



## Deborah M Gordon

Professor of Biology

 Curriculum Vitae available Online

### CONTACT INFORMATION

- **Alternate Contact**

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### Bio

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#### BIO

Deborah M. Gordon is a Professor in the Department of Biology at Stanford University. She studies how ant colonies work without central control using networks of simple interactions, and how these networks evolve in relation to changing environments. She received her PhD from Duke University, then joined the Harvard Society of Fellows, and did postdoctoral research at Oxford and the University of London before joining the Stanford faculty in 1991. Projects include a long-term study of a population of harvester ant colonies in Arizona, studies of the invasive Argentine ant in northern California, arboreal ant trail networks and ant-plant mutualisms in Central America.

#### ACADEMIC APPOINTMENTS

- Professor, Biology
- Member, Bio-X
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

#### HONORS AND AWARDS

- Fellow, Animal Behavior Society (2017)
- Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford (2009-10, 2001-02)
- Fellow, California Academy of Sciences (2007-)
- Guggenheim Fellowship, Guggenheim Foundation (2001-02)
- Gores Award for excellence in teaching, Stanford University (2001)

#### PROGRAM AFFILIATIONS

- Symbolic Systems Program

#### PROFESSIONAL EDUCATION

- BA, Oberlin College , French (1976)
- M.Sc, Stanford University , Biology (1977)

- PhD, Duke University , Zoology (1984)

## LINKS

- Lab Website: <https://web.stanford.edu/~dmgordon>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Professor Deborah M Gordon studies the evolutionary ecology of collective behavior. Ant colonies operate without central control, using local interactions to regulate colony behavior.

## Teaching

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### COURSES

#### 2021-22

- Citizenship in the 21st Century: COLLEGE 102 (Win)
- Ecology and Evolution of Animal Behavior: BIO 145, BIO 245 (Win)

#### 2020-21

- Ecology and Evolution of Animal Behavior: BIO 145, BIO 245 (Win)
- Ecology for Everyone: BIO 30 (Win)

#### 2019-20

- Ecology and Evolution of Animal Behavior: BIO 145, BIO 245 (Win)
- Ecology for Everyone: BIO 30 (Win)

#### 2018-19

- Ecology and Evolution of Animal Behavior: BIO 145, BIO 245 (Win)
- Ecology for Everyone: BIO 30 (Win)
- Measuring and Predicting Spatial Patterns: BIOS 276 (Win)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Neil Khosla, Daniel Shaykevich

#### Postdoctoral Faculty Sponsor

Biplabendu Das

#### Postdoctoral Research Mentor

Katie Fiocca

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (Phd Program)

## Publications

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### PUBLICATIONS

- **Better tired than lost: Turtle ant trail networks favor coherence over short edges.** *PLoS computational biology*  
Chandrasekhar, A., Marshall, J. A., Austin, C., Navlakha, S., Gordon, D. M.

