

Name: Paul F. Hendrix

Academic Rank: Professor

Department: Joint Appointment: Institute of Ecology (50%), Crop & Soil Sciences (25%)

% Salary Budgeted: Instruction 25%, Research 75%, Extension 0%, Outreach 0%



Education: B.S. Memphis State University, May, 1970
M.S. Memphis State University, May, 1974
Ph.D. University of Georgia, December, 1981

Employment: Research Biologist EPA Research Laboratory, Athens, GA, 1980-1983
Postdoctoral Associate Univ. of Georgia, 1983-1985
Assistant Research Scientist Univ. of Georgia, 1985-1989
Assistant Professor - Univ. of Georgia, 1989-1995
Associate Professor - Univ. of Georgia, 1995-present

Membership in Professional Societies:

Soil Science Society of America, International Soil Science Society, Soil Ecology Society

I. CONTRIBUTIONS TO TEACHING:

A. Courses Taught and Enrollment:

<u>Year</u>	<u>Semester</u>	<u>Course</u>	Hendrix's		
			<u>Hours</u>	<u>Portion</u>	<u>Enrollment</u>
2005	Spring	ECOL4/6010 Ecosystem Ecology	3	100%	33
	Summer	ECOL4960 Directed Project	3	100%	3
		ECOL8990 Special Problems	3	100%	5
2004	Fall	ECOL4990 Senior Thesis	3	100%	1
	Spring	ECOL4/6010 Ecosystem Ecology	3	100%	28
	Summer	ECOL4960 Directed Project	3	100%	2
	Fall	ECOL4990 Senior Thesis	3	100%	1
2003	Spring	ECOL8660 Soil Ecology	4	50%	11
		ECOL4/6010 Ecosystem Ecology	3	50%	29
		ECOL4990 Senior Thesis	3	100%	1
2002	Spring	ECOL3900 Directed Project	3	100%	2
		ECOL4/6010 Ecosystem Ecology	3	50%	31
		ECOL4960 Directed Project	3	100%	1
2002	Summer	ECOL4960 Directed Project	3	100%	1
	Fall	ECOL8000 Modern Topics Ecol.	3	50%	13

2001	Spring	ECOL8665 Soil Ecology	4	33%	6
	Summer	ECOL4/6010 Ecosystem Ecology	3	50%	34
	Fall	ECOL4960 Directed Project	3	100%	2
		ECOL8000 Modern Topics Ecol.	3	50%	13
2000	Spring	ECOL4/6010 Ecosystem Ecology	3	100%	36
	Summer	ECOL4960 Directed Project	3	100%	2
	Fall	ECOL8000 Modern Topics Ecol.	3	50%	16
1999	Spring	ECOL8665 Soil Ecology	4	33%	12
	Summer	ECL4010/6010 Ecosystem Ecology	3	50%	35
	Fall	CRSS4960-Directed Project	5	100%	2
		ECOL8000 Modern Topics Ecol.	3	50%	16

B. Supervision of Student Research:

1. Post-doctoral associates directed

R.L. Potter. Projects on Ca dynamics in longleaf pine ecosystem and soil organic matter dynamics in agroecosystems (1999-2005).

2. Visiting scholars directed

*Came to UGA specifically to study under Dr. Hendrix

B. Boots (The Netherlands) Feeding ecology of native and exotic earthworms in forest soils. Spring, 2005.

I. Fovell (Belgium) Native-exotic earthworm interactive effects on soil processes. Fall, 2004.

3. M.S. and seven Ph.D. students directed

*Came to UGA specifically to study under Dr. Hendrix

*B. Snyder. Earthworm-millipede interactions in deciduous forest soils. Ph.D. (Spring, 2008)

*C. Huang. Exotic earthworm invasions in tropical forests of Puerto Rico. Ph.D. (Spring, 2008)

*H. Bossuyt. Soil organic matter studies in managed and native ecosystems. Ph.D., Spring, 2003.

*T. Winsome. Earthworm ecology in California grassland ecosystems. Ph.D., Summer, 2003.

S.Lachnicht. Earthworm feeding ecology in tropical and temperate forest soils. Ph.D., Spring, 2001.

*R. Schartz. Soil carbon dynamics in conventional and no-tillage

agroecosystems. M.S. thesis, Fall, 1999.

A. Peterson. Soil macrofauna and soil quality in chaparral ecosystems. M.S. thesis, Spring 1999.

Also served on numerous advisory, reading and examining committees at the Ph.D. (9 currently) and M.S. (1 currently) levels, including students from Ecology, Crop & Soil Sciences, Entomology and Microbiology.

