

VITAE

NAME: Ronald Edwin Stinner

BIRTHDATE/PLACE: July 27, 1943, New York, New York

ACADEMIC RANK:

Professor of Entomology and Biomathematics
Full Member - Graduate Faculty

TIME DISTRIBUTION:

90% Research, 10% Extension

AREAS OF INTEREST:

Research: Integrated pest management and interactive internet decision aids. Invasive species management. Internet applications and datasharing. Program management.

Extension: Web document preparation and site maintenance. Online Databases

EDUCATION:

B.S. North Carolina State University, 1965. Entomology
Ph.D. University of California, Berkeley, 1970. Entomology

PROFESSIONAL EXPERIENCE:

1965-70 - Graduate Research Assistant, Teaching Assistant, NIH Postdoctoral Fellow, Department of Entomology, University of California, Berkeley.
1970-71 - Research Associate, Department of Entomology, Texas A&M University, College Station.
1971-77 - Research Associate, Assistant Professor, Department of Entomology, North Carolina State University, Raleigh.
1977-83 - Associate Professor, Department of Entomology and Biomathematics Program, North Carolina State University, Raleigh.
1982 - Professeur Visiteur, Departement de Biologie, Universite Laval, Quebec, Canada.
1983-Present - Professor, Department of Entomology and Biomathematics Program, North Carolina State University, Raleigh.
1987-97 - Editor, Environmental Entomology
1988-91 - Director and Graduate Administrator, Biomathematics Graduate Program, Department of Statistics, North Carolina State University
1993-present - Director, NSF/IUCR Center for Integrated Pest Management, NCSU, Raleigh
2003-present - Director, USDA Southern Region IPM Center, NCSU, Raleigh

INTERNATIONAL EXPERIENCE

- 1974 USA Delegate to USSR on Agricultural Forecasting (1 month)
 1982 Professeur Visiteur, Departement de Biologie, Universite Laval, Quebec, Canada (6 months)
 1982 "Traveling Salesman" for N.C. State University Agricultural Systems Program, Philippines, Thailand, Indonesia, Colombia (6 weeks)
 1983 Subconsultant to IIED on modeling bibliography for AID
 1984 Subconsultant to AID on modeling Sri Lanka agriculture
 1990 Invited participant in conference on IPM of food crops in the Sahel, Institut d'Sahel, Mali, Africa (10 days)
 1990 Intensive Spanish language training, Costa Rica (2 months)
 1998 Internet Consultant, ICIPE, Kenya (2 months)
 1999 McMaster Fellow, CSIRO, Australia (1 month)
 2001 Farmer to Farmer, Internet Consultant, Nicaragua and Bolivia

HONORS, AWARDS, CONSULTANTSHIPS, ADVISORY PANELS

- Phi Eta Sigma
 Gamma Sigma Delta
 Sigma Xi
 New York State Regents Scholarship
 Purina Agricultural Scholarship
 Sigma Xi N.C. State University Outstanding Young Scientist
 Regional Project S-59, Modelling Subcommittee Chairman, 1974-1978
 IPM/NSF Project Consultant (1974-1978)
 Regional Project on Corn Diseases, Modelling Consultant (1974)
 N.C. Department of Agriculture Non-point Sources of Pesticide Pollution, Consultant (1977-1979)
 Universite Laval, Prediction of European Skipper Emergence, Consultant (1977)
 CSRS Comprehensive Review Panel, Department of Entomology, Mississippi State (1979)
 NSF Advisory Panel for Long-term Ecological Research (1980)
 EPA/CR/SEA Review Panel for the CIPM Cotton Project (1980)
 NSF Review Panel, Population Biology and Physiological Ecology (1981-1983)
 Panel Member, EPA Fire Ant Symposium (1983)
 CSRS Review Panel, Department of Entomology & Plant Pathology, New Mexico State (1983)
 ESCOP Subcommittee on "Decision Models in Computer Use in Agricultural Research" (1985)
 Associate Editor, The Canadian Entomologist (1985-1987)
 Editor, Environmental Entomology (1986-1997)
 Southern Region (IPM-CSRS) Review Panel (1986)
 Chairman, National IPM Network Steering Committee (1994-2001)
 Chairman, Southern Region IPM Information Exchange (1996)
 PMIDSS Review Committee for USDA (1997)
 USDA/APHIS/PPQ Safeguarding American Agriculture Review Panel (1999)
 Western Region IPM Review Panel (1997, 1999-2001)
 USDA/APHIS/PPQ Safeguarding American Agriculture Review Panel (1999)
 USDA/APHIS/PPQ Information Technology Issue Group Co-Leader (1999-2001)
 Research and Information Subcommittee, Invasive Species Council (2000)

