

# Stanford

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## Rodolfo Dirzo

Associate Dean for Integrative Initiatives in Environmental Justice, Bing Prof in Environmental Science, Professor of Earth System Science and Senior Fellow at the Woods Institute for the Environment

Biology

 Curriculum Vitae available Online

### CONTACT INFORMATION

- **Alternate Contact**

Pamela Hung - Administrative Assistant

**Email** pamhung@stanford.edu

**Tel** 650 736-8005

### Bio

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### BIO

My scientific work examines the study of species interactions in tropical ecosystems from California, Latin America, and other tropical areas of the world. Recent research highlights the decline of animal life (“defaunation”), and how this affects ecosystem processes/services (e.g. disease regulation). I teach ecology, natural history, conservation biology, and biocultural diversity at undergraduate and graduate levels at Stanford, and conduct science education programs with underserved children in the Bay Area and our study sites. My lab includes undergrads, graduate students, postdocs, and visiting scholars from the US, and many other countries. I have co-authored the new Framework for K-12 Science Education.

### ACADEMIC APPOINTMENTS

- Professor, Biology
- Professor, Earth System Science
- Senior Fellow, Stanford Woods Institute for the Environment

### ADMINISTRATIVE APPOINTMENTS

- Co-Director, INOGO Program of the Woods Institute for the Environment, (2011- present)
- Associate Chair for Diversity and Inclusion, School of Earth, Energy and Environment, (2020- present)

### HONORS AND AWARDS

- Pew Scholar in Conservation, The Pew Charitable Trust (1992)
- Outstanding Service Award: Teaching, Organization for Tropical Studies (2002)
- Member, Mexican Academy of Sciences (2003)
- Outstanding Researcher, Biology, National University of Mexico (2003)
- Presidential Award in Ecology, Secretary of Environment, Mexico (2003)
- Foreign Associate, US National Academy of Science (2004)
- Foreign Member, American Academy of Arts and Sciences (2004)

- Member, California Academy of Sciences (2008)
- Medal of Honor (Science),, The State Congress, Morelos, Mexico (2015)
- Merit in Ecology (Research), The Ecological Society of Mexico (2015)
- Miriam Arnold Rollan Prize for Community Service, Stanford University (2016)
- Medal Alfonso L. Herrera: Distinguished Scientist, Universidad Autonoma de Puebla, Mexico (2017)
- Medal for Merit in Research and Education, International Association for Tropical Biology (ATBC) (2017)
- President Miguel Aleman Medal for outstanding work in ecology and environmental problems, Mexico City (2017)
- Medal Luis Cifuentes, Mexican Federation of Biologists, Area of Research Puerto Vallarta, Mexico (2020)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Board Member, Turning Green (2021 - present)
- Board Member, Stop Extinction (2020 - present)
- Group member, Zoonotic Diseases Working Group of International Union of Biological Sciences (2020 - present)
- Committee member, Stanford Biology Diversity Equity and Inclusion (2020 - present)
- Committee member, Stanford Public Art Committee (2019 - present)
- Board Member, Stanford Breadth Governance Board (2019 - present)
- Board Member, Biological Sciences Curriculum Studies (2019 - present)
- Advisory Board, Stanford Bing Over Seas Program (2013 - present)
- Advisory Committee, Jasper Ridge Biological Preserve (2008 - present)

## **PROGRAM AFFILIATIONS**

- Center for Latin American Studies

## **PROFESSIONAL EDUCATION**

- B.Sc., University of Morelos, Mexico , Biology (1972)
- M.Sc., University of Wales , Ecology (1977)
- Ph.D., University of Wales , Ecology (1980)

## **COMMUNITY AND INTERNATIONAL WORK**

- Plant-animal interactions, Mexico, Costa Rica, Amazonia

## **LINKS**

- Dirzo Lab Website: <http://dirzolab.stanford.edu/>

## **Research & Scholarship**

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### **CURRENT RESEARCH AND SCHOLARLY INTERESTS**

My interests are centered on the study of species interactions, trying to understand how the ecology and evolution of plants is affected by other living organisms, particularly animals (herbivores, pollinators, seed dispersal agents, and seed predators) and pathogens. My work is focused on tropical forest ecosystems, particularly in Latin America, particularly Mexico, Costa Rica and Amazonia, but I am also conducting similar studies in other ecosystems as well. More recently, I have been conducting research in East Africa (Kenya, Tanzania), looking at how anthropogenic impact affects ecological interactions between plants and animals.