4. Undergraduate Advising:

Advised three to five undergraduate students each year since 1999, many of whom have conducted special research projects through grants from the National Science Foundation's Research Experiences for Undergraduates program.

II. CONTRIBUTIONS TO RESEARCH AND OTHER CREATIVE ACTIVITIES:

A. Publications: (all peer reviewed)

1. Books authored or co-authored:

Coleman, D.C., D.A. Crossley, Jr., and P.F. Hendrix. 2004. Fundamentals of soil ecology, 2nd ed. Elsevier, New York.

2. Books edited and co-edited:

Coleman, D.C. and P.F. Hendrix (eds.). 2000. Arthropods as webmasters in terrestrial ecosystems. CAB International Publishers, London.

Lavelle, P., L. Brussaard and P. Hendrix (eds.). 1999. Earthworm management in tropical agroecosystems. CAB International Publishers, London.

3. Chapters in books (peer reviewed)

** Invited contribution

Hendrix, P.F. and C.A. Edwards. 2004. Earthworms in agroecosystems: Research approaches. In: C.A. Edwards, ed. Earthworm ecology, 2nd ed.. St. Lucie Press, Boca Raton. pp. 287-295.

James, S.W. and P.F. Hendrix. 2004. Invasion of exotic earthworms into North America and other regions. In: C.A. Edwards, ed. Earthworm ecology, 2nd ed.. St. Lucie Press, Boca Raton. pp. 75-88.

**van Vliet, P.C.J. and P.F. Hendrix. 2003. Role of fauna in soil physical processes. In: LK Abbott and DV Murphy, eds. Soil Biological Fertility - A Key To

Sustainable Land Use In Agriculture. Kluwer Publishers. pp.61-80.

- **Hendrix, P.F., E.P. Odum, D.A. Crossley, Jr., and D.C. Coleman. 2001. Horseshoe Bend old-field studies and agroecosystem project: A brief history and retrospective analysis. In: G. Barrett, T. Barrett (eds.). *Holistic Science: The Evolution of the Georgia Institute of Ecology (1940-2000)*. Taylor and Francis Publishers, Sussex.
- **Hendrix, P.F. (section ed.). 2000. Soil fauna. In: M.E. Sumner, ed. *Handbook of Soil Science*. CRC Press, Boca Raton.
- **Hendrix, P.F. 2000. Earthworms. In: M.E. Sumner, ed. *Handbook of Soil Science*. CRC Press, Boca Raton.

4. Journal articles:

*Co-authorship with student or postdoctoral associate

- Hendrix, P.F. 2006. Introduction: Biological invasions belowground—Earthworms as invasive species. *Biological Invasions* (in press).
- Hendrix, P.F., G.H. Baker, M.A. Callahan, Jr., G.A. Damoff, C. Fragoso, G. González, S.W. James, S.L. Lachnicht, T. Winsome, X. Zou. 2006. Invasion of exotic earthworms into ecosystems inhabited by native earthworms. *Biological Invasions* (in press)
- Coleman, D.C., M.D. Hunter, P.F. Hendrix, D.A. Crossley, Jr., B. Simmons and K. Wickings. 2005. Long-term consequences of biochemical and biogeochemical changes in the Horseshoe Bend Agroecosystem, Athens, GA. *European J. Soil Biol.* (in press).
- Quideau, S.A., R.C. Graham, S.W. Oh, P.F. Hendrix and R.E. Wasylshen. 2005. Leaf litter decomposition in a chaparral ecosystem, southern California. *Soil Biol. Biochem.* 37:1988-1998.
- *Winsome, T. P.F. Hendrix, L. Epstein and W.R. Horwath. 2006. Competitive interactions between native and exotic earthworm species as influenced by habitat quality in a California grassland. *Appl. Soil Ecol.* 32:38-53.
- *Bossuyt, H., J. Six and P.F. Hendrix. 2006. Interactive effects of functionally different earthworm species on aggregation and incorporation and decomposition of newly added residue carbon. *Geoderma* 130:14-25.
- *Bossuyt, H., J. Six and P.F. Hendrix. 2004. Rapid incorporation of carbon from fresh residues into newly formed stable microaggregates within earthworm casts. *European J. Soil Sci.* 55:393-399.
- *70. Bossuyt, H., J. Six and P.F. Hendrix. 2005. Protection of soil carbon by microaggregates within earthworm casts. *Soil Biol. Biochem.* 37:251-258.