Member, Advisory Council, If Plants Could Talk – Gardening Television Series and Educational Web Site (2000-01)

SPARE/USAID IPM Review Panel (2003)

Chairman, NAL Review of Invasivespecies.gov (2002-03)

PI for mngt of SR IPM Competitive Grants (2004-2006)

PI for mngt SR PMAP Competitive Grants (2003-2006)

Member, Board of Directors, Conservators Center, Inc. (2003-2004)

Board of Directors, International Association for the Plant Protection Sciences (2004)

SE Branch, Ent Soc Amer., IPM Award (2004)

WEBSITES (over 50, only major sites listed)

cipm.ncsu.edu

pestdata.ncsu.edu

cipmtest.ncsu.edu

ipm.ncsu.edu

agdata.ncsu.edu

www.safeguarding.org

www.PestAlert.org

www.OrganicAgInfo.org

www.InvasiveSpecies.org

www.ExoticForestPests.org

www.cphst.org

www.PlantProtection.org

www.naicc.org

www.ipmcenters.org

www.sripmc.org

www.pestmanagement.info

www.PPRS.info

www.GrowFood.org

6 secure intranets

STAFF

Jo-Anne Scoggins - Administrative Assistant

Jennifer Hodorowicz - Communications Specialist

Jeanne Bacheler - BTAS

David Hodorowicz - BTAA

John Hodorowicz - BTAA

David Henry - BTAA

GRADUATE STUDENTS: 19 total (8 Ent MS, 1 Ecol MS, 7 Ent PhD, 4 BMA PhD)

PROGRAM MANAGERS

James VanKirk - Southern Region IPM Center Associate Director

Karl Suiter - APHIS Applications Manager

SENIOR RESEARCHERS

Heike Meissner - Invasive species database development

Roger Magarey - Pest Risk and Distribution Modeling

Yulu Xia - Internet Applications

POST-DOCTORAL ASSOCIATES

Jack Bacheler - *Heliothis* overwintering

Jesse Logan - *Heliothis* overwintering, modelling
 Richard Sprenkel - soybean, arthropods, *Epilachna*
 William Blau - *Epilachna* movement
 Steven Sims - soybean arthropods, *Cerotoma*
 Margaret Saks - *Epilachna* movement
 Mark Carter - Agroecosystem modeling, Web site development
 Rosanne Minarovic - Benefits assessment and CQI meetings
 Woody Bailey - Invasive species database development
 Glen Fowler - Invasive species database development
 Russ Bullock - Invasive species risk assessment
 Tony Koop - Invasive species risk assessment
 Dan Borchert - Invasive species modeling and prediction

RESEARCH ASSISTANTS (Full-time)

Leah Millar - Invasive species management
 Andrea Johnson - Invasive species management
 Jennifer Keller - Invasive species database development
 Tracy Renee - Invasive species database development
 Teri Bacheler - Invasive species database development
 Yu Takeuche - Invasive species management
 Terry DiLeone - Invasive species management
 Hillary Hill - Invasive species management
 Robin Olive - Invasive species management
 Melissa Dirani - Invasive species management
 Heather Hartzog - Invasive species management
 Glenn Fowler - Invasive species management
 Shawn Winterton - Invasive species management
 Christie Hurt - Invasive species management
 Ian Winborne - Internet Applications
 Aleem Meerapuram - Internet Applications
 Eva Zurek - Internet Applications
 Peg Rotstein - Internet Applications
 Melinda Gibbs - Invasive species database development
 Kim Swartzburg - Invasive species database development

GRANTS AND CONTRACTS

NSF	\$170,000	1976-79	Crop heterogeneity
NSF	600,000	1979-82	Agroecosystem structure
USDA	65,000	1979-81	Soybean insect modelling
EPA	125,000	1979-85	Modelling soybean pests
NSF	56,000	1983-85	Movement of Mexican bean beetle
N.C. Soybean	4,500	1986-87	Soybean x insect interaction modelling