In the field of conservation biology, I am interested in studying the consequences of anthropogenic impact on the disruption of ecological processes and ecosystem services, including the importance of species interactions in human disease regulation.

Finally, I have a major interest in environmental education and sharing of my experiences in ecology and conservation, with the general public and students of all levels.

## PROJECTS

- Effect of Herbivores on Plant Diversity - National University of Mexico (UNAM)
- Effects of natural enemies (herbivorous animals and fungi) on the ecology of plants in tropical forest ecosystems - Stanford University, in collaboration with UNAM (Mexico), and other Brazilian institutions
- Anthropogenic impact on species interactions in tropical and temperate ecosystems - Stanford University
- Effects of biological enrichment on biodiversity and disease risk in oil palm plantations - Stanford University (Woods Institute)
- Effects of defamation on ecosystem processes and services

## Teaching

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### COURSES

#### 2023-24

- Conservation Biology: A Latin American Perspective: BIO 144, BIO 234, HUMBIO 112 (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105B (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105B (Spr)
- Ornithology: BIO 121, BIO 221 (Spr)
- Sustainability and Civilization: BIO 35, HISTORY 35, POLISCI 35 (Win)
- Where the Wild Things Are: The Ecology and Ethics of Conserving Megafauna: BIO 185, DLCL 170, EALC 170, EARTHSYS 170, GLOBAL 170 (Win)

#### 2022-23

- Bio-Cultural Diversity and Community-Based Conservation in Oaxaca: OSPGEN 63 (Sum)
- Conservation Biology: A Latin American Perspective: BIO 144, BIO 234, HUMBIO 112 (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105B (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105B (Spr)
- Global Change in the Anthropocene: An Iberoamerican Perspective: OSPMADRD 10 (Aut)
- Sustainability and Civilization: BIO 35 (Win)

#### 2021-22

- Conservation Biology: A Latin American Perspective: BIO 144, BIO 234, HUMBIO 112 (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105B (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105A (Win)
- Ecology and Natural History of Jasper Ridge Biological Preserve: EARTHSYS 105B (Spr)
- Global Change in Chile: OSPSANTG 58 (Win)
- Ornithology: BIO 121, BIO 221 (Spr)
- Spanish in Science/Science in Spanish: BIO 208, EARTHSYS 207, LATINAM 207 (Spr)

- Understanding Restoration Ecology from the Lens of Restorative Justice: BIO 106 (Spr)

## 2020-21

- Conservation Biology: A Latin American Perspective: BIO 144, BIO 234, HUMBIO 112 (Spr)
- Ecology and Natural History of Jasper Ridge Biological Preserve: BIO 105B, EARTHSYS 105B (Spr)
- Ornithology: BIO 121, BIO 221 (Spr)

## STANFORD ADVISEES

### Doctoral Dissertation Reader (AC)

Harman Jaggi, Oliver Nguyen

### Doctoral Dissertation Advisor (AC)

TJ Francisco, Luísa Genes, Tenzin Norzin, Chinmay Sonawane

### Master's Program Advisor

Catherine Beck, Alan Cuevas, Samantha Faul, Xavier Gomez, Matt Murphy, Alexandria Quan, Tina Truong

### Doctoral Dissertation Co-Advisor (AC)

Sergio Sanchez

### Undergraduate Major Advisor

Kimberly Cheung

### Doctoral (Program)

Luísa Genes, Audrey Hsi

## GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

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

## Publications

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### PUBLICATIONS

- **Evaluating stealth health and environmental conservation education among diverse youth in California: moving towards narrowing disparities** *JOURNAL OF OUTDOOR AND ENVIRONMENTAL EDUCATION*  
Srivastava, A., Gauloche, S., Dirzo, R., Rodriguez, E.  
2024
- **Mycorrhizal type and tree diversity affect foliar elemental pools and stoichiometry.** *The New phytologist*  
Bönisch, E., Blagodatskaya, E., Dirzo, R., Ferlian, O., Fichtner, A., Huang, Y., Leonard, S. J., Maestre, F. T., von Oheimb, G., Ray, T., Eisenhauer, N.  
2024
- **Habitat protection and removal of encroaching shrubs support the recovery of biodiversity and ecosystem functioning** *CONSERVATION SCIENCE AND PRACTICE*  
Losapio, G., De Moraes, C. M., Dirzo, R., Tscheulin, T., Zouros, N., Mescher, M. C.  
2024
- **Underlying and proximate drivers of biodiversity changes in Mesoamerican biosphere reserves.** *Proceedings of the National Academy of Sciences of the United States of America*  
Auliz-Ortiz, D. M., Benitez-Malvido, J., Arroyo-Rodriguez, V., Dirzo, R., Perez-Farrera, M. A., Luna-Reyes, R., Mendoza, E., Alvarez-Anorve, M. Y., Alvarez-Sanchez, J., Arias-Ataide, D. M., Avila-Cabadilla, L. D., Botello, F., Braasch, et al  
2024; 121 (6): e2305944121
- **Lasting effects of avian-frugivore interactions on seed dispersal and seedling establishment** *JOURNAL OF ECOLOGY*  
Quintero, E., Arroyo, J., Dirzo, R., Jordano, P., Rodriguez-Sanchez, F.

