-475.

Oppermann, Serpil. Ed. *Ekoeleştiri: Çevre ve Edebiyat.* Ankara: Phoenix, 2012.

Parham, John. *The Environmental Tradition in English Literature*. London: Ashgate, 2002.

Plumwood, Val. “The Ecological Crisis of Reason.” Chapter 1 of *Environmental Culture: The Ecological Crisis of Reason.* New York: Routledge, 2002. 13-37.For notes. Pp. 242-243.

Reed, T.V. “Toward an Environmental Justice Ecocriticism.” The Environmental Justice Reader: Politcs, Poetics and Pedagogy. Eds. Joni Adamson, Mei Mei Evans and Rachel Stein. Tuscon: The U of Arizona P, 2002. 145-162.

Rigby, Kate. “Ecocriticism.” *Introducing Criticism at the 21st Century*. Ed. Julian Wolfreys. Edinburgh: Edinburgh UP, 2002. 151-78.

Sandilands, Catriona. “From Difference to Differences: A Proliferation of Ecofeminisms.” Chapter 3 in *The Good- Natured Feminist: Ecofeminism and the Quest for Democracy*. Minneapolis: U of Minnesota P, 1999. 48-74.

Sandilands, Catriona Mortimer. “Queering Ecocultural Studies.” *Cultural Studies*. 22. 3-4 (May-July 2008): 455-476.

Sen, Malcolm. “Spatial Justice: The Ecological Imperative and Postcolonial Development.” *Journal of Postcolonial Writing*. 45. 4 (December 2009): 365-377.

Slovic, Scott. “The Third Wave of Ecocriticism: North American Reflections on the Current Phase of the Disicpline.” Ecozon@ 1.1 (2010): 4-10.

Slovic, Scott. “Love is Never Abstract.” *Watershed: Environment and Culture*. 2.1 (Spring/Summer 2008): 17-23.

Sturgeon, Noël . “Movements of Ecofeminism.” Chapter 1 in *Ecofeminist Natures: Race, Gender, Feminist Theory and Political Action.* New York: Routledge, 1997. 23-58. For notes: Pp.200-210

Warkentin, Traci. “Interspecies Etiquette: An Ethics of Paying Attention to Animals*.” Ethics & the Environment.* 15. 1 (2010): 101-121.

Wheeler, Wendy and Hugh Dunkerly. “Introduction.” *New Formations: A Journal of Culture/ Theory/ Politics.* Special issue on *Earthographies: Ecocriticism and Culture*. 7-14.

White, Lynn. “The Historical Roots of our Ecological Crisis.” *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: U of Georgia P, 1996. 3-14.

Willoquet-Maricondi, Paula. Ed. *Framing the World: Explorations in Ecocriticism and Film*. Charlottesville: U of Virginia P, 2010.

Wolfe, Cary. “’Animal Studies,’Disicplinarity, and the (Post)Humanities.” Chapter 4 in *What is Posthumanism?* Minneapolis: The U of Minnesota P, 2010. 99-126. For Notes. Pp. 319-324.

Yaeger, Patricia. "The Death of Nature and the Apotheosis of Trash." *PMLA* 123.2 (March 2008): 321-39.

Yaeger, Patricia. "Sea Trash, Dark Pools, and the Tragedy of Commons." *PMLA* 125.3 (May 2010): 523-45.

 Yaeger, Patricia. “Literature in the Ages of Wood, Tallow, Coal, Whale Oil, Gasoline, Atomic Power, and Other Energy Sources." *PMLA* 126.2 (March 2011): 305-326.

**Ecocritical Journals:**

1. *ISLE: Interdisiciplinary Studies in Literature and Environment*
2. *Ecozon@: European Journal of Literature, Culture and Environment* ([www.ecozona.eu/](http://www.ecozona.eu/))
3. *Journal of Ecocriticism: A New Journal of Nature, Society and Literature*  (<http://ojs.unbc.ca/index.php/joe/index>)
4. *AJE: Australasian Journal of Ecocriticism and Cultural Ecology* (<http://www.nla.gov.au/openpublish/index.php/aslec-anz/index>)
5. *IJE: Indian Journal of Ecocriticism*
6. *Environmental Humanities* (<http://environmentalhumanities.org/>)
7. *PAN: Philosophy Activism Nature (*h[ttp://www.panjournal.net/](http://www.panjournal.net/)).

**Useful Ecological Terms**

Adaptation: how living things change what they do or what they are to survive in a particular environment. In this the organism is not a passive recipient of external circumstances; the relationship is interactive. See Evolution.

Adaptive Radiation: the evolution of many new species from a relative handful of ancestor species. It often happens after some kind of catastrophe empties a range of ecological niches simultaneously.