IPM Regional	54,000	1986-88	<i>Heliothis</i> x soybean modelling
IPM Regional	55,000	1986-88	House fly management modelling
IPM Regional	100,000	1987-89	Soybean IPM
IPM Regional	70,000	1989-91	House fly management modelling
NSF	50,000	1989-91	Expert systems & uncertainty
IPM Regional	83,000	1990-92	Expert systems for poultry IPM
NSF	569,000	1991-01	Continuing support for IPM Center
Center Members	4,000,000	1992-03	Continuing support for IPM Center
USDA/CSREES	18,500	1995-96	IPM Initiative Phase I
USDA/NAPIAP	41,000	1995-97	Benefits Assessment Online Database
Cotton Inc	241,000	1996-04	Cotton Information on the web
USDA/CSREES	172,000	1996-01	NIPMN Network
SR IPM	46,000	1997-99	Cotton Production Info on the Web
USDA/CSREES	370,000	1997-01	PMAP Implementation of PMIDSS
USDA/CSREES	370,000	1997-00	PMAP Implementation of PMIDSS
USDA/OPMP	30,000	1998-00	Crop Profiles Database
USDA/APHIS	176,280	1998-01	Web Databases for Invasive Species
USDA/OPMP	70,000	1998-00	Crop Profiles Database
IR-4	48,000	1999-03	IR-4 website and databases
NSF/SBIR Spec	247,000	1999-02	TMOF
NPB	25,000	2000-02	Safeguarding.org
USDA/SR IPM	38,000	2000-01	IPM Expertise Database
USDA/CSREES	100,000	2000-01	Pest Mngt Centers Info System
USDA/IFAFS	60,000	2000-03	Organic Ag Info website
USDA/CSREES	535,000	2001-04	PMIDSS-PMCs
USDA/APHIS	2,800,000	2001-04	Invasive Species Information Mngt
USDA/CSREES	76,000	2001-04	IPM Project Mngt and Online Reporting
USDA /FS	15,000	2001-03	Exotic Forest Pests Website
USDA/APHIS	270,000	2002-04	Agr. Internet Monitoring (2 pgms)
USDA/APHIS	289,000	2003-04	Global Pest & Disease Database
USDA/ARS	25,000	2002-04	New PM Technologies
USDA/ARS	67,000	2002-04	InvasiveSpecies.gov
USDA/CSREES	4,300,000	2003-07	SR IPM Center
USDA/CSREES	450,000	2003-05	Biosecurity Training
USDA/APHIS	175,000	2004	Offshore Pest Information System

PUBLICATIONS

- Xia, Yulu, Ron Stinner, and Woody Bailey. 2003. Agricultural data share and exchange using web services. Pp 425-433. In Proc. Second International Symp. Intelligent Information Technology in Agriculture. Oct 22-24 (2003) Beijing, China
- Gutierrez, A.P., Kogan, M., and R.E. Stinner. 2003. Report of the External IPM Review Panel to SPARE (USAID). 93 pp.
- Stinner, R.E. 2003. NSF Centre for Integrated Pest Management. Pesticide Outlook. Pp 77-80.
- Xia, Y., and R.E. Stinner. 2003. Agricultural chemicals use data access using coldfusion markup language and a relational database. Computers and Electronics in Agriculture 38: 217 - 225.
- Stinner, R.E. 2003. NSF Centre for Integrated Pest Management. Pesticide Outlook.
- Xia, Y., R. E. Stinner, and X. Wang. 2002. Simple Object Access Protocol (SOAP) for Bioinformatics Software Interoperability. Bioinformatics. 1: 74-82.
(<http://www.cpb.uokhsc.edu/ojvr/soapabs2002.htm>)
- Xia, Y., Stinner, R.E., Chu, P-C 2002. Database integration with the web for biologists to share data and information. EJB Electronic Journal of Biotechnology. Available from:
<http://www.ejb.org/content/vol5/issue2/full/8/index.html>
- Rotstein, M.J., S.G. Lloyd, A.L. Fowler, and R.E. Stinner. 2002. Internet surveillance - new web search and response application is a valuable tool. Proc. 13th Australian Weeds Conference. Perth, Australia (9/8-13/02). Pp 186- 188.
- Stinner, R.E., and J.E. Bacheler. 2002. Comprehensive nutrient management planning: NAICC Survey Results. CIPM Tech. Rept. 2002-1. 11 pp.
- Stinner, R.E. 2001. Quality assurance and Accuracy. Pp 19-20. In. Bruno,D., et al., eds. Western Rangeland Noxious Weeds. Collecting, Sharing and Using Information. Proceedings of a Workshop, Sept 6-7, 2000. Phoenix, AZ
- Stinner, R.E., et al. 2001. Sharing Data. Pp. 21-25. In. Bruno,D., et al., eds. Western Rangeland Noxious Weeds. Collecting, Sharing and Using Information. Proceedings of a Workshop, Sept 6-7, 2000. Phoenix, AZ
- Stinner, R.E. 2001. National plant regulatory databases. Pp. 22-24. In R.L. Ridgway et al., eds.. Invasive Species Stakeholders. Collecting, Sharing and Using Information. Proceedings of a round table. April 26, 2000, Washington, DC.