2024

- **Association between anthropization and rodent reservoirs of zoonotic pathogens in Northwestern Mexico.** *PLoS one*  
Mendoza, H., Lopez-Perez, A. M., Rubio, A. V., Barron-Rodriguez, J. J., Mazari-Hiriart, M., Pontifes, P. A., Dirzo, R., Suzan, G.  
2024; 19 (2): e0298976
- **Mixed population trends inside a California protected area: Evidence from long-term community science monitoring** *IBIS*  
Wright-Ueda, J. M., Dirzo, R., McFadden, T. N.  
2023
- **Explaining variation in plant-herbivore associational effects in a tree biodiversity experiment** *JOURNAL OF ECOLOGY*  
Leonard, S. J., Dirzo, R., Eisenhauer, N., Rebollo, R., Schaedler, M., Ferlian, O.  
2023
- **Female philopatry and unsuccessful male dispersal of a top predator in a human-modified landscape revealed by relatedness analysis** *EUROPEAN JOURNAL OF WILDLIFE RESEARCH*  
de Oliveira, M. E., Saranholi, B. H., Miotto, R. A., Souza, A. C., Dirzo, R., Galetti Jr, P. M.  
2023; 69 (5)
- **Tropical Dry Forest Restoration in an Era of Global Change: Ecological and Social Dimensions** *SUSTAINABILITY*  
Campo, J., Giardina, C. P., Dirzo, R.  
2023; 15 (4)
- **The Herbaceous Understory Plant Community in the Context of the Overstory: An Overlooked Component of Tropical Diversity** *DIVERSITY-BASEL*  
Perea, R., Schroeder, J. W., Dirzo, R.  
2022; 14 (10)
- **Modeling multiple ecosystem services and beneficiaries of riparian reforestation in Costa Rica** *ECOSYSTEM SERVICES*  
Langhans, K. E., Schmitt, R. P., Chaplin-Kramer, R., Anderson, C. B., Vargas Bolanos, C., Vargas Cabezas, F., Dirzo, R., Goldstein, J. A., Horangic, T., Miller Granados, C., Powell, T. M., Smith, J. R., Alvarado Quesada, et al  
2022; 57
- **Circling the drain: the extinction crisis and the future of humanity.** *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*  
Dirzo, R., Ceballos, G., Ehrlich, P. R.  
2022; 377 (1857): 20210378
- **Broad-scale climate variation drives the dynamics of animal populations: a global multi-taxa analysis.** *Biological reviews of the Cambridge Philosophical Society*  
Wan, X., Holyoak, M., Yan, C., Le Maho, Y., Dirzo, R., Krebs, C. J., Stenseth, N. C., Zhang, Z.  
2022
- **Frugivore Population Biomass, but Not Density, Affect Seed Dispersal Interactions in a Hyper-Diverse Frugivory Network** *FRONTIERS IN ECOLOGY AND EVOLUTION*  
Genes, L., Losapio, G., Donatti, C. I., Guimaraes Jr, P. R., Dirzo, R.  
2022; 10
- **Predator-prey interactions of terrestrial invertebrates are determined by predator body size and species identity.** *Ecology*  
Kuile, A. M., Apigo, A., Bui, A., DiFiore, B., Forbes, E. S., Lee, M., Orr, D., Preston, D. L., Behm, R., Bogar, T., Childress, J., Dirzo, R., Klope, et al  
1800: e3634
- **Restoration of plant-animal interactions in terrestrial ecosystems** *BIOLOGICAL CONSERVATION*  
Genes, L., Dirzo, R.  
2022; 265
- **On the move: spatial ecology and habitat use of red fox in the Trans-Himalayan cold desert.** *PeerJ*  
Reshamwala, H. S., Raina, P., Hussain, Z., Khan, S., Dirzo, R., Habib, B.  
2022; 10: e13967
- **Rapid morphological change in a small mammal species after habitat fragmentation over the past half-century** *DIVERSITY AND DISTRIBUTIONS*  
Li, J., Dirzo, R., Wang, Y., Zeng, D., Liu, J., Ren, P., Zhong, L., Ding, P.  
2021