- Callaham, M.A., Jr., P.F. Hendrix and R.J. Phillips. 2003. Population Dynamics of an exotic earthworm (*Amyntas agrestis*) in undisturbed soils of the southern Appalachian Mountains, USA. *Pedobiologia* 47:466-470.
- *Lachnicht, S.L., P.F. Hendrix, R.L. Potter, D.C. Coleman and D.A. Crossley, Jr. 2004. Winter decomposition of transgenic cotton in conventional and no-tillage systems. *Appl. Soil Ecol.* 27:135-142.
- van Vliet, P.C.J., M.H. Beare, D.C. Coleman and P.F. Hendrix. 2004. Effect of enchytraeids (Annelida: Oligochaeta) on soil carbon and nitrogen dynamics in laboratory incubations. *Appl. Soil Ecol.* 25:147-160.
- *Singleton, D.R., P.F. Hendrix, D.C. Coleman and W.B. Whitman. 2003. Identification of uncultured bacteria tightly associated with the intestine of the earthworm *Lumbricus rubellus*. *Soil Biol. Biochem.* 35:1547-1555.
- Anderson, C.B. and P.F. Hendrix. 2003. Hallazgo de *Eiseniella tetraedra* (Savigny 1826) (Annelida: Oligochaeta) en isla Navarino, Chile [The discovery of *Eiseniella tetraedra* (Savigny 1826) (Annelida: Oligochaeta) on Navarino Island, Chile]. *Anales del Instituto de la Patagonia, Serie de Ciencias Naturales.* 30:143-146.
- Coleman, D.C., S. Fu, P.F. Hendrix and D.A. Crossley, Jr. 2002. Soil food webs in agroecosystems: Impacts of herbivory and tillage management. *European J. Soil Biol.* 38:21-28.
- *Bossuyt, H., J. Six and P.F. Hendrix. 2002. Aggregate-protected carbon in no-tillage and conventional tillage agroecosystems using ¹⁴C-labeled plant residue. *Soil Sci. Soc. Amer. J.* 66:1965-1973.
- Hendrix, P.F. and P. Bohlen. 2002. Exotic earthworm invasions in North America: Ecological and policy implications. *Bioscience* 52:801-811.
- *Lachnicht, S.L., P.F. Hendrix and X. Zou. 2002. Interactive effects of native and exotic earthworms on resource use and nutrient mineralization in a tropical wet forest soil of Puerto Rico. *Biol. Fert. Soil* 36:43-52.
- *Peterson, A.C., P.F. Hendrix, C. Haydu, R.C. Graham and S.A. Quideau. 2001. Single-tree influence on earthworms and soil macroarthropods in the southern California chaparral. *Pedobiologia* 45:509-522.
- *Garrett, C.J., D.A. Crossley, Jr., D.C. Coleman, P.F. Hendrix, K.W. Kisselle and R.L. Potter. 2001. Impact of the rhizosphere on soil microarthropods in agroecosystems on the Georgia Piedmont. *Appl. Soil Ecol.* 16:141-148.

