

# Interindividual variability in social insects – “proximal”

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Getting to the start line: how bumblebees and honeybees are visually guided towards their first floral contact. <i>Insectes Sociaux</i> , 2014, 61, 325-336.	0.7	34
2	Genotypic Influence on Aversive Conditioning in Honeybees, Using a Novel Thermal Reinforcement Procedure. <i>PLoS ONE</i> , 2014, 9, e97333.	1.1	19
3	Species-specific influence of group composition on collective behaviors in ants. <i>Behavioral Ecology and Sociobiology</i> , 2014, 68, 1929-1937.	0.6	41
4	Fine individual specialization and elitism among workers of the ant <i>Eciton tuberculatum</i> for a highly specific task: intruder removal. <i>Ethology</i> , 2014, 120, 1185-1198.	0.5	9
6	Animal personality aligns task specialization and task proficiency in a spider society. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 9533-9537.	3.3	59
8	Complex operant learning by worker bumblebees ( <i>Bombus impatiens</i> ): detour behaviour and use of colours as discriminative stimuli. <i>Insectes Sociaux</i> , 2015, 62, 365-377.	0.7	9
9	Developmental plasticity and social specialization in cooperative societies. <i>Animal Behaviour</i> , 2015, 106, 37-42.	0.8	25
10	Ontogeny of Nestmate Recognition in Social Hymenoptera. , 2015, , 165-191.		5
11	Group personality during collective decision-making: a multi-level approach. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20142515.	1.2	61
12	Temporarily social spiders do not show personality-based task differentiation. <i>Animal Behaviour</i> , 2015, 105, 95-102.	0.8	5
13	Long-term behavioural consistency in prey capture but not in web maintenance in a social spider. <i>Behavioral Ecology and Sociobiology</i> , 2015, 69, 1019-1028.	0.6	21
14	Individual and Group Personalities Characterise Consensus Decision-Making in an Ant. <i>Ethology</i> , 2015, 121, 703-713.	0.5	24
15	Influence of task switching costs on colony homeostasis. <i>Die Naturwissenschaften</i> , 2015, 102, 36.	0.6	4
16	Collective resilience in a disturbed environment: stability of the activity rhythm and group personality in <i>Periplaneta americana</i> . <i>Behavioral Ecology and Sociobiology</i> , 2015, 69, 1879-1896.	0.6	9
17	Similar patterns of frequency-dependent selection on animal personalities emerge in three species of social spiders. <i>Journal of Evolutionary Biology</i> , 2015, 28, 1248-1256.	0.8	20
18	Cross-fostering by foreign conspecific queens and slave-making workers influences individual- and colony-level personality. <i>Behavioral Ecology and Sociobiology</i> , 2015, 69, 395-405.	0.6	11
19	The stinging response of the common wasp ( <i>Vespula vulgaris</i> ): plasticity and variation in individual aggressiveness. <i>Insectes Sociaux</i> , 2015, 62, 455-463.	0.7	9
20	Daily Thermal Fluctuations Experienced by Pupae via Rhythmic Nursing Behavior Increase Numbers of Mushroom Body Microglomeruli in the Adult Ant Brain. <i>Frontiers in Behavioral Neuroscience</i> , 2016, 10, 73.	1.0	14

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21	The social mirror for division of labor: what network topology and dynamics can teach us about organization of work in insect societies. <i>Behavioral Ecology and Sociobiology</i> , 2016, 70, 1087-1099.	0.6	34
22	Division of labor is not a process or a misleading concept. <i>Behavioral Ecology and Sociobiology</i> , 2016, 70, 1109-1112.	0.6	28
23	Scaling of work and energy use in social insect colonies. <i>Behavioral Ecology and Sociobiology</i> , 2016, 70, 1047-1061.	0.6	28