- **A review of philopatry and dispersal in felids living in an anthropised world** *Palavras-chave MAMMAL REVIEW*  
De oliveira, M. E., Saranholi, B. H., Dirzo, R., Galetti, P. M.  
2021
- **Differences in mutualistic or predatory interactions between tree and rodent species as revealed by using a double-duplex passive integrated transponder tagging technique** *ACTA OECOLOGICA-INTERNATIONAL JOURNAL OF ECOLOGY*  
Gu, H., Yang, X., Dirzo, R., Zhang, Z.  
2021; 112
- **Phenotypic plasticity in plant defense across life stages: Inducibility, transgenerational induction, and transgenerational priming in wild radish.** *Proceedings of the National Academy of Sciences of the United States of America*  
Sobral, M., Sampedro, L., Neylan, I., Siemens, D., Dirzo, R.  
2021; 118 (33)
- **Effects of Domestic and Wild Ungulate Management on Young Oak Size and Architecture** *SUSTAINABILITY*  
Lopez-Sanchez, A., Roig, S., Dirzo, R., Perea, R.  
2021; 13 (14)
- **Logging drives contrasting animal body-size effects on tropical forest mammal communities** *FOREST ECOLOGY AND MANAGEMENT*  
Gutierrez-Granados, G., Dirzo, R.  
2021; 481
- **Jose Mario Molina: Life and legacy of a man who helped to save Earth's ozone layer.** *Proceedings of the National Academy of Sciences of the United States of America*  
Dirzo, R., Fernandez, A.  
2021; 118 (1)
- **Successful neighbour: Interactions of the generalist carnivore red fox with dogs, wolves and humans for continued survival in dynamic anthropogenic landscapes** *GLOBAL ECOLOGY AND CONSERVATION*  
Reshamwala, H. S., Mahar, N., Dirzo, R., Habib, B.  
2021; 25
- **Human-mediated impacts on biodiversity and the consequences for zoonotic disease spillover.** *Current biology : CB*  
Glidden, C. K., Nova, N., Kain, M. P., Lagerstrom, K. M., Skinner, E. B., Mandle, L., Sokolow, S. H., Plowright, R. K., Dirzo, R., De Leo, G. A., Mordecai, E. A.  
2021; 31 (19): R1342-R1361
- **Transgenerational Plasticity in Flower Color Induced by Caterpillars.** *Frontiers in plant science*  
Sobral, M., Neylan, I. P., Narbona, E., Dirzo, R.  
2021; 12: 617815
- **TROPICAL RAINFOREST FRAGMENTATION AFFECTS PLANT SPECIES RICHNESS, COMPOSITION AND ABUNDANCE DEPENDING ON PLANT-SIZE CLASS AND LIFE HISTORY** *BOTANICAL SCIENCES*  
Aguirre-Jaimes, A., Lopez-Acosta, J., Dirzo, R.  
2021; 99 (1): 92–103
- **Incidence of Galls on Sympatric California Oaks: Ecological and Physiological Perspectives** *DIVERSITY-BASEL*  
Perea, R., Dirzo, R., Bieler, S., Wilson Fernandes, G.  
2021; 13 (1)
- **Forest fragmentation and defaunation drive an unusual ecological cascade: Predation release, monkey population outburst and plant demographic collapse** *BIOLOGICAL CONSERVATION*  
Portela, R. Q., Dirzo, R.  
2020; 252
- **Matching species traits and microsites improves regeneration in mixed oak woodlands** *APPLIED VEGETATION SCIENCE*  
Lopez-Sanchez, A., Johnson, I., Dirzo, R., Perea, R.  
2020
- **Impacts of rodent eradication on seed predation and plant community biomass on a tropical atoll** *BIOTROPICA*  
Kuile, A., Orr, D., Bui, A., Dirzo, R., Klope, M., McCauley, D., Motta, C., Young, H.