2021; 17 (10): e1009523

- **Gene expression variation in the brains of harvester ant foragers is associated with collective behavior.** *Communications biology*  
Friedman, D. A., York, R. A., Hilliard, A. T., Gordon, D. M.  
2020; 3 (1): 100
- **A distributed algorithm to maintain and repair the trail networks of arboreal ants.** *Scientific reports*  
Chandrasekhar, A. n., Gordon, D. M., Navlakha, S. n.  
2018; 8 (1): 9297
- **The Evolution of the Algorithms for Collective Behavior** *CELL SYSTEMS*  
Gordon, D. M.  
2016; 3 (6): 514-520
- **Effect of Interactions between Harvester Ants on Forager Decisions.** *Frontiers in ecology and evolution*  
Davidson, J. D., Arauco-Aliaga, R. P., Crow, S., Gordon, D. M., Goldman, M. S.  
2016; 4
- **Distributed nestmate recognition in ants** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Esponda, F., Gordon, D. M.  
2015; 282 (1806)
- **The ecology of collective behaviour** *PLoS Biology*  
Gordon, D. M.  
2014
- **The rewards of restraint in the collective regulation of foraging by harvester ant colonies** *NATURE*  
Gordon, D. M.  
2013; 498 (7452): 91-?
- **Movement, Encounter Rate, and Collective Behavior in Ant Colonies.** *Annals of the Entomological Society of America*  
Gordon, D. M.  
2021; 114 (5): 541-546
- **Tree Preference and Temporal Activity Patterns for a Native Ant Community in an Urbanized California Woodland** *JOURNAL OF INSECT BEHAVIOR*  
MacArthur-Waltz, D. J., Nelson, R. A., Lee, G., Gordon, D. M.  
2021
- **Multi-year drought exacerbates long-term effects of climate on an invasive ant species.** *Ecology*  
Couper, L. I., Sanders, N. J., Heller, N. E., Gordon, D. M.  
2021; e03476
- **Goals and Limitations of Modeling Collective Behavior in Biological Systems** *FRONTIERS IN PHYSICS*  
Ouellette, N. T., Gordon, D. M.  
2021; 9
- **Variation and change in behavior: a comment on Loftus et al.** *BEHAVIORAL ECOLOGY*  
Gordon, D. M.  
2021; 32 (1): 21–22
- **Measurement of natural variation of neurotransmitter tissue content in red harvester ant brains among different colonies.** *Analytical and bioanalytical chemistry*  
Shin, M. n., Friedman, D. A., Gordon, D. M., Venton, B. J.  
2020
- **Editorial: An Ecological Perspective on Decision-Making: Empirical and Theoretical Studies in Natural and Natural-Like Environments** *FRONTIERS IN ECOLOGY AND EVOLUTION*  
El Hady, A., Davidson, J. D., Gordon, D. M.  
2019; 7
- **Cancer Ecology and Evolution: Positive interactions and system vulnerability.** *Current opinion in systems biology*

- Adler, F. R., Gordon, D. M.  
2019; 17: 1–7
- **Distributed Adaptive Search in T Cells: Lessons From Ants** *FRONTIERS IN IMMUNOLOGY*  
Moses, M. E., Cannon, J. L., Gordon, D. M., Forrest, S.  
2019; 10
  - **Distributed Adaptive Search in T Cells: Lessons From Ants.** *Frontiers in immunology*  
Moses, M. E., Cannon, J. L., Gordon, D. M., Forrest, S.  
2019; 10: 1357
  - **The physiology of forager hydration and variation among harvester ant (*Pogonomyrmex barbatus*) colonies in collective foraging behavior** *SCIENTIFIC REPORTS*  
Friedman, D. A., Greene, M. J., Gordon, D. M.  
2019; 9
  - **The physiology of forager hydration and variation among harvester ant (*Pogonomyrmex barbatus*) colonies in collective foraging behavior.** *Scientific reports*  
Friedman, D. A., Greene, M. J., Gordon, D. M.  
2019; 9 (1): 5126
  - **The Ecology of Collective Behavior in Ants** *ANNUAL REVIEW OF ENTOMOLOGY, VOL 64*  
Gordon, D. M., Douglas, A. E.  
2019; 64: 35–50
  - **Measuring collective behavior: an ecological approach.** *Theory in biosciences = Theorie in den Biowissenschaften*  
Gordon, D. M.  
2019
  - **Regulation of harvester ant foraging as a closed-loop excitable system.** *PLoS computational biology*  
Pagliara, R., Gordon, D. M., Leonard, N. E.  
2018; 14 (12): e1006200
  - **The Ecology of Collective Behavior in Ants.** *Annual review of entomology*  
Gordon, D. M.  
2018
  - **The Role of Dopamine in the Collective Regulation of Foraging in Harvester Ants.** *iScience*  
Friedman, D. A., Pilko, A., Skowronska-Krawczyk, D., Krasinska, K., Parker, J. W., Hirsh, J., Gordon, D. M.  
2018
  - **Foraging behavior and locomotion of the invasive Argentine ant from winter aggregations.** *PloS one*  
Burford, B. P., Lee, G., Friedman, D. A., Brachmann, E., Khan, R., MacArthur-Waltz, D. J., McCarty, A. D., Gordon, D. M.  
2018; 13 (8): e0202117
  - **Local Regulation of Trail Networks of the Arboreal Turtle Ant, *Cephalotes goniodontus*** *AMERICAN NATURALIST*  
Gordon, D. M.  
2017; 190 (6): E156–E169
  - **Spatial organization and interactions of harvester ants during foraging activity** *JOURNAL OF THE ROYAL SOCIETY INTERFACE*  
Davidson, J. D., Gordon, D. M.  
2017; 14 (135)
  - **Two lineages that need each other.** *Molecular ecology*  
Gordon, D. M., Friedman, D. A.  
2017; 26 (4): 975-976
  - **Context-dependent expression of the foraging gene in field colonies of ants: the interacting roles of age, environment and task.** *Proceedings. Biological sciences / The Royal Society*  
Ingram, K. K., Gordon, D. M., Friedman, D. A., Greene, M., Kahler, J., Peteru, S.  
2016; 283 (1837)