24	Ant workers exhibit specialization and memory during raft formation. <i>Die Naturwissenschaften</i> , 2016, 103, 36.	0.6	2
25	Rapidly changing environment modulates the thermoregulatory fanning response in honeybee groups. <i>Animal Behaviour</i> , 2016, 115, 237-243.	0.8	13
26	Reproductive environment affects learning performance in bumble bees. <i>Behavioral Ecology and Sociobiology</i> , 2016, 70, 2053-2060.	0.6	8
27	Soldiers in a Stingless Bee. <i>American Naturalist</i> , 2016, 187, 120-129.	1.0	36
28	Active explorers show low learning performance in a social insect. <i>Environmental Epigenetics</i> , 2017, 63, zow101.	0.9	16
29	Selection favors incompatible signaling in bacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1968-1970.	3.3	5
30	Larvae influence thermoregulatory fanning behavior in honeybees ( <i>Apis mellifera</i> L.). <i>Insectes Sociaux</i> , 2016, 63, 271-278.	0.7	12
31	Social context modulates idiosyncrasy of behaviour in the gregarious cockroach <i>Blaberus discoidalis</i> . <i>Animal Behaviour</i> , 2016, 111, 297-305.	0.8	32
32	Fitness costs of worker specialization for ant societies. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20152572.	1.2	21
33	Nest Maintenance Activity of <i>Dinoponera quadriceps</i> in a Natural Environment. <i>Journal of Insect Behavior</i> , 2016, 29, 162-171.	0.4	3
34	The behavioral ecology of variation in social insects. <i>Current Opinion in Insect Science</i> , 2016, 15, 40-44.	2.2	44
35	Responses to nutritional challenges in ant colonies. <i>Animal Behaviour</i> , 2016, 111, 235-249.	0.8	30
36	Response threshold variance as a basis of collective rationality. <i>Royal Society Open Science</i> , 2017, 4, 170097.	1.1	6
37	Individual and genetic task specialization in policing behaviour in the European honeybee. <i>Animal Behaviour</i> , 2017, 128, 95-102.	0.8	2
38	Fast learning in free-foraging bumble bees is negatively correlated with lifetime resource collection. <i>Scientific Reports</i> , 2017, 7, 496.	1.6	43

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39	Queen personality type predicts nest-guarding behaviour, colony size and the subsequent collective aggressiveness of the colony. <i>Animal Behaviour</i> , 2017, 124, 7-13.	0.8	14
40	Deconstructing Superorganisms and Societies to Address Big Questions in Biology. <i>Trends in Ecology and Evolution</i> , 2017, 32, 861-872.	4.2	45
41	Extreme allomaternal care and unequal task participation by unmated females in a cooperatively breeding spider. <i>Animal Behaviour</i> , 2017, 132, 101-107.	0.8	28
42	Who Are the "Lazy" Ants? The Function of Inactivity in Social Insects and a Possible Role of Constraint: Inactive Ants Are Corpulent and May Be Young and/or Selfish. <i>Integrative and Comparative Biology</i> , 2017, 57, 649-667.	0.9	32
43	Inter-individual variability in the foraging behaviour of traplining bumblebees. <i>Scientific Reports</i> , 2017, 7, 4561.	1.6	43
44	An irreversible division of labor through a sexually dependent system in the clonal plant <i>Iris laevigata</i> (Iridaceae). <i>Ecosphere</i> , 2017, 8, e01757.	1.0	8
45	Sequential social experiences interact to modulate aggression but not brain gene expression in the honey bee ( <i>Apis mellifera</i> ). <i>Frontiers in Zoology</i> , 2017, 14, 16.	0.9	15
46	Intraindividual Behavioral Variability Predicts Foraging Outcome in a Beach-dwelling Jumping Spider. <i>Scientific Reports</i> , 2017, 7, 18063.	1.6	13
47	Spatial fidelity of workers predicts collective response to disturbance in a social insect. <i>Nature Communications</i> , 2018, 9, 1201.	5.8	67