- *Lachnicht, S.L, and P.F. Hendrix. 2001. Interactions of the earthworm *Diplocardia mississippiensis* (Megascolecidae) with microbial and nutrient dynamics in a subtropical Spodosol. *Soil Biol Biochem.* 33:1411-1417.
- *Fu, S., Kisselle, K. W., Coleman, D.C., Hendrix, P. F. and Crossley Jr., D. A. 2001. Shortterm impacts of aboveground herbivory (grasshopper) on the abundance and ¹⁴C activity of soil nematodes in conventional tillage and notill agroecosystems. *Soil Biol. Biochem.* 33:1253-1258.
- Callaham, M.A., Jr., J.M. Blair, and P.F. Hendrix. 2001. Different behavioral patterns of the earthworms *Octolasion tyrtaeum* and *Diplocardia* spp. in tallgrass prairie soils: Potential influences on plant growth. *Biol. Fertil. Soil.* 34:4956.
- *Kisselle, K. W., C. J. Garrett, S. Fu, P. F. Hendrix, D. A. Crossley, Jr., D. C. Coleman, and R. L. Potter. 2001. Budgets for rootderived carbon and litterderived carbon: Comparison between conventional tillage and no tillage soils. *Soil Biol. Biochem.* 33:1067-1075.
- *Fu, Shenglei, Coleman, D.C., Hendrix, P.F. and Crossley Jr., D.A. 2000. Responses of trophic groups of soil nematodes to residue application under conventional tillage and notill regimes. *Soil Biol. Biochem.*32:17311741.
- *Fu, Shenglei, D.C. Coleman, R. Schartz, R.L. Potter, P.F.Hendrix and D. A. Crossley, Jr. 2000. ¹⁴C distribution in soil organisms and respiration after the decomposition of crop residue in conventional tillage and notill agroecosystems at Georgia piedmont. *Soil Tillage Res.* 57:3141.
- *Fu, S., M.L. Cabrera, D.C. Coleman, K.W. Kisselle, C.J. Garrett, P.F. Hendrix and D.A. Crossley, Jr. 2000. Soil carbon dynamics of conventional and notill agroecosystems on the Georgia Piedmont HSBC models. *Ecol. Modelling* 131:229248.
- Hendrix, P.F, M.A. Callaham, Jr., S.L. Lachnicht, J.M. Blair, S.W. James and X. Zou. 1999. Stable isotopic studies of resource utilization by earthworms in subtropical savanna and forest ecosystems. *Pedobiologia* 43:818-823.
- *Kisselle, K.W., J.C. Garrett, P.F. Hendrix, D.A. Crossley, Jr. and D.C. Coleman. 1999. Method for ¹⁴C labeling maize field plots and assessment of label uniformity within plots. *Comm. Soil Sci. Plant Anal.* 30:17591771.
- Hendrix, P.F., S.L. Lachnicht, M.A. Callaham, Jr. and X. Zou. 1999. Stable isotopic studies of earthworm feeding ecology in tropical ecosystems of Puerto Rico. *Rapid Commun. Mass Spectrom.* 13:1295-1299.

5. Abstracts of contributed presentations at national and international meetings

*Graduate student or postdoctoral associate co-authorship

- Egerton-Warburton, L.M., Sickel, J., Podbielski, J., Hendrix, P., Sternberg, P., and Graham, R.C. Mycorrhizal community dynamics following a high intensity wildfire in the California chaparral. Annual Meeting of the Soil Ecology Society, Argonne National Laboratory, May, 2005.
- Hendrix, P.F., Graham, R.C., Egerton-Warburton, L.M., Norman, J. and Crossley, D.A., Jr. Soil macrofauna community dynamics following a high intensity wildfire in the California chaparral. Annual Meeting of the Soil Ecology Society, Argonne National Laboratory, May, 2005.
- Potter, R.L., Hendrix, P.F., Guedes, R.M., James, F.C. and Tschinkel, W.R. An ecosystem level simulation model of calcium dynamics following prescribed fire in the longleaf pine/wiregrass community of northeastern Florida. Annual Meeting of the Soil Ecology Society, Argonne National Laboratory, May, 2005.
- Egerton-Warburton, L.M., Podbielski, J., Sickel, J., Hendrix, P., Sternberg, P., and Graham, R.C. Mycorrhizal community dynamics following a high intensity wildfire in the California chaparral. Annual Meeting of the Ecological Society of America. Montreal, Canada, August, 2005.
- Hendrix, P., G. Baker, I. Barois, M. Callahan Jr., G. Damoff, C. Fragoso, T. Fraser, G. Gonzalez, S. James, S. Lachnicht, T. Winsome, X. Zou. Effects of earthworm invasion into ecosystems inhabited by native earthworms. XIVth International Colloquium on Soil Zoology and Ecology, Rouen, France, September, 2004.
- Coleman, D.C., M.D. Hunter, P.F. Hendrix, D.A. Crossley Jr., B. Simmons, K. Wickings. Long-term consequences of biochemical and biogeochemical changes in the Horseshoe Bend agroecosystem, Athens, GA. XIV th International Colloquium on Soil Zoology and Ecology, Rouen, France, September, 2004.
- *Potter, R, P. Hendrix, R. Guedes, F. James and W. Tschinkel. Long-term changes in soil Ca pools following controlled burns in longleaf pine/wiregrass ecosystems in north Florida. Annual Meeting of the Soil Science Society of America, Seattle, WA, November, 2004.
- Fonte, S., Kong, K. Van Kessel, P. Hendrix and J. Six. Influence of Earthworm Activity on Greenhouse Gas Fluxes in Conventional and Organic Corn-Tomato Systems. Annual Meeting of the Soil Science Society of America, Seattle, WA, November, 2004.
- West,L., D. Radcliffe, W. Miller, J. Macfie, L. Morris, P. Hendrix. Soil science education and practice in Georgia - Changing and growing. Annual Meeting of the Soil Science Society of America, Seattle, WA, November, 2004.