Stinner, R.E., and J.E. Bachelier. 2000. Online Project Document Review Instruction Manual for USDA/OPMP. CIPM Tech. Bull. 102. 19pp.

Stinner, R.E. 2000. Information management: past, present, and future. Pp. 474-481. In G.G. Kennedy and T.B. Sutton. Emerging Technologies for Integrated Pest Management. APS Press, St. Paul, MN. 526 pp.

Stinner, R.E. 1999. Pest management in the developing world: Information and acceptance. Pp 174-176. In. Sustainable Agriculture Solutions. The Sustainable Agriculture Initiative Action Report. Novello Press, London.

Ridgeway, R.L. William Gregg, R.E. Stinner, and Gordon Brown, Eds. 1999. Invasive Species Databases: Proceedings of a Workshop. C.V. Riley Foundation. 53 pp.

Ragsdale, Nancy N., and R.E. Stinner. 1999. The role of benefits in the regulatory arena. Pp. 156-164. In. Pesticides: Managing Risk and Optimizing Benefits. Amer. Chem Soc. Symp. Series 734. 286pp.

Stinner, R.E. 1999. Overview of Databases. In Ridgeway, R.L., et al. Invasive Species Databases: Proceedings of a Workshop. C.V. Riley Foundation. 53 pp.

Stinner, R. E. 1999. IPMnet for East/Southern Africa: A WWW Project Focusing on Agricultural Crops. In Proc. 3rd IUFRO Extension Working Party Symposium. July 19-24 (1998). Blacksburg, VA

R.E. Stinner. 1998. Globalisation of IPM through the Internet. Pp 289-296. In. Pest Management - Future Challenges. Proc. Sixth Australasian Appl. Entomol. Research Conf. Brisbane, Australia (29 Sept. 2 Oct., 1998)

Stinner, R.E., Ed. 1998. Developing Benefits Assessments Protocols. CIPM Tech. Bull. 100.16pp + appendices.

Stinner, R.E. 1998. Pest management and the Internet: A Beginner's Guide to Internet Access for International Agriculture. CIPM Outreach Bull. 101. 10 pp

Stinner, R. E. 1997. Cotton and the Internet. CIPM Outreach Bull. 100. 12 pp.

Stinner, R.E., and G.A. Schaefer. 1996. Agriculture and the World Wide Web. Presentation Summaries Symp Global Strategies for Electronic Communication of IPM Knowledge Bases. XX Int. Congr. Entomol., Florence, Italy (1996). Pp 1-2.

Stinner, R.E. 1996. The National IPM Network: One solution to the information glut on the Internet. Presentation Summaries Symp Global Strategies for Electronic Communication of IPM Knowledge Bases. XX Int. Congr. Entomol., Florence, Italy (1996). Pp 1-2.