48	Adaptive phenotypic variation among clonal ant workers. <i>Royal Society Open Science</i> , 2018, 5, 170816.	1.1	4
49	Division of labor as a bipartite network. <i>Behavioral Ecology</i> , 2018, 29, 342-352.	1.0	13
50	Do Ants Use Ant Colony Optimization?. <i>Emergence, Complexity and Computation</i> , 2018, , 265-291.	0.2	1
51	The role of personality variation, plasticity and social facilitation in cockroach aggregation. <i>Biology Open</i> , 2018, 7, .	0.6	10
52	Multi-robot replication of ant collective towing behaviours. <i>Royal Society Open Science</i> , 2018, 5, 180409.	1.1	8
53	Within-colony genetic diversity differentially affects foraging, nest maintenance, and aggression in two species of harvester ants. <i>Scientific Reports</i> , 2018, 8, 13868.	1.6	11
54	The interplay between personalities and social interactions affects the cohesion of the group and the speed of aggregation. <i>PLoS ONE</i> , 2018, 13, e0201053.	1.1	17
55	Learning Distinct Chemical Labels of Nestmates in Ants. <i>Frontiers in Behavioral Neuroscience</i> , 2018, 12, 191.	1.0	14
56	Behavioral flexibility promotes collective consistency in a social insect. <i>Scientific Reports</i> , 2018, 8, 15836.	1.6	20

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57	Stress and early experience underlie dominance status and division of labour in a clonal insect. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20181468.	1.2	25
58	Experienced individuals influence the thermoregulatory fanning behaviour in honey bee colonies. <i>Animal Behaviour</i> , 2018, 142, 69-76.	0.8	6
59	Individual behavioural type and group performance in <i>Formica fusca</i> ants. <i>Behavioural Processes</i> , 2018, 157, 402-407.	0.5	20
60	Fitness benefits and emergent division of labour at the onset of group living. <i>Nature</i> , 2018, 560, 635-638.	13.7	80
61	The effect of parasitism on personality in a social insect. <i>Behavioural Processes</i> , 2018, 157, 532-539.	0.5	2
62	Ant nurse workers exhibit behavioural and transcriptomic signatures of specialization on larval stage. <i>Animal Behaviour</i> , 2018, 141, 161-169.	0.8	24
63	Animal Personalities and Behavioral Genetics. , 2019, , 337-339.		0
64	Genomics of Developmental Plasticity in Animals. <i>Frontiers in Genetics</i> , 2019, 10, 720.	1.1	96
65	Differential responses to chemical cues correlate with task performance in ant foragers. <i>Behavioral Ecology and Sociobiology</i> , 2019, 73, 1.	0.6	17
66	Genotypic trade-off between appetitive and aversive capacities in honeybees. <i>Scientific Reports</i> , 2019, 9, 10313.	1.6	12
67	Reconsidering response threshold models – short-term response patterns in thermoregulating bumblebees. <i>Behavioral Ecology and Sociobiology</i> , 2019, 73, 1.	0.6	10
68	Interindividual variation in learning ability in honeybees. <i>Behavioural Processes</i> , 2019, 167, 103918.	0.5	13
69	Foraging strategies are maintained despite workforce reduction: A multidisciplinary survey on the pollen collected by a social pollinator. <i>PLoS ONE</i> , 2019, 14, e0224037.	1.1	30
70	Evolution, phylogenetic distribution and functional ecology of division of labour in trematodes. <i>Parasites and Vectors</i> , 2019, 12, 5.	1.0	15
71	Within-individual behavioural variability and division of labour in social insects. <i>Journal of Experimental Biology</i> , 2019, 222, .	0.8	21
72	Social modulation of individual differences in dance communication in honey bees. <i>Behavioral Ecology and Sociobiology</i> , 2019, 73, 1.	0.6	21
73	The influence of colony traits on the collective behaviour of <i>Myrmica scabrinodis</i> ants. <i>Insect Conservation and Diversity</i> , 2019, 12, 481-491.	1.4	13