Hendrix, P., K. Cromack, R. Potter and T. Winsome. Effects of native and exotic earthworms on soil processes in the Pacific Northwest. Annual Meeting of the Soil Science Society of America, Seattle, WA, November, 2004.

*Pilar, G., Xia, K. and P. Hendrix. Degradation of TNT in soils under the influence of earthworms. Annual Meeting of the Soil Science Society of America, Seattle, WA, November, 2004.

*Winsome, T. *, W.R. Horwath, L. Epstein and P.F. Hendrix. Functional differences between exotic and native earthworm species in a California grassland. 88th Annual Meeting of the Ecological Society of America, Savannah, GA, August, 2003.

Callaham, M.A., Jr., C.D. Babb, M.A. Williams, P.F. Hendrix and M.L. Cabrera. Effects of native North American and introduced exotic earthworms on denitrification rates in two soils. Annual Meeting of the Soil Ecology Society, Palm Springs, CA, May 2003.

*Winsome, T., L.Epstein, P.F. Hendrix, and W.R. Horwath. Predicting the relative abundance of exotic and native earthworm species following land use change in California oak savanna. Annual Meeting of the Soil Ecology Society, Palm Springs, CA, May 2003.

Hendrix, P.F. Biological invasions belowground: Interactive effects of native and exotic earthworms on soil processes. Annual Meeting of the Soil Ecology Society, Palm Springs, CA, May 2003.

Hendrix, P., R. Potter, R. Guedes, F. James and W. Tschinkel. Calcium cycling in relation to prescribed fire on oligotrophic sites in north Florida. Annual Meeting of the Soil Science Society of America, Indianapolis, IN, 2002.

*Bossuyt, H., J. Six, J., P.F. Hendrix. Effects of earthworm activity on soil aggregation and aggregate-associated carbon pools. Annual Meeting of the Soil Science Society of America, Indianapolis, IN, 2002.

Hendrix, P.F. Biological invasions belowground: Interactive effects of native and exotic earthworms on soil processes. 7th International Symposium on Earthworm Ecology, Cardiff, Wales, UK, 1-6 September, 2002.

Hendrix, P.F. and P. Bohlen. Ecological assessment of exotic earthworm invasions in North America. Annual Meeting of the Soil Science Society of America, Charlotte, NC, 2001.

*Winsome, T., P.F. Hendrix and L. Epstein. The impact of land-use practices on native earthworm populations in California grasslands. Annual Meeting of the Ecological Society of America, Madison, WI, 2001.

Hendrix, P.F., M.A. Callaham, Jr., J.M. Blair, S.L. Lachnicht and S.W. James. Isotopic analysis of native and exotic earthworm feeding ecology in a Kansas tallgrass prairie. Annual Meeting of the Ecological Society of America, Madison, WI, 2001.

*Bossuyt, H., J. Six, J., P.F. Hendrix. Aggregate-protected and unprotected carbon pools in no-tillage and conventional tillage agroecosystems. Biannual Meeting of the Soil Ecology Society, Warm Springs, GA, May, 2001.

*Potter, R.L., P.F. Hendrix, W.R. Tschinkel and F.C. James. An ecosystem model of calcium in a longleaf pine forest in North Florida. Annual Meeting of the Soil Science Society of America, Minneapolis, MN, 2000.

Hendrix, P.F. Environmental assesement of exotic earthworm invasions. Vermillennium Conference, Kalamazoo, MI, 2000.

Hendrix, P.F., M.L. Cabrera, R.L. Potter, R.J. Schartz and M.E. Weise. Carbon fixation by kenaf in no-tillage and plowed soils on the Southern Appalachian Piedmont. Annual Meeting of the Soil Science Society of America, Salt Lake City, UT, 1999.

*Potter, R.L., P.F. Hendrix, W.R. Tschinkel, F.C. James and S.T. Reed. An ecosystem model of calcium in longleaf pine forest in North Florida. Annual Meeting of the Soil Science Society of America, Salt Lake City, UT, 1999.

*Callaham, M.A., Jr., J.M. Blair and P.F. Hendrix. Influences of native North American and exotic European earthworms on soil processes in tallgrass prairie. Biannual Meeting of the Soil Ecology Society, Chicago, IL, May, 1999.