2020

- **Biodiversity and ecosystem services in the Campo Rupestre: A road map for the sustainability of the hottest Brazilian biodiversity hotspot** *PERSPECTIVES IN ECOLOGY AND CONSERVATION*  
Fernandes, G., Arantes-Garcia, L., Barbosa, M., Barbosa, N. U., Batista, E. L., Beiroz, W., Resende, F. M., Abrahao, A., Almada, E. D., Alves, E., Alves, N. J., Angrisano, P., Arista, et al  
2020; 18 (4): 213–22
- **Are protected populations of two globular cactus species facing a demographic explosion or just a "bonanza" year?** *JOURNAL OF ARID ENVIRONMENTS*  
Antonini, Y., Dirzo, R., Quitete-Portela, R.  
2020; 179
- **Early plant development depends on embryo damage location: the role of seed size in partial seed predation** *OIKOS*  
Perea, R., Fernandes, G., Dirzo, R.  
2020; 129 (3): 320–30
- **A field experiment to determine the effect of dry-season irrigation on vegetative and reproductive traits in the wet-deciduous tree Bonellia nervosa** *JOURNAL OF TROPICAL ECOLOGY*  
Sanchez, O., Quesada, M., Dirzo, R., Schlichting, C. D.  
2020; 36 (1): 29–35
- **Distinct responses of antagonistic and mutualistic networks to agricultural intensification.** *Ecology*  
Morrison, B. M., Dirzo, R. n.  
2020: e03116
- **Agricultural intensification drives changes in hybrid network robustness by modifying network structure.** *Ecology letters*  
Morrison, B. M., Brosi, B. J., Dirzo, R.  
2019
- **Spatio-temporal variation of biotic and abiotic stress agents determines seedling survival in assisted oak regeneration** *JOURNAL OF APPLIED ECOLOGY*  
Lopez-Sanchez, A., Pelaez, M., Dirzo, R., Fernandes, G., Seminatore, M., Perea, R.  
2019
- **Host plant phylogeny and abundance predict root-associated fungal community composition and diversity of mutualists and pathogens** *JOURNAL OF ECOLOGY*  
Schroeder, J. W., Martin, J. T., Angulo, D. F., Arias-Del Razo, I., Barbosa, J. M., Perea, R., Sebastian-Gonzalez, E., Dirzo, R.  
2019; 107 (4): 1557–66
- **Nurse plant size and biotic stress determine quantity and quality of plant facilitation in oak savannas** *FOREST ECOLOGY AND MANAGEMENT*  
Pelaez, M., Dirzo, R., Fernandes, G., Perea, R.  
2019; 437: 435–42
- **An island of wildlife in a human-dominated landscape: The last fragment of primary forest on the Osa Peninsula's Golfo Dulce coastline, Costa Rica** *PLOS ONE*  
Gutierrez, B., Zambrano, A., Zambrano, S., Gil, C., Bohlman, S., Avellan Arias, E., Mulder, G., Ols, C., Dirzo, R., DeLuycker, A. M., Lewis, K., Broadbent, E. N.  
2019; 14 (3)
- **Rodent community responses to vegetation and landscape changes in early successional stages of tropical dry forest** *FOREST ECOLOGY AND MANAGEMENT*  
Patricia Morales-Diaz, S., Yolotl Alvarez-Anorve, M., Edith Zamora-Espinoza, M., Dirzo, R., Oyama, K., Daniel Avila-Cabadilla, L.  
2019; 433: 633–44
- **Peláez M, Dirzo R, Fernandes GW, Perea R. 2019. Nurse plant size and biotic stress determine quantity and quality of plant facilitation in oak savannas.** *Forest Ecology and Management* 437: 435-442 *Forest Ecology and Management*  
Dirzo, R.  
2019
- **An island of wildlife in a human-dominated landscape: The last fragment of primary forest on the Osa Peninsula's Golfo Dulce coastline, Costa Rica.** *Plos one*  
Gutierrez, B. L., Almeyda Zambrano, A. M., Almeyda Zambrano, S. L., Quispe Gil, C. A., Bohlman, S., Avellan Arias, E., Mulder, G., Ols, C., Dirzo, R., DeLuycker, A. M., Lewis, K., Broadbent, E. N.