- Yu, Y., H. Gould, R. E. Stinner, and G. G. Wilkerson. 1993. A model for time-dependent economic threshold for chemical control of corn earworm on soybean. *Agric. Systems* 43: 439-458.
- Yu, Y., H. J. Gold, G. G. Wilkerson, and R. E. Stinner. 1994. Uncertainty in pest control thresholds: application to chemical control of corn earworm soybean on soybean. *Agric. Systems* 44: 19-33.
- Rock, G. C., R. E. Stinner, J. E. Bacheler, L. A. Hull, and H. W. Hogmire, Jr. 1993. Predicting geographical and within-season variation in male flights of four fruit pests. *Environ. Entomol.* 22: 716-725.
- Stinner, R. E. and J. E. Bacheler. 1993. The myth of random movement: old concepts with a new twist. *J. Agric. Entomol.* 10: 247-265.
- Stinner, R. E. 1992. Implications of ecological modeling on management strategies for agricultural pests. *Lutte Integru Contre les Ennemis des Cultures Vivrieres dans le Sahel* 1: 381- 386.
- Berry, I. L. and R. E. Stinner. 1992. Computer development of insect population models. In J. L. Goodenough and J. M. McKinion [eds.], *Basics of insect modeling*. Am. Soc. Agr. Engineers Monogr. 10. 221 pp.
- Ping-chu, C., K. J. Giroux, and R. E. Stinner. 1992. Dynamic water gain and loss in larval Mexican bean beetle. *Physiol. Entomol.* 17: 309-315.
- Ping-chu, C., R. E. Stinner, and K. J. Giroux. 1992. A dynamic model of larval Mexican bean beetle survival as a function of body water balance. *Physiol. Entomol.* 17: 316-324.
- Yu, Y., H. J. Gold, R. E. Stinner, and G. G. Wilkerson. 1992. Leslie model for the population dynamics of corn earworm in soybean. *Environ. Entomol.* 21: 253-263.
- Ellsworth, P. C., J. R. Bradley, Jr., G. C. Kennedy, R. P. Patterson, and R. E. Stinner. 1992. Irrigation effects on the European corn borer - maize water relations. *Ent. exp. appl.* 64: 11-21.
- Yu, Y., H. J. Gold, and R. E. Stinner. 1991. Relation of transition probabilities in the Leslie model to those from experimental cumulative distributions. *Res. Popul. Ecol.* 33: 165-177.
- Wilhoit, L. R., R. E. Stinner, and R. C. Axtell. 1991. Computer simulation model of house fly population management in confined animal production systems. *N.C. Agric. Res. Serv. Tech. Bull.* 296. 81 pp.
- Fletcher, M. G., R. C. Axtell, R. E. Stinner, and L. R. Wilhoit. 1991. Temperature-dependent development of immature *Carcinops pumilio* (Coleoptera: Histeridae), a predator of the house fly (Diptera: Muscidae). *J. Entomol. Sci.* 26: 99-108.

- Patel, K. J., L. M. Rueda, R. C. Axtell, and R. E. Stinner. 1991. Temperature-dependent development of the fungal pathogen, *Lagenidium giganteum* in mosquito larvae. *J. Med. Entomol.* 28: 95-100.
- Wilhoit, L. R., R. E. Stinner, and R. C. Axtell. 1991. CARMOD: A simulation model for *Carcinops pumilio* (Coleoptera: Histeridae) population dynamics and predation on immature stages of house flies (Diptera: Muscidae). *Environ. Entomol.* 20: 1079-1088
- Wilhoit, L. R., R. E. Stinner, R. C. Axtell, J. E. Bacheler, and J. Mann. 1991. PARMOD: A simulation model for the population dynamics of *Muscidifurax* spp. and *Spalangia* spp. (Hymenoptera: Pteromalidae), parasites of house fly pupae (Diptera: Muscidae). *Environ. Entomol.* 20: 1418-1426.
- Besson, R. T., R. E. Stinner, and T. E. Reagan. 1991. Modeling the areawide impact of sugarcane varieties and predation on sugarcane borer (Lepidoptera: Pyralidae) populations in southern Louisiana. *Environ. Entomol.* 20: 769-793.
- Kramer, D. A., R. E. Stinner, and F. P. Hain. 1991. Time versus rate in parameter estimation of nonlinear temperature-dependent development models. *Environ. Entomol.* 20: 484-488.
- Wilhoit, L. R., R. E. Stinner, and R. C. Axtell. 1991. Estimating manure temperatures from air temperatures and results of its use in models of filth fly (Diptera: Muscidae) development. *Environ. Entomol.* 20: 635-643.
- Thomson, M. S. and R. E. Stinner. 1990. The scale response of *Trichogramma* (Hymenoptera: Trichogrammatidae): variation among species in host specificity and the effect of conditioning. 35: 7-21.
- Gold, H. J., G. G. Wilkerson, Y. Yu, and R. E. Stinner. 1990. Decision analysis as a tool for integrating simulation with expert systems when risk and uncertainty are important. *Computers & Electronics in Agric.* 4: 343-360.
- Rock, G. C. and R. E. Stinner. 1990. Influence of temperature on the ovipositional biology of the redbanded leafroller and tufted apple budmoth (Lepidoptera: Tortricidae). *J. Entomol. Sci.* 25: 277-283.
- Geden, C. J., R. E. Stinner, D. A. Kramer, and R. C. Axtell. 1990. MACMOD: A simulation model for *Macrocheles muscaedomesticae* (Acarina: Macrochelidae) population dynamics and rates of predation on immature house fly (Diptera: Muscidae). *Environ.* 19: 578-586.
- Mann, J. A., R. E. Stinner, and R. C. Axtell. 1990. Parasitism of house fly (*Musca domestica* L.) pupae by four species of Pteromalidae (Hymenoptera): effects of host-parasitoid densities and host distribution. *Med. & Vet. Entomol.* 4: 235-243.
- Mann, J. A., R. C. Axtell, and R. E. Stinner. 1990. Temperature-dependent development and parasitism

