

Curriculum Vitae
James Francis Anthony Traniello

Professor of Biology

Department of Biology
Boston University
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Research Associate, Museum of Comparative Zoology, Harvard University

Editor-in-Chief, *Behavioral Ecology and Sociobiology*

Director, Undergraduate Concentration in Behavioral Biology, Boston University

Education

1976-80 Ph.D., Organismal and Evolutionary Biology, Harvard University
Dissertation Mentors: Bert Hölldobler, Edward O. Wilson, Robert E.
Silberglied (deceased)
1974-76 M.S., Entomology, University of Massachusetts, Amherst
1974 B.A., Biology *cum laude*, Boston University

Research Interests and Experience

Ecology, behavior and evolution of invertebrates; evolutionary neurobiology and neuroethology; social brain evolution; behavioral development; senescence and aging; caste and division of labor; disease and sociality; genes and sociality; biodiversity; community ecology; socioecology; foraging behavior; search strategy; chemical communication and defense

Courses Taught

Introduction to Behavioral Biology / Ecology, Evolution, and Behavior (Principles of Biology I) / Sociobiology / Seminar in Behavioral Biology/ Animal Behavior / Insect Biology / Behavioral Ecology / Experimental Insect Sociobiology

Recognition of Research, Teaching, Advising and Mentoring

Elected Fellow, Animal Behavior Society, 2017

Templeton Prize for Excellence in Student Advising, 2012. College of Arts and Sciences

Outstanding Teaching Award, College Honors Program, 1996. College of Arts and Sciences

Departmental nominee, College of Arts and Sciences Teaching Excellence Award, 2001, 2003, 2011, 2012, 2016

Nominee and twice finalist, Metcalf Award for Teaching Excellence (University-wide award).

Academic Positions

1981-present: Professor of Biology, Boston University (promotion to Associate Professor with tenure, 1987; promotion to Full Professor, 1994)

1981-present: Research Associate in Entomology, Museum of Comparative Zoology, Harvard University

1980-81 Lecturer on Biology, Harvard University. Courses taught: Biology 22, Ethology; Biology 241, The Social Insects (with E.O. Wilson)

1983-2002 Instructor, Harvard University Extension. Course taught: Animal Behavior

1987-2003 Director of Undergraduate Studies, Department of Biology, Boston University

2009-present Program Developer and Director, Concentration in Biology with Specialization in Behavioral Biology, Department of Biology, Boston University

1984-1986 Instructor, Boston University Metropolitan College. Courses taught: Principles of Biology I; Sociobiology

Editorial Responsibilities

Editor-in-Chief, *Behavioral Ecology and Sociobiology* (2011- present)

Associate Editor, *Behavioral Ecology and Sociobiology* (2006-2011)

Member, Advisory/Editorial Board, *Journal of Insect Behavior* (1998- present)

Member, Advisory/Editorial Board, *Ethology, Ecology and Evolution* (1996-present)

Member, Advisory/Editorial Board, *Journal of Insect Science* (2006-2011)

Member, Advisory/Editorial Board, *Psyche* (1985- 2011)

Significant Awards and Grants (past 15 years)

2015-2018. Marie Skłodowska-Curie Cofund. Project 660976 Evolution of the social brain: how social complexity affects individual cognition in ants. (with co-sponsor Martin Giurfa, University of Toulouse). €246,668

2014-2018. National Science Foundation. IOS-1354291. Collaborative Research: Collective intelligence and social brain evolution in ants. (with coPIs W. Gronenberg and C. Moreau). \$1,440,000

2012-2015. National Institutes of Health/National Institute of Aging 50201113. Senescence, Neurodegeneration and Sensory/Motor Decline in a Social Invertebrate. \$89,099

2007-2013. National Science Foundation. IOB-0725013, 0724591. Behavioral Neuroscience Program. Social organization, behavioral development and functional neuroplasticity in the ant genus *Pheidole*. (with Wulfila Gronenberg, coPI) \$480,000. (plus annual Research Experiences for Undergraduates supplements, \$6000/award).