Air Pollution: sulfur oxides and particulates from industrial plants burning fossil fuels are the current worst forms of air pollution. Auto emissions run a close second. Most air pollution derives in one form or another from the use of petroleum products, oil in particular. See Oil below.

Airshed: an area characterized by air with common qualities. Compare Watershed.

Alternative Fuels: fuels from sources cleaner than coal or petroleum products: ethanol, methanol, natural gas, solar, wind, geothermal, biodiesel from vegetable oil, etc

Animals: the animal kingdom branches into the deuterostomes (mouth and anus develop separately) and the protostomes. Animals are multicellular and possess mitochondria, a complex nervous system, and cells protected by a membrane and filled with complex organelles. 75% of all the animal species are insects.

Animism: a derogatory anthropological term for what most human cultures have believed throughout prehistory: that the Earth is alive and reactive, as are its many places. Greeks and Romans once thought a "genius loci" or spirit of place inhabited every hill, grove, and stream. Such beings still live in all human mythologies. The modern counterpart is panpsychism, the idea that all things possess qualities of mindfulness or psyche. With the coming of heavy industry, such ideas gave way to the financially convenient reduction of the Earth to the status of a lifeless resource.

Anthropocene: It’s a new name for a new geologic epoch—one defined by our own massive impact on the planet. That mark will endure in the geologic record long after our cities have crumbled. The word "Anthropocene" was coined by Dutch chemist Paul Crutzen about a decade ago. One day Crutzen, who shared a Nobel Prize for discovering the effects of ozone-depleting compounds, was sitting at a scientific conference. The conference chairman kept referring to the Holocene, the epoch that began at the end of the last ice age, 11,500 years ago, and that—officially, at least—continues to this day.

 The Anthropocene defines Earth's most recent [geologic time period](http://www.eoearth.org/article/Geologic_time) as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, biospheric and other earth system processes are now altered by humans. The word combines the root "anthropo", meaning "human" with the root "-cene", the standard suffix for "epoch" in [geologic time](http://www.eoearth.org/article/Geologic_time). The Anthropocene is distinguished as a new period either after or within the [Holocene](http://www.eoearth.org/article/Holocene), the current [epoch](http://www.eoearth.org/article/Geologic_time), which began approximately 10,000 years ago (about 8000 BC) with the end of the last glacial period. (See Wikipedia)

Anthropocentric Detour: deep ecologist George Sessions’ term for the ideological turn of mind Western civilization has taken, accompanied by occasional opportunities to return to a less human-centered way of viewing the world (e.g., Maimonides’ belief that the world was good before humans were created, and Spinoza’s thought that mind is found throughout nature). For many deep ecologists, regarding the natural world only for what it does for us exhibits a regrettable immaturity.

Anthropocentrism: human chauvinism, according to John Seed. An example is the belief that the Earth is merely a stage for human salvation or self-development without any intrinsic importance of its own.

Biocentric: putting the natural world, rather than the human world, into the perceived center of the cosmos. The land is not made for us: we are a part of it.

Biochemical (Biological) Oxygen Demand (BOD): the amount of oxygen required to dissolve and decompose organic matter. A water quality measurement often applied to treated sewage.

Bioconcentration (Biomagnification): the strengthening of a harmful and usually toxic substance as it moves up the food chain, as with DDT growing 400 times deadlier in seagulls and other carnivores than when first ingested by marsh animals.

Biocontrol: using natural means like predators to control pests, like growing ginger to repel snails and slugs and nasturtiums to ward off aphids, which are also food for ladybugs and lacewing moths. Goldfish placed in water storage containers eat incoming mosquitos.

Bioculture: Paul Taylor’s term for how humans exploit other living things: domesticating animals, force-feeding livestock, etc.

Biodegradable: reducible by bacteria as opposed to something that remains in the environment (plastic, certain inustrial wastes)

**Biodiversity:** biological variety of the kind that preserves species and their DNA. R. H. Whittaker categorized it (1972) as alpha, the number of species in an ecosystem; beta, the diversity between ecosystems; and gamma, the diversity of entire regions. Depleted biodiversity leads to population crashes, declines in genetic variability, and extinctions.

Biomass: the total quantity of living matter in a given area or ecosystem.

Biome: the largest ecological regions distinguishable by characteristic plants and animals. There are six: tundra, conifer, deciduous forest, grassland, tropical, and desert. Biomes are subdivided into associations made up of societies.

Biophilia: love of nature. Coined by biologist E. O. Wilson. The opposite of necrophilia, the love of dead things.