rates of four species of pteromalid (Hymenoptera) parasitoids of house fly (*Musca domestica* L.) pupae. *Med. & Vet. Entomol.* 4: 245-253.

McClain, D. C., G. C. Rock, and R. E. Stinner. 1990. Thermal requirements for development and simulation of the seasonal phenology of *Encarsia perniciosi* (Tower) (Hymenoptera: Aphelinidae), a parasitoid for the San Jose scale (Homoptera: Diaspididae) in North Carolina orchards. *Environ. Entomol.* 19: 1396-1402.

McClain, D. C., G. C. Rock, and R. E. Stinner. 1990. San Jose scale (Homoptera: Diaspididae): simulation of seasonal phenology in North Carolina orchards. *Environ. Entomol.* 19: 918-928.

Axtell, R. C. and R. E. Stinner. 1990. Computer simulation modeling of fly management, Chp. 19, pp. 265-291. In: D. A. Rutz and R. S. Patterson (eds.), *Biocontrol of arthropods affecting livestock and poultry*. Westview Press, Boulder, Colorado.

Rueda, L. M., K. J. Patel, R. C. Axtell, and R. E. Stinner. 1990. Temperature-dependent development and survival rates of *Culex quinquefasciatus* Say and *Aedes aegypti* (L.) (Diptera: Culicidae). *J. Med. Entomol.* 27: 892-898.

Fletcher, M. G., R. C. Axtell, and R. E. Stinner. 1990. Longevity and fecundity of the house fly, *Musca domestica* L., as a function of temperature. *J. Med. Entomol.* 27: 922-926.

Thomson, M. S. and R. E. Stinner. 1989. *Trichogramma* spp. (Hymenoptera: Trichogrammatidae): field hosts and multiple parasitism in North Carolina. *J. Entomol. Sci.* 24: 232-240.

Stinner, R. E. and J. R. Bradley, Jr. 1989. Habitat manipulation to increase effectiveness of predators and parasites, pp. 519-527. In: E. G. King and R. D. Jackson (eds.), *Proceedings of the workshop on biological control of Heliothis: increasing the effectiveness of natural enemies*. 11-15 Nov. 1985, New Delhi, India. Far Eastern Regional Res. Office, U.S. Dept. Agric., New Delhi, India. 550 pp.

Schaalje, G. B., R. E. Stinner, and D. L. Johnson. 1989. Modelling insect populations affected by pesticides with application to pesticide efficacy trials. *Ecol. Model.* 47: 233-263.

Ellsworth, P., R. P. Patterson, J. R. Bradley, Jr., G. G. Kennedy, and R. E. Stinner. 1989. Developmental consequences of water and temperature in the European corn borer-maize interaction. *Ent. exp. appl.* 53: 287-296.

Geden, C. J., R. E. Stinner, and R. C. Axtell. 1988. Predation by predators of the house fly in poultry manure: effects of predator density, feeding history, interspecific interference, and field conditions. *Environ. Entomol.* 17: 320-329.

Stinner, R. E., G. C. Rock, and J. E. Bacheler. 1988. Tufted apple budmoth (Lepidoptera: Tortricidae): simulation of within-season phenology in North Carolina. *Environ. Entomol.* 17: 266-270.