*Potter, R.L., P.F. Hendrix, W.R. Tschinkel, F.C. James and S.T. Reed. An ecosystem model of calcium in longleaf pine/wiregrass communities in North Florida. Biannual Meeting of the Soil Ecology Society, Chicago, IL, May, 1999.

B. Invited presentations

Hendrix, P., C.Y. Huang and B. Snyder. Exotic earthworm invasions: Extent, mechanisms, impacts and mitigation. Latin American Conference on Oligochaete Ecology and Taxonomy, San Juan, Puerto Rico, November, 2005.

Hendrix, P. Biological invasions belowground: Impacts of native vs. exotic earthworms on soil processes. Graduate Faculty Symposium, Institute of Ecology, University of Georgia, September, 2005

Hendrix, P.F. Earthworm effects on carbon flow in terrestrial ecosystems. International Workshop on Earthworms and Carbon Sequestration. Max-Planck Institute for Biogeochemistry, Jena, Germany, December, 2004.

Hendrix, P.F. Exotic earthworm invasions in the Pacific Northwest. All-Scientists Meeting, H.J. Andrews LTER, Blue River, OR, June, 2004.

Hendrix, P.F. Response of soil macroinvertebrates to wildfire in California chaparral. All-Scientists Meeting, San Dimas Experimental Forest, CA, March, 2003

Hendrix, P.F. Earthworms and conservation tillage. Sustainable Agriculture and Conservation Tillage: A System Approach Training, February, 2003, Douglas, GA

Hendrix, P.F. Biological invasions belowground: Interactive effects of native and exotic earthworms on soil processes. 7th International Symposium on Earthworm Ecology, Cardiff, Wales, UK, September, 2002.

Hendrix, P.F. Effects of exotic versus native earthworms on soil processes in wildland ecosystems. Environmental Science Lecture Series, Department of Soil & Environmental Sciences, University of California, Riverside, CA, November, 2001.

Hendrix, P.F. Earthworm ecology. Clemson University Extension Service, Growers Meeting, October, 2001.

Hendrix, P.F. Stable isotopic studies of earthworm feeding ecology. Archbold Research Center, Ft. Meyers, FL, May, 2000.

Hendrix, P.F. Soil biology under conservation tillage. 22nd Annual Southern Conservation Tillage Conference for Sustainable Agriculture. Tifton, GA, July, 1999.

Hendrix, P.F., S.L. Lachnicht, M.A. Callaham, Jr. and X. Zou.. Stable isotopic studies of earthworm feeding ecology in tropical ecosystems of Puerto Rico. Annual meeting of the Stable Isotope-Mass Spectroscopy User's Group, Exeter, UK, January, 1999.

C. Conferences organized

2005: Organized international symposium "Through a Ped Darkly: Functional Ecology Belowground," and festschrift for retirement of Prof. D.C. Coleman, University of Georgia, Athens, October, 2005.

2004: Organized "Special session on *Invasive earthworms*" XIVth International Colloquium on Soil Zoology and Ecology, University of Rouen, Rouen, France, September, 2004.

2003: Organized “Workshop on Exotic Earthworm Invasions: Extent, Mechanisms, Impacts and Mitigation,” University of Georgia, October 30-November 1, 2003

III. CONTRIBUTIONS TO EXTENSION

No extension appointment

IV. SOURCES OF GRANTS/AMOUNTS

2005: Principal investigator (100%), NSF Research Experiences for Undergraduates (Native earthworms modify effects of exotic earthworm invasions on soil processes in wildland ecosystems).. \$11,500; May 1, 2005– Feb. 28, 2006; funded.

2004: Co-Pi (10%), National Commission on Science for Sustainable Forestry (subcontracted through Chicago Botanic Garden). \$18,884; Jul. 1, 2004 – Dec. 31, 2005; funded.

2004: Principal investigator (25%), Preproposal to NSF IGERT Program (Graduate Training and Research in Soil Biogeosciences). \$2,477,608; Mar. 1, 2005 – Feb. 28, 2010; not funded.

2004: Principal investigator (100%), NSF Research Experiences for Undergraduates (Native earthworms modify effects of exotic earthworm invasions on soil processes in wildland ecosystems). \$13,500; May 1, 2004 - Feb 28, 2005; funded.

2004: Collaborator (5%), Kearney Foundation (Rates of soil carbon accumulation and transformation in a Ponderosa pine forest using high resolution chronosequence analysis). \$74,000 (\$2,500 directly to Hendrix); Jan. 1, 2004 – Dec. 30, 2006; funded.