- **From division of labor to the collective behavior of social insects** *BEHAVIORAL ECOLOGY AND SOCIOBIOLOGY*  
Gordon, D. M.  
2016; 70 (7): 1101-1108
- **The behavioral ecology of variation in social insects.** *Current opinion in insect science*  
Jandt, J. M., Gordon, D. M.  
2016; 15: 40-4
- **Experimental modulation of external microbiome affects nestmate recognition in harvester ants (*Pogonomyrmex barbatus*).** *PeerJ*  
Dosmann, A., Bahet, N., Gordon, D. M.  
2016; 4: e1566
- **Ant Genetics: Reproductive Physiology, Worker Morphology, and Behavior** *ANNUAL REVIEW OF NEUROSCIENCE, VOL 39*  
Friedman, D. A., Gordon, D. M.  
2016; 39: 41-56
- **The evolution of the algorithms for collective behavior** *Cell Systems*  
Gordon, D. M.  
2016: 514-52-
- **From division of labor to the collective behavior of social insects.** *Behavioral ecology and sociobiology*  
Gordon, D. M.  
2015; 70: 1101-1108
- **Interactions Increase Forager Availability and Activity in Harvester Ants** *PLOS ONE*  
Pless, E., Queirolo, J., Pinter-Wollman, N., Crow, S., Allen, K., Mathur, M. B., Gordon, D. M.  
2015; 10 (11)
- **Intermediate disturbance promotes invasive ant abundance** *BIOLOGICAL CONSERVATION*  
Vonshak, M., Gordon, D. M.  
2015; 186: 359-367
- **The invasive Argentine ant *Linepithema humile* (Hymenoptera: Formicidae) in Northern California reserves: from foraging behavior to local spread** *MYRMECOLOGICAL NEWS*  
Gordon, D. M., Heller, N. E.  
2014; 19: 103-110
- **Does an ecological advantage produce the asymmetric lineage ratio in a harvester ant population?** *Oecologia*  
Gordon, D. M., Pilko, A., De Bortoli, N., Ingram, K. K.  
2013; 173 (3): 849-857
- **Water stress strengthens mutualism among ants, trees, and scale insects.** *PLoS biology*  
Pringle, E. G., Akçay, E., Raab, T. K., Dirzo, R., Gordon, D. M.  
2013; 11 (11)
- **Protection Mutualisms and the Community: Geographic Variation in an Ant-Plant Symbiosis and the Consequences for Herbivores** *SOCIOBIOLOGY*  
Pringle, E. G., GORDON, D. M.  
2013; 60 (3): 242-251
- **Fast and Flexible: Argentine Ants Recruit from Nearby Trails** *PLOS ONE*  
Flanagan, T. P., Pinter-Wollman, N. M., Moses, M. E., Gordon, D. M.  
2013; 8 (8)
- **Harvester ants use interactions to regulate forager activation and availability** *ANIMAL BEHAVIOUR*  
Pinter-Wollman, N., Bala, A., Merrell, A., Queirolo, J., Stumpe, M. C., Holmes, S., Gordon, D. M.  
2013; 86 (1): 197-207
- **Harvester ants use interactions to regulate forager activation and availability.** *Animal behaviour*  
Pinter-Wollman, N., Bala, A., Merrell, A., Queirolo, J., Stumpe, M. C., Holmes, S., Gordon, D. M.  
2013; 86 (1): 197-207