- Stinner, R. E., G. C. Rock, and J. E. Bacheler. 1988. Tufted apple budmoth (Lepidoptera: Tortricidae): simulation of post-diapause development and prediction of spring adult emergence in North Carolina. *Environ. Entomol.* 17: 271-274.
- Thomson, S. and R. E. Stinner. 1988. Comparative responses of feral and laboratory *Trichogramma* to *Heliothis* spp. moth scales and inert particles. *J. Entomol. Sci.* 23: 244-249.
- Hawthorne, D. J., G. C. Rock, and R. E. Stinner. 1988. Redbanded leafroller (Lepidoptera: Tortricidae): thermal requirements for development and simulation of within-season phenology in North Carolina. *Environ. Entomol.* 17: 40-46.
- Saks, M. E., M. A. Rankin, and R. E. Stinner. 1988. Sexually differentiated flight responses of the Mexican bean beetle to larval and adult nutrition. *Oecologia* 75: 296-302.
- Kennedy, G. G., F. Gould, O. M. B. de Ponti, and R. E. Stinner. 1987. Ecological, agricultural, genetic, and commercial considerations in the development of insect resistant germplasm. *Environ. Entomol.* 16: 327-338.
- Williams, D. and R. E. Stinner. 1987. Respiration and drowning in post-diapause pupae of *Heliothis zea*. *Can. Entomol.* 119: 329-338.
- House, G. J., A. D. Worsham, T. J. Sheets, and R. E. Stinner. 1987. Herbicide effects on soil arthropod dynamics and wheat straw decomposition in a North Carolina no-tillage agroecosystem. *Biol. & Fert. Soils* 4: 109-114.
- House, G. J. and R. E. Stinner. 1987. Decomposition of plant residues in no-tillage agroecosystems: influence of litterbag mesh size and soil arthropods. *Pedobiologia* 30: 351-360.
- Stinner, R. E. and M. Saks. 1986. Within region movement models and their problems, pp. 259-264. In: Dr. MacKenzie, C. S. Barfield, G. G. Kennedy and R. D. Berger (eds.), *The movement and dispersal of agriculturally important biotic agents*. Claitor's Publ. Div., Baton Rouge, Louisiana. 611 pp.
- Stinner, R. E., M. Saks, and L. Dohse. 1986. Modeling of agricultural pest displacement, pp. 235-241. In: W. Danthanarayana (ed.), *Insect flight: dispersal and migration*. Springer-Verlag, Berlin.
- Bradley, J. R., Jr., G. A. Herzog, S. H. Roach, R. E. Stinner, and L. I. Terry. 1986. Cultural control of *Heliothis* spp. in southeastern cropping systems. *So. Coop. Ser. Bull.* 316: 22-27.
- Baldwin, L., D. A. Haith, J. W. Jones, J. Keith, R. Lund, G. E. Meyer, W. Meyers, J. Nye, R. M. Peart, J. Schmidt, R. E. Stinner, J. Stucki, D. Thatch, and C. Wells. 1985. Decision models and computer use in agricultural research. ESCOP White Paper, 34 pp.
- Stinner, R. E. 1985. Cost-benefit analysis: defining research needs (Discussion), pp. 62-63. In: M. A.

Hoy and D. C. Herzog (eds.), Biological control in agricultural IPM systems. Academic Press, New York.

Stinner, R. E. 1985. An update on development of selective pesticides favoring arthropod natural enemies (Discussion), p. 150. In: M. A. Hoy and D. C. Herzog (eds.), Biological control in agricultural IPM systems. Academic Press, New York.

Stinner, R. E. 1985. Estimating the abundance and impact of arthropod natural enemies in IPM systems (Discussion), p. 322. In: M. A. Hoy and D. C. Herzog (eds.), Biological control in IPM systems. Academic Press, New York.

Stinner, R. E. 1985. Integrating influences of natural enemies into models of crop/pest systems (Discussion), p. 344. In: M. A. Hoy and D. C. Herzog (eds.), Biological control in agricultural IPM systems. Academic Press, New York.

Riley, S. L. and R. E. Stinner. 1985. Recorder for automatically monitoring tethered-insect flight. Ann. Entomol. Soc. Am. 78: 626-628.

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