2012. National Science Foundation EAPSI OISE-1209967. Neural basis of individual behavior and collective action in a superorganism, the weaver ant. (Summer Institute Grant for doctoral student J. Frances Kamhi) \$8,300.00

2007-2010. Whitmire Microgen Corporation. Unrestricted grant in aid of research. \$30,000

2003-2004. Boston University SPRnG Grant. Neural correlates of aging, size, individual development and social plasticity in the ant *Pheidole dentata*. (with Christine Li and Kristen Harris, co-PIs). \$20,000

2001-2007. FMC Corporation. Unrestricted grant in aid of research. \$30,000

2001-2006. National Science Foundation. Animal Behavior Program. Social behavior, immunity and disease resistance in termites. (R. Rosengaus, coPI). \$290,744

NSF Panelist

2003, 2006, 2009, 2016

Invited Symposia and Seminars

Symposium on Interindividual Differences in Social Insect Behavior, Entomological Society of America National Meeting, Hollywood, Florida, 1985

Fondation Les Treilles Workshop, 1986: "From Individual Characteristics to Collective Organization: The Example of Social Insects." Salernes, France

Fondation Les Treilles Workshop, 1996: Self-Organization in Insect Societies

Symposium on Foraging Behavior, 10th International Congress of the IUSI, Munich, Germany, 1986

Symposium on the Ecology of Learning, Animal Behavior Society Regional Meetings, Burlington, Vermont, 1986

Keynote Speaker, Massachusetts Association of Science Teachers, Boston, MA, 1986
Simmons College, 1987

Student Symposium on Animal Behavior, Museum of Science, Boston, MA, 1987

Amos Fortune Forum, Jaffrey, NH, 1987 (lectures in honor of the first freed slave in America)

Michener Lecturer in Social Biology, University of Kansas, 1988

Kansas State University, 1988

Symposium on Invertebrate Behavior, Eastern Psychological Association, Boston, MA, 1989

University of Massachusetts, Amherst, 1989

Invited Symposium Speaker, Foraging Strategy in Social Insects, Termite Evolution, Caste Evolution, 11th International Congress of the IUSI, Bangalore, India, 1990

Darwin Festival, Salem State College, Salem, MA, 1990

University of New Hampshire, 1991

Schnierla Symposium on Insect Behavior, Lawrence, Kansas, 1993

National Conference on Urban Entomology, 1994

International Congress on Social Insect Biology (IUSI), Paris, 1994

University of Cincinnati, 1997

Cornell University, 1998

International Congress on Social Insect Biology (IUSI), Adelaide, 1998

International Conference on Social Learning, Naples, 1998

University of Connecticut, 2000

University of Massachusetts, Amherst, 2001

Tufts University, 2002

DARPA/DSO Endogenous Defense Workshop, Fairfax, Virginia, 2004

International Congress of Entomology, Brisbane, Australia, 2004

University of Arizona, 2005

Cambridge Entomological Club, 2005

University of Vermont, 2006

International Congress of the IUSI, invited symposium speaker, 2006

University of Utah, 2007

University of Massachusetts, 2009

University of Arizona, 2009

Colorado State University, 2009

Invited Instructor, the Ant Course, Portal, Arizona, 2009

Invited Symposium Speaker, Celebration of the Social Insects, Entomological Society of America National Meeting, Indianapolis, Indiana, 2010

Distinguished Speaker, Louisiana State University, 2010

University of Illinois at Urbana-Champaign, 2010

McGill University, 2012

Invited Symposium Speaker, Social Networks, Entomological Society of America National Meeting, Knoxville, Tennessee, 2012

University of Bonn, 2012

Wesleyan University, 2013

Arizona State University, 2013

University of New Hampshire, 2013

Symposium Coorganizer, Integrative Analysis of Division of Labor, International Congress of the IUSI, Cairns, Australia, 2014

Invited speaker, International Neuroscience Doctoral Programme workshop,
Chamalimaud Neuroscience Programme, Lisbon, Portugal, 2014
Tufts University, 2016

Publications

Traniello, J.F.A. 1977. Recruitment behavior, orientation, and the organization of foraging in the carpenter ant *Camponotus pennsylvanicus* DeGeer. Behav. Ecol. Sociobiol. 2: 61-79.

Traniello, J.F.A. 1978. Caste in a primitive ant: absence of age polyethism in *Amblyopone*. Science 202: 770-772.