Bioregion: a naturally bounded, ecologically distinct geography: a watershed is one example. Term coined by Peter Berg and Raymond Dasmann. The largest bioregion is an ecoregion (example: the Ozark Plateau), the next largest a georegion (river basins, mountains, watersheds), and the next a local morphoregion. As Berg described it:

*A bioregion refers both to geographical terrain and a terrain of consciousness--to a place and the ideas that have developed about how to live in that place... A bioregion can be determined initially by use of climatology, physiography, animal and plant geography, natural history and other descriptive natural sciences. The final boundaries of a bioregion, however, are best described by the people who have lived within it, through human recognition of the realities of living-in-place....*

Bioregionalism: philosophies, ecological practices, and politics built around the idea that a place’s natural features and edges suggest the basis for understanding it and inhabiting it. Scientifically, this means joining ecology to anthropology through geography: a seamless interdependency between ecosystem, culture, and region. Most versions of bioregionalism share the following areas of focus:

* Those who actually live in a bioregion know best how to manage it. Top-down solutions from far away are to be suspected.
* Dwellers begin to understand a place by reinhabiting it, which means learning all about its ecosystems and animals, water sources, weather, soil types, waste management, ecological strengths and traumas, and resources for ecologically gentle living. The mood that matches this is learning to feel at home there.
* Food is best grown and bought locally.
* Local democracy is based on direct participation and small-group discussion. (As Leopold Kohr put it, "If something is wrong, then something is too big.")
* Developments that would damage the local environment--shopping malls, tract housing, factories, etc.--should be firmly and consistently opposed. Locally made products are preferred over those shipped from a distance or made locally through mass production both of which transfer capital to outside sources.
* Respect for the rights, needs, customs, privacy, and knowledge of indigenous people living in the area.
* Living sustainably means ecologically sensible practices such as reuse and recycling, water and power conservation, and reduction of trash and other wastes.

Biosphere: taken together, the troposphere, oceans, and land surfaces where things live. Also called the Ecosphere.

Bioremediation: using animal microorganisms or plants (phytoremediation) to heal polluted soil or water.

Biotic: living.

Biotic Community: a self-sustaining community of living things. An ecosystem.

Biotic Factor: the environmental influence exerted naturally by living organisms: worms that aerate soil, animals that enrich it with manure, trees that throw shade, etc.

Biotic Potential: a population's maximum production rate given ideal surroundings and resources.

Biotope: an environmentally uniform area. The physical aspect of an ecosystem.

Carbon: an element whose atoms have six protons and six electrons. Because its outer electron shell holds only four of the eight electrons it could support, carbon bonds easily with other elements and with itself to fashion the complex molecules on which life as we know it depends. It makes up almost half of the human body's dry mass.

Carbon Cycle: the passage and recycling of carbon through the plantary biosphere, lithosphere, hydrosphere, and atmosphere.   Carbon Dioxide: a colorless atmospheric waste-product gas (one carbon atom joined to two carbon atoms) produced by combustion, fermentation, and respiration. Fossil fuel consumption and deforestation have almost doubled the quantity of it in the atmosphere. See Greenhouse Effect and Photosynthesis.

Carbon Flux: carbon movement; movement of organic compounds through an ecosystem. Specifically, the relationship between carbon dioxide absorbed by green plants and carbon dioxide respirated by various organisms.

Carcinogen: a substance that fosters cancer, an illness characterized by cells that cannot quit dividing in a kind of biological nation-statism.

Carrying Capacity: the maximum poplation an ecosystem can support of a given species. An ongoing debate focuses on whether the Earth's carrying capacity for humans has already been exceeded or shortly will be.

Cell: makers and maintainers of protoplasm; the basic living unit of all organisms except viruses. The cells of organisms other than bacteria are eukaryotes: those containing a defined nucleus in which chromosomes contain the DNA recipes from which cells synthesize protein. Cells know what to do and which genes to turn on because of what surrounding cells do in reference to a chemical-directional gradient. In organisms of greater complexity cells specialize into a variety of tissues.

Cetaceans: the order that includes dolphins and whales. (Closest living relative to the whale: the hippo.) Like the Order Sirenia (manatees and dugongs), the Cetaceans were never land animals.

Chimera: an artificially created animal composed of mixed DNA. A human with a mouse's brain would be an example, as would Frankenstein's angry monster. In Greek mythology the Chimera--a fire-breather who was part lion, part goat, and part dragon--devastated the land until finally slain by a hero. Nevertheless, certain enthusiastic biologists are more eager to create chimeras than to read hints and warnings from ancient mythology.

Chlorofluorocarbons (CFCs): nonburning chemicals made of carbon, chlorine, and fluorine and used in aerosol sprays, solvents, foams, refrigerants, and packing materials. When released into the air and exposed to ultraviolet radiation in the upper atmosphere, they form a gas that opens

Cities: urban systems whose dominant members occupy various niches, some of which compete. Rather parasitic, the large ones, in that they take from all over without giving, bereft as they are of natural producers. Because of their exclusive emphasis on growth and productivity, they are locked into an ecological immaturity that wastes resources and widely and indiscriminately pollutes. For all these reasons they are as unsustainable as the civilizations that spawn them.