- **Colony life history and lifetime reproductive success of red harvester ant colonies** *JOURNAL OF ANIMAL ECOLOGY*  
Ingram, K. K., Pilko, A., Heer, J., Gordon, D. M.  
2013; 82 (3): 540-550
- **Aggression is task dependent in the red harvester ant (*Pogonomyrmex barbatus*)** *BEHAVIORAL ECOLOGY*  
Sturgis, S. J., Gordon, D. M.  
2013; 24 (2): 532-539
- **Interactions with Combined Chemical Cues Inform Harvester Ant Foragers' Decisions to Leave the Nest in Search of Food** *PLOS ONE*  
Greene, M. J., Pinter-Wollman, N., Gordon, D. M.  
2013; 8 (1)
- **Harvester ant colony variation in foraging activity and response to humidity.** *PloS one*  
Gordon, D. M., Dektar, K. N., Pinter-Wollman, N.  
2013; 8 (5)
- **Anternet: The regulation of harvester ant foraging and Internet congestion control** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*  
Prabhakar, B., Dektar, K. N., Gordon, D. M.  
IEEE.2013: 1355–1359
- **Modeling the spread of the Argentine ant into natural areas: Habitat suitability and spread from neighboring sites** *ECOLOGICAL MODELLING*  
Fitzgerald, K., Heller, N., Gordon, D. M.  
2012; 247: 262-272
- **The Dynamics of Foraging Trails in the Tropical Arboreal Ant *Cephalotes goniodontus*** *PLOS ONE*  
Gordon, D. M.  
2012; 7 (11)
- **Plant defense, herbivory, and the growth of *Cordia alliodora* trees and their symbiotic Azteca ant colonies** *OECOLOGIA*  
Pringle, E. G., Dirzo, R., Gordon, D. M.  
2012; 170 (3): 677-685
- **Nest site and weather affect the personality of harvester ant colonies** *BEHAVIORAL ECOLOGY*  
Pinter-Wollman, N., Gordon, D. M., Holmes, S.  
2012; 23 (5): 1022-1029
- **Nest site and weather affect the personality of harvester ant colonies.** *Behavioral ecology : official journal of the International Society for Behavioral Ecology*  
Pinter-Wollman, N., Gordon, D. M., Holmes, S.  
2012; 23 (5): 1022-1029
- **The Regulation of Ant Colony Foraging Activity without Spatial Information** *PLOS COMPUTATIONAL BIOLOGY*  
Prabhakar, B., Dektar, K. N., Gordon, D. M.  
2012; 8 (8)
- **Diversification and phylogeographic structure in widespread Azteca plant-ants from the northern Neotropics** *MOLECULAR ECOLOGY*  
Pringle, E. G., Ramirez, S. R., Bonebrake, T. C., Gordon, D. M., Dirzo, R.  
2012; 21 (14): 3576-3592
- **Effects of Vegetation Cover, Presence of a Native Ant Species, and Human Disturbance on Colonization by Argentine Ants** *CONSERVATION BIOLOGY*  
Fitzgerald, K., Gordon, D. M.  
2012; 26 (3): 525-538
- **Nestmate recognition in ants (Hymenoptera: Formicidae): a review** *MYRMECOLOGICAL NEWS*  
Sturgis, S. J., Gordon, D. M.  
2012; 16: 101-110
- **The effect of individual variation on the structure and function of interaction networks in harvester ants** *JOURNAL OF THE ROYAL SOCIETY INTERFACE*  
Pinter-Wollman, N., Wollman, R., Guetz, A., Holmes, S., Gordon, D. M.  
2011; 8 (64): 1562-1573