Traniello, J.F.A. 1980a. Colony specificity in the trail pheromone of an ant. Naturwissenschaften 67: 360.

Holldobler, B. and Traniello, J.F.A. 1980b. The pygidial gland and chemical recruitment communication in *Pachycondyla (=Termitopone) laevigata*. J. Chem. Ecol. 6: 883-893.

Holldobler, B. and Traniello, J.F.A. 1980c. Tandem running pheromone in ponerine ants. Naturwissenschaften 67: 360.

Traniello, J.F.A. 1981a. Enemy deterrence in the recruitment strategy of a termite: soldier-organized foraging in *Nasutitermes costalis*. Proc. Nat. Acad. Sci. USA 78: 1976-1979.

Traniello, J.F.A. and Jayasuriya, A.K. 1981b. The sternal gland and recruitment communication in the primitive ant *Aneuretus simoni*. Experientia 37: 46.

Traniello, J.F.A. and Jayasuriya, A.K. 1981c. Chemical communication in the primitive ant *Aneuretus simoni*: the role of the pygidial and sternal glands. J. Chem. Ecol. 7: 1023-1033.

Adams, E.A. and Traniello, J.F.A. 1981d. Chemical interference competition in *Monomorium minimum*. Oecologia 51: 265-270.

Levings, S.C. and Traniello, J.F.A. 1982a. Territoriality, nest dispersion, and community structure in ants. Psyche 88: 265-319.

Traniello, J.F.A. 1982b. Population structure and social organization in *Amblyopone pallipes*. Psyche 89: 65-80.

Traniello, J.F.A. 1982c. Recruitment and orientation components in a termite trail pheromone. Naturwissenschaften 69: 343-344.

- Traniello, J.F.A. 1983a. Social organization and foraging success in *Lasius neoniger* (Hymenoptera: Formicidae): behavioral and ecological aspects of recruitment communication. *Oecologia* 59: 94-100.
- Calabi, P., Traniello, J.F.A. and Werner, M. 1983b. Age polyethism: its occurrence in the ant *Pheidole hortensis* and some general consideration. *Psyche* 90: 395-412.
- Traniello, J.F.A., Fujita, M.S. and Bowen, R.V. 1984a. Ant foraging behavior: ambient temperature influences prey selection. *Behav. Ecol. Sociobiol.* 15: 65-68.
- Traniello, J.F.A. and Holldobler, B. 1984b. Chemical communication during tandem running in *Pachycondyla obscuricornis* (Hymenoptera: Formicidae). *J. Chem. Ecol.* 10: 783-794.
- Traniello, J.F.A., Thorne, B.L. and Prestwich, G.D. 1984c. Chemical composition and efficacy of the cephalic gland secretion of *Armitermes chagresi*. *J. Chem. Ecol.* 10: 531-543.
- Traniello, J.F.A. and Busher, C. 1985a. Chemical regulation of foraging in the Neotropical termite *Nasutitermes costalis*. *J. Chem. Ecol.* 11: 319-332.
- Traniello, J.F.A., Rosengaus, R.B. and Levy, C.K. 1985b. Single and double isotope labeling of social insect colonies: gamma-emitting radionuclides as individually identifiable markers. *Entom. exp. appl.* 38: 87-92.
- Leibensperger, L., Traniello, J.F.A. and Fraser, J. 1985c. Olfactory cues utilized by female *Gromphadorhina portentosa* (Dictyoptera: Blaberidae) during mate choice. *Ann. Ent. Soc. Am.* 78: 629-634.
- Busher, C., Calabi, P. and Traniello, J.F.A. 1985d. Polymorphism and division of labor in the Neotropical ant *Camponotus sericeiventris* Guerin. *Ann. Ent. Soc. Am.* 78: 221-228.
- Hall, P. and Traniello, J.F.A. 1985e. Behavioral bioassays of termite trail pheromones. Recruitment and orientation effects of cembrene-A in *Nasutitermes costalis* (Isoptera: Termitidae) and discussion of factors affecting termite response in experimental contexts. *J. Chem. Ecol.* 11: 1503-1573.
- Traniello, J.F.A. and Beshers, S.N. 1985f. Species-specific alarm/recruitment responses in a Neotropical termite. *Naturwissenschaften* 72: 491-492.
- Jayasuriya, A.K. and Traniello, J.F.A. 1985g. The biology of the primitive ant *Aneuretus simoni* (Emery). I: Distribution, abundance, colony structure, and foraging ecology. *Insectes Sociaux* 32: 363-374.