***As Homo sapiens’s entry in any intergalactic design competition, industrial civilization would be tossed out at the qualifying round.* -- David Orr**.

Coevolution: interactions between species that impact how both evolve. Examples: bees and plants needing pollination; the cleaner fish and the whale shark.

Commoner’s Laws of Ecology: 1. Everything is connected to everything else. 2. Everything must go somewhere. 3. Nature knows best. 4. There is no such thing as a free lunch, or everything has to go somewhere. (Barry Commoner, biologist, 1971.)

Consumer: an organism that consumes other organisms, whether living or dead. Compare Producer.

Consumerism: the mass delusion, supplemented by expensive advertising, that using up as many products as possible as quickly as possible will somehow not cave in the biosphere. See Dieback.

Deep Ecology: a term coined by Arne Naess in his 1973 article “The Shallow and the Deep, Long-Range Ecology Movements” to challenge the exclusively human-centered view of the natural world by looking more deeply into questions of our place in it (as opposed to surface environmental reform that addresses problems but not their psychological or philosophical underpinnings). Its two fundamental norms, irreducible to any others: self-realization (as opposed to ego-realization) and biocentric equality that opposes anthropocentrism as the heart of our problem with nature. Naess’s motto: “Simple in means, rich in ends.” After working out a philosophical platform with George Sessions while camping in Death Valley in 1984, Naess later defined “deep” in terms of a persistent questioning (problematizing) and a pursuit of deep (significant) change. Deep ecologists see identification--with plants and animals, places, the world--as the basis of empathy and relationship. (David Kidner prefers “resonance” between self and other to "identification.") Warwick Fox believes that unlike social ecology and ecofeminism, deep ecology moves the source of our war against nature from intraspecies (human) to interspecies, a move that transcends blaming politicians or industrialists by focusing on their justification: anthropocentrism, which lovelessly regards the world as a thing for human use.

Dependent Co-Arising (Paticca Samuppada): Buddhist theory of mutual causality, which in practice means the interdependency of personal and social activity. Joanna Macy links this to a sense of environmental responsibility: consciousness (not ego) and world rise and fall together.

Detritus: decomposing organic matter (leaves, bugs, etc.)

Dioxin: a highly toxic chlorinated hydrocarbon used in herbicides and produced by industrial pollution.

DNA (Deoxyribonucleic Acid): a form of nucleic acid organized into pairs of double-helix molecules packaged into chromosomes carrying the genetic code. The molecules are made of linked nucleotides: units with a sugar, a phosphate, and one of four base chemicals: adenine, thymine, guanine, and cytosine. These bases join like ladder rungs--always an A to a T and a C to a G--with the sugar-phosphate forming the outside "backbone" of the strand. The sequence of these nucleotides, with each group of three spelling one anino acid "codon," determines the kind of protein manufactured when translated by strands of RNA. (James Watson and Francis Crick discovered this structure in 1953.) RNA also aids in DNA's replication. Everything living carries the same gene code, one reason scientists are so confident we are all related biologically. Some DNA sequences are identical in humans and bacteria, a fact that underlines our common biological origins. See RNA, Chromosome.

Ecofeminism: term introduced (“ecofeminisme”) by Francois d’Eaubonne in the 1974 text *Le Feminisme ou la Mort*. Dissatisfied with ecological analyses that leave patriarchy out of account, ecofeminists out parallels between how men in the West mistreat women and how they mistreat the Earth: in both cases a relationship of power, control, a will to dominate, and a pervasive fear of of the fact of interdependency. A twist on this is the patriarchal habit of objectifying women while feminizing the environment; women are then seen as less mature or human because "closer to nature." Not all ecofeminists agree on women's relationship to the natural world: Salleh thinks that feminine bodily experiences situate women more closely to nature, whereas Roach critiques this for reinforcing of the old nature-culture dichotomy. Many ecofeminists have criticized deep ecology's emphasis on unity (seen as a deemphasis on diversity and particularity) and on the need for elaborate philosophizing; for Plumwood, who sees the Western exaltation of rationality as a suicidal expression of ecological contempt, "identifying" with nature is an extended egotism that replaces relationship with psychological fusion. For Ynestra King, the tie with nature, though socially colored, should be celebrated rather than repudiated as "determinist" or "essentialist."

Ecological Efficiency: the percentage (usually around 10%) of useful energy that passes from one trophic level in a food chain to another. Shorter food chains tend to lose less energy.

Ecological Equivalents: species that live far apart but in similar niches and ecosystems.