- **Twitter in the Ant Nest How does a colony organize its work?** *NATURAL HISTORY*  
Gordon, D. M.  
2011; 119 (6): 10-?
- **Hydrocarbons on Harvester Ant (*Pogonomyrmex barbatus*) Middens Guide Foragers to the Nest** *JOURNAL OF CHEMICAL ECOLOGY*  
Sturgis, S. J., Greene, M. J., Gordon, D. M.  
2011; 37 (5): 514-524
- **Chemical Defense by the Native Winter Ant (*Prenolepis imparis*) against the Invasive Argentine Ant (*Linepithema humile*)** *PLOS ONE*  
Sorrells, T. R., Kuritzky, L. Y., Kauhanen, P. G., Fitzgerald, K., Sturgis, S. J., Chen, J., Dijamco, C. A., Basurto, K. N., Gordon, D. M.  
2011; 6 (4)
- **Colony variation in the collective regulation of foraging by harvester ants** *BEHAVIORAL ECOLOGY*  
Gordon, D. M., Guetz, A., Greene, M. J., Holmes, S.  
2011; 22 (2): 429-435
- **Colony variation in the collective regulation of foraging by harvester ants.** *Behavioral ecology : official journal of the International Society for Behavioral Ecology*  
Gordon, D. M., Guetz, A., Greene, M. J., Holmes, S.  
2011; 22 (2): 429-435
- **The fusion of behavioral ecology and ecology** *BEHAVIORAL ECOLOGY*  
Gordon, D. M.  
2011; 22 (2): 225-230
- **Indirect benefits of symbiotic coccoids for an ant-defended myrmecophytic tree** *ECOLOGY*  
Pringle, E. G., Dirzo, R., Gordon, D. M.  
2011; 92 (1): 37-46
- **Adventures Among Ants: A Global Safari with a Cast of Trillions (Book Review)** *NATURE*  
Book Review Authored by: Gordon, D. M.  
2010; 465 (7295): 163-163
- **Fine-scale genetic structure and dispersal distance in the harvester ant *Pogonomyrmex barbatus*** *HEREDITY*  
Sun, S. S., GORDON, D. M.  
2010; 104 (2): 168-173
- **The intertwined population biology of two Amazonian myrmecophytes and their symbiotic ants** *ECOLOGY*  
Frederickson, M. E., Gordon, D. M.  
2009; 90 (6): 1595-1607
- **How site fidelity leads to individual differences in the foraging activity of harvester ants** *BEHAVIORAL ECOLOGY*  
Beverly, B. D., McLendon, H., Nacu, S., Holmes, S., Gordon, D. M.  
2009; 20 (3): 633-638
- **Nest connectivity and colony structure in unicolonial Argentine ants** *INSECTES SOCIAUX*  
Heller, N. E., Ingram, K. K., GORDON, D. M.  
2008; 55 (4): 397-403
- **Rainfall facilitates the spread, and time alters the impact, of the invasive Argentine ant** *OECOLOGIA*  
Heller, N. E., Sanders, N. J., Shors, J. W., Gordon, D. M.  
2008; 155 (2): 385-395
- **The short-term regulation of foraging in harvester ants** *BEHAVIORAL ECOLOGY*  
Gordon, D. M., Holmes, S., Nacu, S.  
2008; 19 (1): 217-222
- **Male parentage in dependent-lineage populations of the harvester ant *Pogonomyrmex barbatus*** *MOLECULAR ECOLOGY*  
Sun, S. S., Gignoux, C., Gordon, D. M.  
2007; 16 (24): 5149-5155