74	Behaviourally specialized foragers are less efficient and live shorter lives than generalists in wasp colonies. <i>Scientific Reports</i> , 2019, 9, 5366.	1.6	17

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75	RNA editing is abundant and correlates with task performance in a social bumblebee. <i>Nature Communications</i> , 2019, 10, 1605.	5.8	57
76	Characterization of a Dopamine Transporter and Its Splice Variant Reveals Novel Features of Dopaminergic Regulation in the Honey Bee. <i>Frontiers in Physiology</i> , 2019, 10, 1375.	1.3	5
77	Synthesis of Tinbergen's four questions and the future of sociogenomics. <i>Behavioral Ecology and Sociobiology</i> , 2019, 73, 1.	0.6	57
78	Spare to share? How does interindividual variation in metabolic rate influence food sharing in the honeybee?. <i>Journal of Insect Physiology</i> , 2019, 112, 35-38.	0.9	2
79	Inter-individual variation in honey bee dance intensity correlates with expression of the <i>foraging</i> gene. <i>Genes, Brain and Behavior</i> , 2020, 19, e12592.	1.1	16
80	Social influence and interaction bias can drive emergent behavioural specialization and modular social networks across systems. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20190564.	1.5	12
81	A mechanistic model of how metabolic rate can interact with resource environment to influence foraging success and lifespan. <i>Ecological Modelling</i> , 2020, 416, 108899.	1.2	5
82	Metabolic rate shapes phenotypic covariance among physiological, behavioral, and life-history traits in honeybees. <i>Behavioral Ecology and Sociobiology</i> , 2020, 74, 1.	0.6	8
83	Waste management by ants: the enhancing role of larvae. <i>Animal Behaviour</i> , 2020, 168, 187-198.	0.8	8
84	Activity Patterns and Age-dependent Changes in Behavior in the Clonal Ant <i>Platythyrea punctata</i> . <i>Journal of Insect Behavior</i> , 2020, 33, 149-157.	0.4	3
85	Functional Heterogeneity in Superorganisms: Emerging Trends and Concepts. <i>Annals of the Entomological Society of America</i> , 2021, 114, 562-574.	1.3	14
86	A computational model of task allocation in social insects: ecology and interactions alone can drive specialisation. <i>Swarm Intelligence</i> , 2020, 14, 143-170.	1.3	4
87	Cognitive phenotypes and their functional differences in the honey bee, <i>Apis mellifera</i> . <i>Animal Behaviour</i> , 2020, 165, 117-122.	0.8	8
88	Lipid content influences division of labour in a clonal ant. <i>Journal of Experimental Biology</i> , 2020, 223, .	0.8	14
89	Division of labour promotes the spread of information in colony emigrations by the ant <i>Temnothorax rugatulus</i> . <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20192950.	1.2	14
90	Early Life Experience Shapes Male Behavior and Social Networks in <i>Drosophila</i> . <i>Current Biology</i> , 2021, 31, 486-501.e3.	1.8	27
91	Habitat features and colony characteristics influencing ant personality and its fitness consequences. <i>Behavioral Ecology</i> , 2021, 32, 124-137.	1.0	12
92	The Collective Behavior of Ant Groups Depends on Group Genotypic Composition. <i>Journal of Heredity</i> , 2022, 113, 102-108.	1.0	4

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93	Task syndromes: linking personality and task allocation in social animal groups. <i>Behavioral Ecology</i> , 2021, 32, 1-17.	1.0	22
94	Time-accuracy trade-off and task partitioning of hygienic behavior among honey bee ( <i>Apis mellifera</i> ) workers. <i>Behavioral Ecology and Sociobiology</i> , 2021, 75, 1.	0.6	2
96	Editorial: Context-Dependent Plasticity in Social Species: Feedback Loops Between Individual and Social Environment. <i>Frontiers in Psychology</i> , 2021, 12, 645191.	1.1	6