Traniello, J.F.A. and Jayasuriya, A.K. 1986h. The biology of the primitive ant *Aneuretus simoni* (Emery). II: The social ethogram and division of labor. *Insectes Sociaux* 32: 375-388.

Rosengaus, R.B., Traniello, J.F.A. and Levy, C.K. 1986i. Social transfer, elimination, and biological half-lives of gamma-emitting radionuclides in the termite *Reticulitermes flavipes*. *Z. ang. entom.* 101: 287-294.

Traniello, J.F.A. and Levings, S.C. 1986j. Intra- and intercolony patterns of nest dispersion in the ant *Lasius neoniger*: correlations with territoriality and foraging ecology. *Oecologia* 69: 413-419.

Traniello, J.F.A. 1987a. Individual and social modification of behavior in response to environmental factors. In: *From Individual to Collective Behavior in Social Insects*. (J.M. Pasteels and J.-L. Deneubourg, eds.).

Traniello, J.F.A. 1987b. The evolution of individual and social strategies of foraging in the ant *Formica schaufussi*. pp. 511- 12. In: *Chemistry and Biology of Social Insects*. (J. Eder and H. Rembold, eds.). J. Peperny Verlag.

Traniello, J.F.A. 1987c. Foraging strategies of social insects. pp. 499-500 In: *Chemistry and Biology of Social Insects*. (J. Eder and H. Rembold, eds.). J. Peperny Verlag.

Beshers, S.N. and Traniello, J.F.A. 1987d. Determinants of social structure in the ant *Novomessor albisetosus*. *Ibid*, p. 133

Calabi, P. and Traniello, J.F.A. 1987e. Ecological correlates of physical and age caste ratios in the ant *Pheidole dentata*. In: *Chemistry and Biology of Social Insects*. (J. Eder and H. Rembold, eds.). J. Peperny Verlag.

Scott, M.P. and Traniello, J.F.A. 1987f. Behavioral cues trigger rapid ovarian development in the burying beetle *Nicrophorus tomentosus*. *J. Insect Physiol.* 33: 693-696.

Traniello, J.F.A. 1987g. Comparative foraging ecology of North Temperate ants: the role of worker size and cooperative foraging in prey selection. *Insectes Sociaux* 34: 118-130.

Scott, M.P., Traniello, J.F.A. and Fetherston, I.A. 1987. Competition between ants and burying beetles (*Nicrophorus spp.*) for prey: differences between northern and southern temperate sites. *Psyche* 94: 325-332.

Traniello, J.F.A. 1988a. Variation in foraging behavior among workers of the ant *Formica schaufussi*: ecological correlates of search behavior and the modification of search pattern. pp. 91-112 In: *Interindividual Behavioral Variability in Social Insects* (R.L. Jeanne, ed.). Westview Press, Boulder, CO.

Kozol, A.J., Scott, M.P. and Traniello, J.F.A. 1988b. The American burying beetle *Nicrophorus americanus*: Studies on the natural history of a declining species. *Psyche* 95: 167-176.

Traniello, J.F.A. 1989a. Foraging strategies of ants. *Ann. Rev. Entomol.* 34: 191-210.

Calabi, P. and Traniello, J.F.A. 1989b. Social organization in the ant *Pheidole dentata*: physical and age caste ratios lack ecological correlates. *Behav. Ecol. Sociobiol.* 24: 69-78.

Traniello, J.F.A. 1989c. Chemical trail systems, orientation, and territoriality in the ant *Lasius neoniger*. *J. Insect Behavior.* 2: 339-354.

Calabi, P. and Traniello, J.F.A. 1989d. Behavioral flexibility in the age castes of the ant *Pheidole dentata*. *J. Insect Behavior.* 2: 663-677.