- **How patrollers set foraging direction in harvester ants** *AMERICAN NATURALIST*  
Greene, M. J., Gordon, D. M.  
2007; 170 (6): 943-948
- **The devil to pay: a cost of mutualism with *Myrmelachista schumanni* ants in 'devil's gardens' is increased herbivory on *Duroia hirsuta* trees** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Frederickson, M. E., Gordon, D. M.  
2007; 274 (1613): 1117-1123
- **Control without hierarchy** *NATURE*  
Gordon, D. M.  
2007; 446 (7132): 143-143
- **Interaction rate informs harvester ant task decisions** *BEHAVIORAL ECOLOGY*  
Greene, M. J., Gordon, D. M.  
2007; 18 (2): 451-455
- **Structural complexity of chemical recognition cues affects the perception of group membership in the ants *Linepithema humile* and *Aphaenogaster cockerelli*** *JOURNAL OF EXPERIMENTAL BIOLOGY*  
Greene, M. J., Gordon, D. M.  
2007; 210 (5): 897-905
- **Seasonal spatial dynamics and causes of nest movement in colonies of the invasive Argentine ant (*Linepithema humile*)** *ECOLOGICAL ENTOMOLOGY*  
Heller, N. E., Gordon, D. M.  
2006; 31 (5): 499-510
- **Brood production and lineage discrimination in the red harvester ant (*Pogonomyrmex barbatus*)** *ECOLOGY*  
Volny, V. P., Greene, M. J., Gordon, D. M.  
2006; 87 (9): 2194-2200
- **Genetic caste determination in harvester ants: Possible origin and maintenance by cyto-nuclear epistasis** *ECOLOGY*  
Linksvayer, T. A., Wade, M. J., Gordon, D. M.  
2006; 87 (9): 2185-2193
- **Forager activation and food availability in harvester ants** *ANIMAL BEHAVIOUR*  
Schafer, R. J., Holmes, S., Gordon, D. M.  
2006; 71: 815-822
- **Linking temporal and spatial scales in the study of an Argentine ant invasion** *BIOLOGICAL INVASIONS*  
Heller, N. E., Sanders, N. J., GORDON, D. M.  
2006; 8 (3): 501-507
- **'Devil's gardens' bedevilled by ants** *NATURE*  
Frederickson, M. E., Greene, M. J., GORDON, D. M.  
2005; 437 (7058): 495-496
- **Task-specific expression of the foraging gene in harvester ants** *MOLECULAR ECOLOGY*  
Ingram, K. K., Oefner, P., GORDON, D. M.  
2005; 14 (3): 813-818
- **Variation in the transition from inside to outside work in the red harvester ant *Pogonomyrmex barbatus*** *INSECTES SOCIAUX*  
Gordon, D. M., Chu, J., Lillie, A., Tissot, M., Pinter, N.  
2005; 52 (3): 212-217
- **The interactive effects of climate, life history, and interspecific neighbours on mortality in a population of seed harvester ants** *ECOLOGICAL ENTOMOLOGY*  
Sanders, N. J., GORDON, D. M.  
2004; 29 (5): 632-637
- **Development of harvester ant colonies alters soil chemistry** *SOIL BIOLOGY & BIOCHEMISTRY*