97	Tachykinin signaling inhibits task-specific behavioral responsiveness in honeybee workers. <i>ELife</i> , 2021, 10, .	2.8	10
98	Body Size and Behavioural Plasticity Interact to Influence the Performance of Free-Foraging Bumble Bee Colonies. <i>Insects</i> , 2021, 12, 236.	1.0	14
99	Beyond spider personality: The relationships between behavioral, physiological, and environmental factors. <i>Ecology and Evolution</i> , 2021, 11, 2974-2989.	0.8	8
101	Variation in personality can substitute for social feedback in coordinated animal movements. <i>Communications Biology</i> , 2021, 4, 469.	2.0	5
102	Response thresholds alone cannot explain empirical patterns of division of labor in social insects. <i>PLoS Biology</i> , 2021, 19, e3001269.	2.6	29
103	An oxytocin/vasopressin-related neuropeptide modulates social foraging behavior in the clonal raider ant. <i>PLoS Biology</i> , 2021, 19, e3001305.	2.6	16
104	Search Behavior of Individual Foragers Involves Neurotransmitter Systems Characteristic for Social Scouting. <i>Frontiers in Insect Science</i> , 2021, 1, .	0.9	3
106	Tandem running by foraging <i>Pachycondyla striata</i> workers in field conditions vary in response to food type, food distance, and environmental conditions. <i>Environmental Epigenetics</i> , 2021, 67, 541-549.	0.9	7
107	Variability in activity differs between castes in the ant <i>Linepithema humile</i> . <i>Ecological Entomology</i> , 2021, 46, 1373-1378.	1.1	5
108	Swarm Robotics: Past, Present, and Future [Point of View]. <i>Proceedings of the IEEE</i> , 2021, 109, 1152-1165.	16.4	124
109	The influence of age and development temperature on the temperature-related foraging risk of <i>Formica cinerea</i> ants. <i>Behavioral Ecology and Sociobiology</i> , 2021, 75, 1.	0.6	3
111	Early social context does not influence behavioral variation at adulthood in ants. <i>Environmental Epigenetics</i> , 2022, 68, 335-344.	0.9	3
112	Experimental increase of worker diversity benefits brood production in ants. <i>Bmc Ecology and Evolution</i> , 2021, 21, 163.	0.7	3
113	Self-Organization and Stigmergy. , 2021, , 793-803.		0
115	Encyclopedia of Social Insects. , 2020, , .		11

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116	The effect of nest topology on spatial organization and recruitment in the red ant <i>Myrmica rubra</i> . <i>Die Naturwissenschaften</i> , 2020, 107, 23.	0.6	8
121	Evolution of Self-Organized Task Specialization in Robot Swarms. <i>PLoS Computational Biology</i> , 2015, 11, e1004273.	1.5	86
122	Changes in Learning and Foraging Behaviour within Developing Bumble Bee ( <i>Bombus terrestris</i> ) Colonies. <i>PLoS ONE</i> , 2014, 9, e90556.	1.1	55
123	A Design Pattern for Decentralised Decision Making. <i>PLoS ONE</i> , 2015, 10, e0140950.	1.1	97
124	A small number of workers with specific personality traits perform tool use in ants. <i>ELife</i> , 2020, 9, .	2.8	16
125	The relationship between individual phenotype and the division of labour in naked mole-rats: itâ€™s complicated. <i>PeerJ</i> , 2020, 8, e9891.	0.9	20
126	The structure of behavioral variation within a genotype. <i>ELife</i> , 2021, 10, .	2.8	30
127	Evidence of cognitive specialization in an insect: proficiency is maintained across elemental and higher-order visual learning but not between sensory modalities in honey bees. <i>Journal of Experimental Biology</i> , 2021, 224, .	0.8	11
128	Collective Homeostasis and Time-resolved Models of Self-organised Task Allocation. , 2016, , .		2