Scott, M.P. and Traniello, J.F.A. 1989e. Insect guardians of the underworld. *Natural History* (June) pp. 32-37.

Scott, M.P. and Traniello, J.F.A. 1990a. Behavioral and ecological correlates of male and female parental care and reproductive success in burying beetles (*Nicrophorus spp.*). *Animal Behaviour* 39:274-283.

Rosengaus, R. and Traniello, J.F.A. 1990b. Studies on the evolution of monogamy and eusociality in termites. pp. 31-32 in *Social Insects and the Environment* (G.K. Veeresh, B. Mallick and C.A. Viraktamath, eds.). Oxford and IBH Publishing Co.

Beshers, S.N. and Traniello, J.F.A. 1990c. Colony demography and fitness in *Trachymyrmex septentrionalis*. *Ibid.*, pp. 340-341.

Traniello, J.F.A., Beshers, S.N., Fourcassie, V., Loh, H.S. and Hennemann, L. 1990d. Search behavior in the ant *Formica schaufussi*: social organization and ecology of individual patterns. *Ibid.*, pp. 543-544.

Fetherston, I., Scott, M.P. and Traniello, J.F.A. 1990e. Parental care in burying beetles: male and female roles and the organization of brood care behaviors. *Ethology* 85:177-190.

Traniello, J.F.A., Fourcassie, V. and Graham, T. 1991a. Search behavior and foraging ecology of the ant *Formica schaufussi*: colony-level and individual patterns of organization. *Ethology, Ecology, and Evolution* 3:35-47.

Traniello, J.F.A. and Beshers, S.N. 1991b. Size-pairing and polymorphism in the ant *Pogonomyrmex badius*: a test of the ecological release hypothesis. *Insectes Sociaux* 38:121-128.

Rosengaus, R.B. and Traniello, J.F.A. 1991c. Biparental care in incipient colonies of the dampwood termite *Zootermopsis angusticollis*. *J. Insect Behav.* 4:633-647.

Traniello, J.F.A. and Beshers, S.N. 1991d. Maximization of foraging efficiency and resource defense by cooperative retrieval in the ant *Formica schaufussi*. *Behav. Ecol. Sociobiol.* 29: 283-289.

Fourcassie, V., Coughlin, D., and Traniello, J.F.A. 1992a. Fractal analysis of search behavior in ants. *Naturwissenschaften* 79: 87-89.

Traniello, J.F.A., Kozol, A.J., and Fournier, M.A. 1992b. Resource-related spatial patterns of search in the ant *Formica schaufussi*: a field study. *Psyche* 99: 87-93.

Fourcassie, V., and Traniello, J.F.A. 1993a. Effects of experience on food-searching behavior in the ant *Formica schaufussi* (Hymenoptera: Formicidae) *J. Insect Behav.* 6: 287-299.

Rosengaus, R.B., and Traniello, J.F.A. 1993b. Temporal polyethism in incipient colonies of the termite *Zootermopsis angusticollis*: a single multiage caste. *J. Insect Behav.* 6: 237-252.

Rosengaus, R.B., and Traniello, J.F.A. 1993c. Disease risk as a cost of outbreeding in the termite *Zootermopsis angusticollis*. *Proc. Natl. Acad. Sci. USA* 90: 6641-6645.

Featherston, I., Scott, M.P., and Traniello, J.F.A. 1994a. Behavioral compensation for mate loss in the burying beetle *Nicrophorus orbicollis*. *Anim. Behav.* 47: 777-785.

Traniello, J.F.A., and Robson, S.K. 1994b. Asymmetries in recruitment behavior and recruitment response in the ant *Formica schaufussi*. p. 148 in *Les Insectes Sociaux* (A. Lenoir, G. Arnold, and M. Lepage, eds.). Universite Paris Nord.

Robson, S.K., and Traniello, J.F.A. 1994c. Cooperative prey retrieval in the ant *Formica schaufussi*: group behavior based upon individual complexity rather than simplicity. *IBID*, p. 233.

Rosengaus, R.B., and Traniello, J.F.A. 1994d. Pathogens and termite population biology. *IBID*, p. 189.