Ecology: from the Greek *oikos* (household) and *logos* (study): the study of interrelationships between organisms and their environment. The term was coined in 1866 by German biologist and philosopher Ernest Haeckel, famous also for his discredited but interesting dictum that ontogeny (individual physical development) recapitulates phylogeny (the evolutionary development of its species).

Ecopsychology: a relatively new discipline operating on an ancient assumption: the deepest levels of the psyche are tied to the Earth (unlike environmental psychology, which looks in linear fashion at the impact of surround on psyche). Theodore Roszak, for instance, posits an “ecological unconscious” at the core of the psyche; Stephen Aizenstat describes a “world unconscious” similar to what early philosophers described as the *anima mundi* or world soul. As with deep ecology, ecopsychology insists that to be healthy, our relations with the Earth must be reciprocal, not exploitive. "Ecopsychology is the effort to understand, heal, and develop the psychological dimensions of the human-nature relationship (psychological, bio-social-spiritual) through connecting and reconnecting with natural processes in the web of life. At its core, ecopsychology suggests that there is a synergistic relation between planetary and personal well being; that the needs of the one are relevant to the other." -- Robert Greenway, Amy Lenzo, Gene Dilworth, Robert Worcester, Linda Buzzell-Saltzman.

Ecosophy: the philosophy of Deep Ecology.

Ecosophy T: Arne Naess’s brand of deep-ecological philosophy whose ultimate norm is Self-realization: realization of self and ecosphere and, ultimately, the universe. From this norm follow certain values like: interdependency of all things; maximum diversity; minimal exploitation; elimination of class society; maximum symbiosis. A key premise is that everything living has an intrinsic value apart from its purely human use value. The “T” recalls his hut Tvergastein, named after quartz crystals found nearby. (One of Naess's models, Spinoza, was a lens-grinder.) See Deep Ecology.

Ecosystem: a biotic community and its surroundings, part inorganic (abiotic) and part organic (biotic), the latter including producers, consumers, and decomposers. The term was introduced in 1935 by Sir Arthur Tansley. Social ecologist Murray Bookchin prefers the less mechanical word *ecocommunity*. Its components are not reducible to the interdependent relationships that emerge from it.

Ecotage: term invented by future Environmental Action members at Earth Day, 1970, to describe the sabotage of environmentally harmful machineries (bulldozers, SUVs) and projects (housing tracts, supermalls). Similar to *monkeywrenching* (Edward Abbey’s term from his 1976 novel *The Monkey Wrench Gang*). Most greens consider ecotage inappropriate until, at the very least, actions like nonviolent resistance have proven futile. Dave Foreman of EarthFirst! distinguishes between terrorism (which is aimed at innocent people) and ecotage (aimed at devices that ruins ecosystems). Farmer-writer Gene Logsdon has wondered whether groups who resort to such acts ever think about protecting, say, vanishing topsoil.

Ecotherapy: Earth-based healing practices. "Ecotherapy involves understanding and healing the human-nature relationship through connecting and reconnecting with natural processes"(Robert Greenway). Ecotherapist [Linda Buzzell-Saltzman](http://thoughtoffering.blogs.com/ecotherapy) refers to the field as "ecopsychology in action."

Ecotone: the transitial zone between adjacent biotic communities, often with unique nutrients and ecological relationships.

Ecotope (Biotope): the smallest ecologically distinctive area within a landscape classification system.

Ecotopia: a vision of an ecologically friendly society.

Ecotourism: tourism that makes use of the ecological attributes of a place (e.g., bird-watching).

Ecotype: a genetically differentiated subpopulation evolved to remain within its habitat.

Element: a molecule composed of one type of atom (e.g., Carbon, Hydrogen, Helium). At present the Periodic Table contains 112 elements. Two or more elements form a compound.

Endocrine Disruptor: a pesticide chemical that interferes with hormones. It is suspected to cause vaginal cancer, immune system deficiencies, and birth defects.

First Law of Thermodynamics: energy cannot be created or destroyed, only converted into another form. Sunlight into tissue; motion into electricity.

Food Chain: the path of food energy transfer from green plants (primary producers) to grazers (primary consumers), omnivors and carnivores (secondary consumers), and to their predators (top carnivores). The detritus food chain starts when organic matter settles on the ground and breaks down. Because such linear food chains are relatively rare in nature, see Food Web.

Food Web: the interconnection of all food chains in an ecosystem. Food web diagrams emphasize the circular complexity of feeding relationships.

Forests: = rain. Cut down a forest and make a localized drought. Deforestation is a direct cause of spreading desertification worldwide. Parallel damage to the human psyche remains largely unexplored.