130	Ovary activation does not correlate with pollen and nectar foraging specialization in the bumblebee <i>Bombus impatiens</i> . <i>PeerJ</i> , 2018, 6, e4415.	0.9	2
134	Self-Organization and Stigmergy. , 2020, , 1-11.		2
136	Personality variation improves collective decision-making in cockroaches. <i>Behavioural Processes</i> , 2020, 177, 104147.	0.5	2
140	Metabolic Rate Diversity Shapes Group Performance in Honeybees. <i>American Naturalist</i> , 2022, 199, E156-E169.	1.0	4
141	Individual Variation Does Not Regulate Foraging Response to Humidity in Harvester Ant Colonies. <i>Frontiers in Ecology and Evolution</i> , 2022, 9, .	1.1	2
142	Sociability as a personality trait in animals: methods, causes and consequences. <i>Biological Reviews</i> , 2022, 97, 802-816.	4.7	53
143	Slow-Fast Cognitive Phenotypes and Their Significance for Social Behavior: What Can We Learn From Honeybees?. <i>Frontiers in Ecology and Evolution</i> , 2021, 9, .	1.1	1
144	Behavioural variation among workers promotes feed-forward loops in a simulated insect colony. <i>Royal Society Open Science</i> , 2022, 9, 220120.	1.1	2
146	Socioecology of the Australian Tree Skink ( <i>Egernia striolata</i> ). <i>Frontiers in Ecology and Evolution</i> , 2021, 9, .	1.1	0



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150	When being flexible matters: Ecological underpinnings for the evolution of collective flexibility and task allocation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2116066119.	3.3	2
151	Analysis of Evolved Response Thresholds for Decentralized Dynamic Task Allocation. ACM Transactions on Evolutionary Learning, 2022, 2, 1-30.	2.7	0
152	The ontogeny of selection on genetic diversity in harvester ants. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, .	1.2	1
153	Behavioral variation across the days and lives of honey bees. IScience, 2022, 25, 104842.	1.9	14
154	Workload Distribution and Division of Labor in Cooperative Societies. Quarterly Review of Biology, 2022, 97, 183-210.	0.0	2
155	Environment-dependent benefits of interindividual variation in honey bee recruitment. Animal Behaviour, 2022, 192, 9-26.	0.8	2
157	Resource sharing is sufficient for the emergence of division of labour. Nature Communications, 2022, 13, .	5.8	4
158	Habitat-dependent variation in consistent behavioural traits does not affect the efficiency of resource acquisition in a thermophilic ant. Behavioral Ecology and Sociobiology, 2023, 77, .	0.6	0
159	Evolution of self-organised division of labour driven by stigmergy in leaf-cutter ants. Scientific Reports, 2022, 12, .	1.6	2
160	Individual consistency in the learning abilities of honey bees: cognitive specialization within sensory and reinforcement modalities. Animal Cognition, 2023, 26, 909-928.	0.9	6
161	What is really social about social insect cognition?. Frontiers in Ecology and Evolution, 0, 10, .	1.1	2
162	Explaining workers' inactivity in social colonies from first principles. Journal of the Royal Society Interface, 2023, 20, .	1.5	2
164	Considering variation in bee responses to stressors can reveal potential for resilience. Journal of Applied Ecology, 2023, 60, 1435-1445.	1.9	2
165	Conformity and differentiation are two sides of the same coin. Trends in Ecology and Evolution, 2023, 38, 545-553.	4.2	5
166	How do neonicotinoids affect social bees? Linking proximate mechanisms to ecological impacts. Advances in Insect Physiology, 2023, , 191-253.	1.1	2
167	Bio-inspired Heterogeneity in Swarm Robots. Lecture Notes in Networks and Systems, 2023, , 141-145.	0.5	0
178	Intraspecific variation in invertebrate cognition: a review. Behavioral Ecology and Sociobiology, 2024, 78, .	0.6	0