Fourcassie, V., and Traniello, J.F.A. 1994e. Food-searching behavior in the ant *Formica schaufussi* (Hymenoptera: Formicidae): response of naive foragers to protein and carbohydrate food. *Anim. Behav.* 48: 69-79.

Beshers, S.N., and Traniello, J.F.A. 1994f. The adaptiveness of demographic distributions of colonies of the fungus-growing ant *Trachymyrmex septentrionalis*. *Ecology* 75: 763-775.

- Kozol, A.J., Traniello, J.F.A., and Williams, S. M. 1994g. Genetic variation in the endangered American burying beetle. *Ann. Entomol. Soc. Am.* 87: 928-935.
- Traniello, J.F.A., and Robson, S. 1995a. Trail and territorial pheromones in the social insects. Chapter 7 (pp 241-285) in: *Chemical Ecology of Insects, Vol. II* (W.J. Bell and R. Carde. eds).
- Fourcassie, V.J.L, and Traniello, J.F.A. 1995b. Ant search behavior analysis with a video frame grabber. *Insectes Sociaux* 42: 249-254.
- Ferster, B., and Traniello, J.F.A. 1995c. Polymorphism and foraging behavior in *Pogonomyrmex badius* (Hymenoptera: Formicidae): worker size, foraging distance, and load size associations. *Environmental Entomology* 24: 673-678.
- Robson, S.K., Lesniak, M.G., Kothandapani, R., Traniello, J.F.A., Thorne, B.L., and Fourcassie, V. 1995d. Nonrandom search geometry in subterranean termites. *Naturwissenschaften* 82: 526-528.
- Beshers, S.N., and Traniello, J.F.A. 1996a. Polyethism and the adaptiveness of worker size variation in the attine ant *Trachymyrmex septentrionalis*. *J. Insect Behavior* 9:61-84.
- Thorne, B.L., Russek-Cohen, B., Forschler, B., Breisch, N., and Traniello, J.F.A. 1996b. Evaluation of mark-release-recapture methods for estimating forager population size of subterranean termite colonies. *Env. Entomol.* 25: 939 - 951.
- Traniello, J.F.A. 1997a. Ecology, Colony Demography, and Social Organization in Ants. In: *Comparative Psychology of Invertebrates: The Field and Laboratory Study of Insect Behavior* (Greenberg, G. and Tobach, E., eds.). Garland Publishing, N.Y.
- Traniello, J.F.A., and Rosengaus, R.B. 1997b. Ecology, evolution, and division of labour in social insects. *Animal Behaviour* 53: 209-213.
- Traniello, J.F.A. 1997c. Olfaction and Chemical Communication. Chapter 18, pp. 167-186 in Glaser, J., ed., *Tested Studies for Laboratory Teaching*. Cornell Univ. Press, Ithaca, NY.
- Thorne, B.L., Breisch, N.L., and Traniello, J.F.A. 1997d. Incipient colony development in the subterranean termite *Reticulitermes flavipes* (Kollar) (Isoptera:Rhinotermitidae). *Sociobiology* 30: 145-159.
- Crosland, M.W.J., and Traniello, J.F.A. 1997e. Behavioral flexibility in division of labor in the lower termite *Reticulitermes fukiensis*. *Naturwissenschaften* 84: 208-211.