- Wagner, D., Jones, J. B., GORDON, D. M.  
2004; 36 (5): 797-804
- **Cuticular hydrocarbons act as cues in the interaction network regulating harvester ant task allocation** *Annual Meeting of the Society-for-Integrative-and-Comparative-Biology*  
Greene, M. J., GORDON, D. M.  
OXFORD UNIV PRESS INC.2003: 846-46
  - **Genetic analysis of dispersal dynamics in an invading population of Argentine ants** *ECOLOGY*  
Ingram, K. K., GORDON, D. M.  
2003; 84 (11): 2832-2842
  - **Optimization, conflict, and nonoverlapping foraging ranges in ants** *AMERICAN NATURALIST*  
Adler, F. R., GORDON, D. M.  
2003; 162 (5): 529-543
  - **Social insects - Cuticular hydrocarbons inform task decisions** *NATURE*  
Greene, M. J., GORDON, D. M.  
2003; 423 (6935): 32-32
  - **Resource-dependent interactions and the organization of desert ant communities** *ECOLOGY*  
Sanders, N. J., GORDON, D. M.  
2003; 84 (4): 1024-1031
  - **Community disassembly by an invasive species** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Sanders, N. J., Gotelli, N. J., Heller, N. E., GORDON, D. M.  
2003; 100 (5): 2474-2477
  - **The effects of proximity and colony age on interspecific interference competition between the desert ants *Pogonomyrmex barbatus* and *Aphaenogaster cockerelli*** *AMERICAN MIDLAND NATURALIST*  
Barton, K. E., Sanders, N. J., Gordon, D. M.  
2002; 148 (2): 376-382
  - **Characterization of polymorphic microsatellite loci in the red harvester ant, *Pogonomyrmex barbatus*** *MOLECULAR ECOLOGY NOTES*  
Volny, V. P., GORDON, D. M.  
2002; 2 (3): 302-303
  - **The regulation of foraging activity in red harvester ant colonies** *AMERICAN NATURALIST*  
Gordon, D. M.  
2002; 159 (5): 509-518
  - **Genetic basis for queen-worker dimorphism in a social insect** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Volny, V. P., GORDON, D. M.  
2002; 99 (9): 6108-6111
  - **Resources and the flexible allocation of work in the desert ant, *Aphaenogaster cockerelli*** *INSECTES SOCIAUX*  
Sanders, N. J., GORDON, D. M.  
2002; 49 (4): 371-379
  - **Qualitative and quantitative differences in cuticular hydrocarbons between laboratory and field colonies of *Pogonomyrmex barbatus*** *COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY B-BIOCHEMISTRY & MOLECULAR BIOLOGY*  
Tissot, M., Nelson, D. R., GORDON, D. M.  
2001; 130 (3): 349-358
  - **Effect of weather on infestation of buildings by the invasive Argentine ant, *Linepithema humile* (Hymenoptera : Formicidae)** *AMERICAN MIDLAND NATURALIST*  
Gordon, D. M., Moses, L., Falkovitz-Halpern, M., Wong, E. H.  
2001; 146 (2): 321-328
  - **Task-related environment alters the cuticular hydrocarbon composition of harvester ants** *JOURNAL OF CHEMICAL ECOLOGY*

- Wagner, D., Tissot, M., GORDON, D.  
2001; 27 (9): 1805-1819
- **Novel wax esters and hydrocarbons in the cuticular surface lipids of the red harvester ant, *Pogonomyrmex barbatus*** *COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY B-BIOCHEMISTRY & MOLECULAR BIOLOGY*  
Nelson, D. R., Tissot, M., Nelson, L. J., Fatland, C. L., GORDON, D. M.  
2001; 128 (3): 575-595
  - **Long-term dynamics of the distribution of the invasive Argentine ant, *Linepithema humile*, and native ant taxa in northern California.** *Oecologia*  
Sanders, N. J., Barton, K. E., Gordon, D. M.  
2001; 127 (1): 123-130
  - **Long-term dynamics of the distribution of the invasive Argentine ant, *Linepithema humile*, and native ant taxa in northern California** *OECOLOGIA*  
Sanders, N. J., Barton, K. E., GORDON, D. M.  
2001; 127 (1): 123-130
  - **A trade-off in task allocation between sensitivity to the environment and response time** *JOURNAL OF THEORETICAL BIOLOGY*  
Pereira, H. M., GORDON, D. M.  
2001; 208 (2): 165-184
  - **The effects of interspecific interactions on resource use and behavior in a desert ant** *OECOLOGIA*  
Sanders, N. J., GORDON, D. M.  
2000; 125 (3): 436-443
  - **The effects of interspecific interactions on resource use and behavior in a desert ant.** *Oecologia*  
Sanders, N. J., Gordon, D. M.  
2000; 125 (3): 436-443
  - **Harvester ants utilize cuticular hydrocarbons in nestmate recognition** *JOURNAL OF CHEMICAL ECOLOGY*  
Wagner, D., Tissot, M., Cuevas, W., GORDON, D. M.  
2000; 26 (10): 2245-2257
  - **How resources and encounters affect the distribution of foraging activity in a seed-harvesting ant** *BEHAVIORAL ECOLOGY AND SOCIOBIOLOGY*  
Brown, M. J., GORDON, D. M.  
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