2003: Principle investigator (100%), USDA/NRI (Workshop on exotic earthworm invasions: Extent, mechanisms, impacts and mitigation). \$10,000; Aug. 1, 2003 – July 31, 2005; funded.

2003: Principle investigator (100%). NSF Ecosystems (Native earthworms modify effects of exotic earthworm invasions on soil processes in wildland ecosystems). \$500,000; Mar. 1, 2003 – Feb. 28, 2007; funded.

- 2002: Principal investigator (100%), NSF-Research Experiences for Undergraduates Program (Supplement to An experimental study of fire ecology in relation to the red-cockaded woodpecker); \$5,000; summer, 2002; funded.
- 2001: Co-Pi. (25%), NSF Long-Term Ecological Studies (Long-term consequences of biochemical and biogeochemical changes in the Horseshoe Bend Agroecosystem, Athens, GA). \$300,000; Jul. 1, 2002 – Aug. 31, 2007; funded
- 2000: Principal investigator (100%), NSF-Research Experiences for Undergraduates Program (Supplement to Long-term soil organic matter dynamics in subtropical agroecosystems); \$5,000; summer, 2000; funded.
- 2000: Principle investigator (100%), USDA-APHIS (Environmental assessment of exotic earthworm importation into the U.S.). \$4,000; Sept. 1, 2000-Feb. 15, 2001; funded.
- 1999: Principal investigator (100%), NSF-Research Experiences for Undergraduates Program (Supplement to Long-term soil organic matter dynamics in subtropical agroecosystems); \$5,000; summer, 1999; funded.
- 1999: Principal investigator (100%), NSF-Research Experiences for Undergraduates Program (Supplement to An experimental study of fire ecology in relation to the red-cocaded woodpecker); \$5,000; summer, 1999; funded.
- 1997-2001: Principal Investigator, USDA-NRI (Earthworm effects on soil processes in California grasslands). \$100,000; July 1, 1997-June 30, 2001; funded.
- 1996-2001: Principal investigator, NSF Long-Term Ecological Studies (Long-term soil organic matter dynamics in subtropical agroecosystems). \$250,000; July 1, 1996-June 30, 2001; funded.
- 1996-2001: Principal investigator, NSF Ecosystems, Collaborative Research (An experimental study of fire ecology in relation to the red-cockaded woodpecker: Linkages among population, community and ecosystem processes). \$201,655; October 1, 1996-November 30, 2001; funded.

V. CONTRIBUTIONS TO PROFESSIONAL SERVICE

A. Editorship or Editorial Board Activities

- Special Issue Editor – *Pedobiologia*, 2005-2006
- Special Issue Editor – *Biological Invasions*, 2004/2005
- Guest Editor – *Southeast Naturalist*, 2002
- Section Editor - *Handbook of Soil Science*, 1999

B. Reviewer for scientific journals and publishers

2005: Biological Invasions, Applied Soil Ecology, Ecological Applications
2004: Ecological Applications, Applied Soil Ecology, Biological Invasions, Pedobiologia
2003: Pedobiologia, Agriculture Ecosystems Environment, American Midland Naturalist, Applied Soil Ecology, Journal of Tropical Biology
2002: Ecology; Soil Science Society of America Journal; Megadrilogica; Ecosystems; Applied Soil Ecology; Conservation Biology
2001: Bioscience; Applied Soil Ecology; Agriculture, Ecosystems & Environment
2000: Pedobiologia, Soil Science Society of America Journal
1999: Pedobiologia, Rapid Comm. Mass Spectroscopy

C. Granting Agency Reviews

2005: NSF Ecosystems competitive grants program
2004: Invited panel member, USDA-NRI Managed Ecosystems competitive grants program
NSF Ecosystems competitive grants program
National Academy of Sciences INTREU grants program
USDA NRI competitive grants program
National Sciences and Engineering Research Council of Canada (NSERC)
2003: NSF Ecosystems competitive grants program
USDA NRI competitive grants program
National Sciences and Engineering Research Council of Canada (NSERC)
2002: NSF Ecosystems competitive grants program
USDA NRI competitive grants program
UGA Agricultural Experiment Station, Hatch Project Review
2001: NSF Ecosystems competitive grants program
USDA NRI competitive grants program
Idaho Experiment Station, Hatch Project Review
Invited member of NSF site review team, Michigan State Univ., Kellogg Biological Station, LTER project review.
2000: NSF Ecosystems competitive grants program
1999: Invited member of NSF site review team, Oregon State Univ., H.J. Andrews LTER project review

D. Committee Memberships and Service to Professional Societies

1. International

2004-2008: Vice President, Soil Zoology Section, International Soil Science Society.
2004: Organizer and special session chair for symposium on *Invasive earthworms*” XIVth International Colloquium on Soil Zoology and Ecology, Soil Zoology Section, International Soil Science Society, University of Rouen, Rouen, FR.