- Rosengaus, R.B. and Traniello, J.F.A. 1997f. Pathobiology and disease transmission in dampwood termites [*Zootermopsis angusticollis* (Isoptera: Termopsidae)] infected with the fungus *Metarhizium anisopliae*. *Sociobiology* 30: 185-195.
- Crosland, M.W.J., Lok, C.M., Wong, T.C., Shakarad, M., and J.F.A. Traniello. 1997 g. Division of labour in a lower termite: most tasks performed by older workers. *Animal Behaviour* 54: 999-1012.
- Crosland, M.W.J., and J.F.A. Traniello. 1998a. Studies of division of labour in termites using monocaste colonies. *Ethology* 104: 57-67.
- Brown, J.J. and Traniello, J.F.A. 1998b. Regulation of brood care in the dimorphic castes of the ant *Pheidole morrisi* (Hymenoptera:Formicidae): effects of caste ratio, colony size and colony needs. *J. Insect Behav.* 11: 209-219.
- Robson, S.K. and Traniello, J.F.A. 1998c. Resource assessment, recruitment behavior and the organization of cooperative foraging in the ant *Formica schaufussi*. *J. Insect Behav.* 11:1-22.
- Rosengaus, R.B., Maxmen, A., Coates, L., and Traniello, J.F.A. 1998d. Disease resistance: a benefit of sociality in the dampwood termite *Zootermopsis angusticollis*. *Behav. Ecol. Sociobiol.* 44: 125-134.
- Rosengaus, R.B., Guldin, M. R., and Traniello, J.F.A. 1998e. Inhibitory effect of fecal pellets on fungal spore germination in the dampwood termite *Zootermopsis angusticollis*. *J. Chem. Ecol.* 24: 1697-1706.
- Thorne, B.L., Traniello, J.F.A., Adams, E.A. and Bulmer, M. 1999a. Reproductive organization of colonies of subterranean termites, *Reticulitermes*. *Ethology, Ecology and Behavior* 11: 149-169.
- Rosengaus, R.B., Traniello, J.F.A., Chen, T. Lefebvre, M. and Karp, R.D. 1999b. Immunity in a social insect. *Naturwissenschaften* 86: 588-591.
- Rosengaus, R.B., Lefebvre, M., Jordan, C., Traniello, J.F.A. 1999c. Pathogen alarm behavior in termites: a new form of communication in social insects. *Naturwissenschaften* 86: 544-548.
- Robson, S.K., and Traniello, J.F.A. 1999d. Key individuals and the organization of labor in ants. pp. 239-259 in *Information Processing in Social Insects* (Detrain, C., Deneubourg, J.-L., and Pasteels, J.M., eds.) Birkhauser
- Traniello, J.F.A. and Leuthold, R. 2000a. The Behavioral Ecology of Foraging in Termites. Chapter 7, pp. 141-168, in *Termites: Evolution, Sociality, Symbioses, Ecology*. (Abe, T., Higashi, T., and Bignell, D., Eds.) Kluwer Publishers, Dordrecht.

Rosengaus R.B., Lefebvre M.L., Traniello J.F.A. 2000b. Inhibition of fungal spore germination by *Nasutitermes*: evidence for a possible antiseptic role of soldier defensive secretions. *J. Chem. Ecol.* 26: 21- 39.

Rosengaus, R.B., Traniello, J.F.A., Lefebvre, M.L. and Carlock, D. 2000c. Social transmission of disease between adult male and female reproductives of the dampwood termite *Zootermopsis angusticollis*. *Ethology, Ecology and Evolution* 12: 419-433.

Brent, C.S. and Traniello, J.F.A. 2001a. Social influence of larvae on ovarian maturation in the dampwood termite *Zootermopsis angusticollis*. *Physiological Entomology* 26:78-85.

Bulmer, M.S., Adams, E.A. and Traniello J.F.A. 2001b. Variation in colony structure in the subterranean termite *Reticulitermes flavipes*. *Behav Ecol Sociobiol* 49: 236-243.

Rosengaus, R.B. and Traniello, J.F.A. 2001c. Disease susceptibility and the adaptive nature of colony demography in the dampwood termite *Zootermopsis angusticollis*. *Behav. Ecol. Sociobiol.* 50: 546-556.

Brent, C.S. and Traniello, J.F.A. 2001d. Influences of sex-specific stimuli on ovarian maturation in primary and secondary reproductives of the dampwood termite *Zootermopsis angusticollis* Hagen. *Physiological Entomology* 26: 239-247.

Brent, C.S. and Traniello, J.F.A. 2001e. Social regulation of testicular development in primary and secondary males of the dampwood termite *Zootermopsis angusticollis* Hagen (Isoptera: Termopsidae). *Insectes Sociaux* 48: 384-391.

Robson, S. K. and Traniello, J.F.A. 2002a. Transient division of labor and behavioral specialization in the ant *Formica schaufussi*. *Naturwissenschaften* 89:128-131.

Bulmer, M. S. and Traniello, J.F.A. 2002b. Lack of aggression and spatial association of colony members in *Reticulitermes flavipes*. *J. Insect Behavior* 15: 121-126.

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Manuscript and Research Proposal Review

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