*It was our Indian rule to keep our fields very sacred. We did not like to quarrel about our garden lands. One's title to a field once set up, no one ever thought of disputing it; for if one were selfish and quarrelsome, and tried to sieze land belonging to another, we thought some evil would come upon him....There is a story of a black bear who got into a pit that was not his own, and he had his mind taken away from him for doing so. -- Buffalo Bird Woman*

Fossil Fuel: coal, oil and natural gas geologically transformed from ancient beds of plant matter into burnable hydrocarbons. All told, these industries put 800 tons of carbon dioxide into the air every second: a sobering number given that oxygen-breathing life on Earth depends on carbon remaining locked in the ground. Although none of these fuels carries much, if anything, left from the dinosaurs, these now-extinct saurons have come to symbolize them with an eerie persistence.

Gaia Hypothesis: formulated by James Lovelock (1959) and further developed by Lynn Margulis, the scientific hypothesis that the Earth and its systems work as a self-regulating whole to maintain the biosphere through systemic feedback loops. The hypothesis was invented to answer the question of how certain environmental variables (gasses in the atmosphere, ocean salinity levels) that should be unstable remain in equilibrium.

Global Warming: the rising of the Earth's average global temperature because of greenhouse gases accumulating in the atmosphere. The scientific emphasis has swung from [whether global warming exists](http://www.flatearthaward.org/) to how to minimize the damage it will cause. One example of many: according to the British Antarctic Survey and U.S. Geological Survey as of 5005, 87% of 244 glaciers studied have retreated over the last fifty years, and average retreat rates are accelerating. If the Greenland ice sheet melts, sea levels worldwide will rise twenty feet. See Greenhouse Effect.

Greenhouse Effect: the gradual warming of a planet by an atmosphere's conversion of incoming solar radiation into heat (discovered in 1824 by Jean Baptiste Fourier). This natural effect is amplified by growing quantities of greenhouse gasses--carbon dioxide, nitroux oxide, chlorofluorocarbons (CFCs), ozone, and methane--that trap reflected radiant energy as it tries to leave the planet. Some would see a tragic, bitter irony in using up topsoil, polluting the rivers and oceans, and blackening the atmosphere while unconsciously converting the entire world into a giant greenhouse. See Global Warming.

Green Psychology: see Ecopsychology. Ralph Metzner prefers the term "green psychology" because instead of sounding like yet another discipline or departmental specialty, it refers to what psychology should have been doing all along: visualizing human beings in our ecological context. In his book by the same name he notes, "The absence of any consideration given to the ecological basis of human life in textbooks and theories of psychology is startling: it's as if we lived in a vacuum or space capsule."

Green Revolution: a modernization of high-yield agriculture which began in 1944 in Mexico with the Cooperative Wheat Research and Production Program organized by the Rockefeller Foundation and the Mexican government under agriculturalist Norman Borlaug. The resulting production techniques boosted wheat yield enormously, and their use in India and Pakistan saved millions of lives. But because such production depends on irrigation (which invites salt), heavy machinery (which compacts soil), and chemical fertilizers and pesticides made from petroleum products, the long-term ecological consequences have been devastating.

Habitat: the abode of a species. (*Microhabitat*: of an individual organism.)

Hybrid: a cross between two genetically diverse parent plants. Agribusiness companies produce and sell hybrids that do not reproduce in order to retain a monopoly on seeds.

Interaction: the primary ones are competition, mutualism, predation, parasitism, amensalism, and commensialism.

Mad Cow Disease: bovine spongiform encephalopathy (BSE), a fatal, infectious disease that degenerates the central nervous system of cattle. It might have evolved from *scrapie*, a similar disease that infects sheep and goats. In Britain, the practice of feeding cattle with the remains of other cattle not known to have been infected helped spread the disease in the mid-1980s. (Given how the meat packing industry treats them anyway, no wonder the cows are mad.)

Meme: a unit of cultural, as opposed to genetic, inheritance. Recent research supports Susan Blackmore's theory that the human brain evolved rapidly to make itself a better habitat for human memes. Such memes would be available for sexual selection.

Mind-Body Problem: a sterile philosophical dilemma given its first modern expression by mathematician and swordsman Rene Descartes. Its basic question: how do the mind and the body relate to one another? Which implies that the two are as separate as self and world were thought to be (another Cartesian gem). A more profound philosopher spoke to this centuries before Descartes and his coordinate-plane approach:

Mineral: the inorganic, crystalline solid that makes up rocks. Over 2,000 varieties have been discovered.

Natural Selection: nature's selection of viable strengths through environmental pressures that force an organism to adapt. The bat that hears better than the rest stands a better chance of living long enough to pass on that kind of hearing. In this way certain favorable genes--favorable to adapting to environment pressures--gradually become more numerous in a given population. Discovered by Charles Darwin and Alfred Russel Wallace in 1858 (rather, discovered years earlier by both; Darwin beat Wallace to the press in 1858). Whether the environment shapes completely passive life-material or interacts with an emerging and ever-more-conscious creative potentiality is a most interesting current debate. See Evolution.