2. University

2004-06: University Libraries Committee

2000: Promotion Evaluation Committee for non-tenure track scientists

3. Departmental (Crop & Soil Sciences)

2004: Secretary, Soils Committee

2003: Chair, Faculty Teaching Evaluation Committee (P. Hartel)
Secretary, Soils Committee

2002: Secretary, Soils Committee

2001: Secretary, Soils Committee

2000: Chair, Post-Tenure Review Committee (W.P. Miller)

Secretary, Soils Committee

1999: Faculty Teaching Evaluation Committee

Departmental (Ecology)

2005: Chair, Space Utilization Committee

2004: Chair, Space Utilization Committee

Chair, Ecosystem Ecologist Search Committee

2003: Chair, Research Facilities Committee

2002: Chair, Analytical Oversight Committee

Curriculum Committee

Hosted visiting lecturer (Dr. Patrick Bohlen)

2001: Chair, Space Utilization Committee

Horseshoe Bend Planning Committee

Ecology Executive Committee

2000: Analytical Oversight Committee

Horseshoe Bend Planning Committee

Space Utilization Committee

1999: Analytical Oversight Committee

Horseshoe Bend Planning Committee

Space Utilization Committee

VI. GOALS FOR THE NEXT FIVE YEARS

A. Teaching Activities:

I will continue to teach Ecosystem Ecology (ECOL 4010/6010) each spring semester (~30 students). I will increase the emphasis on development of ecosystem simulation models by teams of students with similar interests. The students get both an intuitive and a quantitative

feel for interactions among system components and how these interactions drive ecosystem processes. Our new computer facility is greatly enhancing this effort.

I will continue to teach ECOL/CRSS 8660 (Soil Biology and Ecology). With the retirement of my colleagues who co-taught this course, I am planning for a major reorganization of this course in 2008. I have several ideas for covering new material, expanding the field and lab component and adding a modeling project.

I will direct several (probably 3) REU students each year in special research projects (ECOL/CRSS 4960) and senior theses (ECOL/CRSS 4990), as part of my ongoing NSF-funded projects on invasive earthworms. Students in Ecology and Crop & Soil Sciences will be involved.

After a highly successful effort last summer, I will continue to direct Ph.D. students (and possibly some others) in a special problems course (ECOL 8990) every other summer on systematics, taxonomic identification and biogeography of terrestrial oligochaetes. This will bring the students (and me) up to speed on the current thinking in this somewhat esoteric, but highly relevant area of research.

I will continue to serve on advisory committees of about a dozen graduate students in Ecology and Crop & Soil Sciences. I also plan to host visiting scholars from China and from Austria over the next two to three years on projects dealing with earthworm ecology.

B. Research And Other Creative Contribution Activities:

I have three main goals:

- 1) I am taking the lead, with David Radcliffe in Crop & Soil Sciences, in organizing and writing an NSF Integrative Graduate Education and Research Training Grant (IGERT) for resubmission in March, 2007. We have made substantial progress and have attracted a diverse group of collaborators and support from upper-administration (working title is "IGERT: ESSENCE—Education, Service, and Sustainability for Earth Near-surface Critical-zone Environments"). If we are successful, I will devote a considerable portion of my time to this program over the next five years.
- 2) I will continue my ongoing NSF-funded research into the interactive effects of native and exotic earthworms on soil processes. Experiments are underway at H.J. Andrews (OR), Coweeta (NC), Apalachicola National Forest (FL) and the Sabana site near Luquillo (PR). My students (graduate and REU) will run several laboratory studies this year and next to corroborate findings from the field studies. I expect to complete this work by fall 2008 and to acquire new funding from NSF and/or USDA-NRI to continue these long-term studies.
- 3) We are beginning a new study of an earthworm invasion in progress in the Great Smoky Mountains National Park, in collaboration with Park Service biologists. This has the potential

to become a serious ecological problem, as well as a unique research opportunity. We are working to acquire funding from the Park Service, and I will write an NSF supplement or a SGER grant to generate solid data for a full proposal later next year. I am collaborating with a research scientist in Austria who will participate in this work over the next three years or so.