Niche: an organism’s role, function, or position in an ecosystem.

Nuclear Power: energy released by the fission (splitting) or fusion of atomic nucleii: in effect rending the very fabric of matter. The resulting heat drives electric generators. Although the average nuclear plant creates 20-30 tons of highly toxic byproducts and wastes a year, no one has thought up a safe way to deal with it (plutonium has a half-life of 24,400 years).

Nucleic Acid: a very long molecule made up of nucleotide chains carrying genetic information built from carbon, hydrogen, nitrogen, oxygen, and phosphorus. See DNA.

Organic: containing carbon; also, made of living things or the products of their decomposition, like humus.

Organic Farming: a form of small-scale agriculture that produces yields without introducing artificial fertilizers or pesticides. The basic aim is to grow things naturally with a minimum of mechanical interference. Organic farming grew in popularity from Sir Albert Howard's published observations of Indian farming techniques (1940).

Ozone: a three-atom oxygen molecule that in its gaseous state screens ultraviolet radiation. The protective ozone layer hangs 10 to 50 kilometers above the Earth's surface.

Ozone Hole: a once-natural springtime thinning in stratospheric ozone over Antarctica, but now enlarged by CFCs and other pollutants into a hole the size of the Moon.

Pangaea: the 300-million-year-old supercontinent that plate tectonics split 200 million years ago into what have become the current arrangements of continents. There seem to have been at least two other supercontinents before Pangaea.

Pathogen: a microorganism that makes its host sick. Certain viruses, bacteria, and authoritarian flag-waving fanatics are common examples of pathogens. They tend to be parasites that weaken the organisms they feed upon until self-protective systems get rid of them.

Pattern Climax Theory: the pattern of climax vegetation tends to reflect the spatial variations of its physical environment.

PCBs: polychlorinated biphenyls. Fifty common chlorine compounds that grow stronger as they move up the food chain. Odorless and tasteless, they came from electronics manufacturing until laws were passed to forbid their production and release. They are still plentiful in the air, soil, and water, however. Symptoms vary from depression, rashes, and acne to gastrointestinal and liver damage.

Pests: anything that eats or damages what we eat. Too many pests mean not enough predators, like fish or birds for mosquitos and gopher snakes for gophers, who also avoid daffodils, elderberry cuttings, and castor beans. Teas made of chamomile, stinging nettle, comfrey, or horsetail discourage harmful fungi. Marigolds control whiteflies, spearmint, tansy, and pennyroyal control ants, Mexican marigold controls nematodes and root pests, as do French marigolds; yellow nasturtiums decoy black aphids, which are repelled by spearmint, stinging nettle, southernwood, and garlic, and borage repels tomato worms while attracting helpful bees.

Petrochemicals: chemicals made from natural gas or petroleum (crude oil).

Place, Versus Space: various ecological thinkers have pointed out that in the West, the felt sense of place--that tree, this brook, my room--has slowly given way to the abstract notion of space: a chunk of real estate, a Cartesian grid, a sector on a map. Philosopher Ed Casey points out that many languages contain this place/space distiction, which in the West goes back at least as far as Plato's *Timaeus*. Our cultural preferrence for space to place survived even the Einsteinian destruction of categories like absolute time and space: in fact, "place was absorbed into space." This has far-reaching consequences for how we experience ourselves as subjects, lost and place-impoverished, in a conceptually dematerialized world. (Casey points out, for example, the word *morality* goes back to a term for "custom," whereas the word *ethics* refers ultimately to the place where the horses went home at night. For more information, see his *Getting Back into Place* and *The Fate of Place*.)

Placeworld: Ed Casey's term for the felt, lived reconnection of space and place. An example is how the self experiences itself as firmly located somewhere specific rather than feeling lost in a sea of plots or coordinates.

Productivity: the rate at which a group of organisms produces biomass.

Progress: an ideological justification for nonsustainable exploitation of natural resources. Stating that "Progress is inevitable" without mentioning who profits from such an aggressive ideology is like stating that "Rudolf the Red-Nosed Reindeer is a part of Christmas" without mentioning that Rudolf was invented in 1939 by Montgomery Ward as part of a holiday advertising blitz. (Rudolf's original name was Rollo, but they canned it because it announced the conquest theme too openly.)

Protein: extremely complex molecules of carbon, hydrogen, nitrogen, and other elements joined in chains of amino acids (peptides). Protein constitutes the bulk of living matter, gives it structure, and has something to do in almost every aspect of cell operation.

Rainforest: an evergreen forest growing in a wt, humid climate. Rainforest coverage prevents desertification and drought and hosts more than half the world's animal species. Every day unchecked industrial development flattens a patch of rainforest the size of New York City.

Reinhabitation: the bioregional goal of living consciously and sensitively in one's locale. This includes giving key decision-making power, economic and political, to locals who know what the place where they live needs. See Bioregionalism.

Rhizome: a horizontal underground stem from which spring shoots, buds, and roots. A potato is a thickened rhizome. Found in ferns, horsetails, and asparagus.

RNA (Ribonucleic Acid): a versatile nucleic acid that combines with a protein to make ribosoomes, the site of protein assembly (ribosomal RNA); copies genetic information from DNA for transformation into proteins (messenger RNA), and incorporates animo acid combinations into developing proteins (transfer RNA). The RNA molecule is identical to DNA (from which it is made) except for the sugar ribose instead of deoxyribose and uracil for thymine. At one time RNA might have been the only form of life (the RNA World hypothesis): it can replicate without a cell nucleus or even any DNA.

Social Ecology: a discipline that links ecological problems with social problems: “…The hierarchical mentality and class relationships that so thoroughly permeate society give rise to the very idea of dominating the natural world” (Murray Bookchin). Some key emphases:

* The paradigm of domination of nature followed from domination of society by the state and, before that, of women by men.
* Institutionalized hierarchy and domination damage the biosphere and subjugate humans to widespread social injustices. They should be replaced by practices that favor thinking and acting in terms of complementarity.
* The artificial bifurcation of the world into "natural" and "unnatural" (human) cannot stand. We are part of the natural world we damage through our "second nature" symbol-juggling capacities.
* Capitalism based on perpetual expansion is wasteful and outmoded.
* The crisis of our time is not the emergence of cities, but of an urbanization that ruins cities and rural areas alike.
* Bookchin criticizes deep ecology’s blindness to the emergence of hierarchy: “As long as hierarchy persists, as long as domination organizes humanity around a system of elites, the project of dominating nature will remain a predominant ideology and inevitably lead our planet to the brink, if not into the abyss, of ecological extinction.”

Society: a local climax community.

Speciation: the evolution of a new species. This usually happens through either geographical separation over long periods of time, or through *reinforcement*, in which subtle differences in characteristics like calls or wing markings are more favored in mates. When *Agrodiaetus* butterflies live together, for example, the males tend to develop markings that distinguish them by species. Females of the same species prefer them. This provides the kind of breeding barrier an ocean or mountain range might.

Species: a group of organisms that can breed with each other.

Speciesism: term coined in 1970 by British psychologist Richard Ryder to denote a form of prejudice against nonhuman species. An example would be the belief that animals have fewer rights than humans because of lesser intelligence.

Sustainable: using resources without using them up.

Sustainable Society: a society that manages its politics, economies, industries, and population size without overwhelming ecosystems or depleting resources beyond their ability to recharge themselves. Alan Thein During’s basic definition of a sustainable society: “Each generation should meet its needs without jeopardizing the prospects for future generations to meet their own needs.” A less human-centered definition would include the ecosphere's needs as well.

Symbiosis: a mutually beneficial relationship between two species, like the Hawaiian squid and the luminous bacteria it carries in its stomach. The bacteria gets a home, and the squid is camouflaged by the light

[Tree of Life](http://tolweb.org/tree/phylogeny.html): a classification of all living things from the kingdom level down to the species level. Formerly biology textbooks divided all living things into the five kingdoms described by Robert Whittaker in 1969; the current total, based more heavily on RNA/DNA research, is three, now called *domains* (Carl Woese, 1990) but leaving out the viruses:

* Archaea (ancient, bacterialike animals that live in extreme environments)
* Bacteria (the great natural chemists of Earth)

Eukarya (everyone else: fungi, protists, animals and plants)

Watershed: the region drained by a stream or river.

Wetland: a wet land; a bog, fen, marsh, estuary. Wetlands are rich in nutrients, unique in ecosystems, and hospitable to many forms of life, including birds on long flyways. They also filter pollutants out of the water and ease the force of passing floods. The Florida Everglades performed these and other ecologically beneficial activities until 1905, when a governor with the remarkably apt name of Napoleon Bonaparte Broward led the push to dredge, fill, dig, and canal; the resulting floods, stagnation, salinization, fish kills, bird deaths, agricultural runoffs, drought, groundwater depletion, and fire potential have not yet been brought under control. In the United States, farmers were encouraged to allow acreage for wetlands until the Bush Administration not only ended the incentives, but eased regulations in filling in existing wetlands. See Estuarine Zone.

Wilderness Effect: Robert Greenway’s term for the impact of the wilderness experience on the psyche: the gradient goes from none to “a complete blowout of one’s usual programs for processing reality.” Somewhere between these points is where information processing switches from culture-dominated to nature-dominated.