2019; 14 (3): e0214390

- López Gutierrez, B., Almeyda Zambrano, A., Almeyda Zambrano, S., Quispe Gil, C.A., Avellan-Arias, E., Mulder, G., Ols, C., Dirzo, R., DeLuycker, A.M., Bohlman, S., Lewis, K., Broadbent, E.N. 2019. An island of wildlife in a human-diminished landscape on the Osa Peninsula's Golfo Dulce coastline, Costa Rica. *PLoS One.* 14(3): e0214390. <https://doi.org/10.1371/journal.pone.0214390> *PLoS One*  
Dirzo, R.  
2019
- **Opening the silvicultural toolbox: A new framework for conserving biodiversity in Chilean timber plantations** *FOREST ECOLOGY AND MANAGEMENT*  
McFadden, T. N., Dirzo, R.  
2018; 425: 75–84
- **Nature Divided, Scientists United: US-Mexico Border Wall Threatens Biodiversity and Binational Conservation** *BIOSCIENCE*  
Peters, R., Ripple, W. J., Wolf, C., Moskvik, M., Carreon-Arroyo, G., Ceballos, G., Cordova, A., Dirzo, R., Ehrlich, P. R., Flesch, A. D., List, R., Lovejoy, T. E., Noss, et al  
2018; 68 (10): 740–43
- **Invasive rat eradication strongly impacts plant recruitment on a tropical atoll** *PLOS ONE*  
Wolf, C. A., Young, H. S., Zilliacus, K. M., Wegmann, A. S., McKown, M., Holmes, N. D., Tershy, B. R., Dirzo, R., Kropidlowski, S., Croll, D. A.  
2018; 13 (7): e0200743
- **Assessing sustainability in North America's ecosystems using criticality and information theory** *PLOS ONE*  
Ramirez-Carrillo, E., Lopez-Corona, O., Toledo-Roy, J. C., Lovett, J. C., de Leon-Gonzalez, F., Osorio-Olvera, L., Equihua, J., Robredo, E., Frank, A., Dirzo, R., Perez-Cirera, V.  
2018; 13 (7): e0200382
- **Community composition and diversity of Neotropical root-associated fungi in common and rare trees** *BIOTROPICA*  
Schroeder, J. W., Martin, J. T., Angulo, D. F., Barbosa, J. M., Perea, R., Arias-Del Razo, I., Sebastian-Gonzalez, E., Dirzo, R.  
2018; 50 (4): 694–703
- **Embryo size as a tolerance trait against seed predation: Contribution of embryo-damaged seeds to plant regeneration** *PERSPECTIVES IN PLANT ECOLOGY EVOLUTION AND SYSTEMATICS*  
Perea, R., Fernandes, G., Dirzo, R.  
2018; 31: 7–16
- **Cumulative effects of transgenerational induction on plant palatability to generalist and specialist herbivores** *WEB ECOLOGY*  
Neylan, I. P., Dirzo, R., Sobral, M.  
2018; 18 (1): 41–46
- **Anthropogenic food subsidies change the pattern of red fox diet and occurrence across Trans-Himalayas, India** *JOURNAL OF ARID ENVIRONMENTS*  
Reshamwala, H. S., Shrotriya, S., Bora, B., Lyngdoh, S., Dirzo, R., Habib, B.  
2018; 150: 15–20
- **Changes in livestock footprint and tree layer coverage in Mediterranean dehesas: a six-decade study based on remote sensing** *INTERNATIONAL JOURNAL OF REMOTE SENSING*  
Lopez-Sanchez, A., Dirzo, R., Roig, S.  
2018; 39 (14): 4727–43
- **Differential tree recruitment in California oak savannas: Are evergreen oaks replacing deciduous oaks?** *FOREST ECOLOGY AND MANAGEMENT*  
Perea, R., Lopez-Sanchez, A., Dirzo, R.  
2017; 399: 1-8
- **Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ceballos, G., Ehrlich, P. R., Dirzo, R.  
2017; 114 (30): E6089–E6096
- **Interacting effects of land use and climate on rodent-borne pathogens in central Kenya** *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Young, H. S., McCauley, D. J., Dirzo, R., Nunn, C. L., Campana, M. G., Agwanda, B., Otarola-Castillo, E. R., Castillo, E. R., Pringle, R. M., Veblen, K. E., Salkeld, D. J., Stewardson, K., Fleischer, et al

2017; 372 (1722)

- **Forest conversion to cattle ranching differentially affects taxonomic and functional groups of Neotropical bats** *BIOLOGICAL CONSERVATION*  
Goncalves, F., Fischer, E., Dirzo, R.  
2017; 210: 343-348
- **Cascading community and ecosystem consequences of introduced coconut palms (*Cocos nucifera*) in tropical islands** *CANADIAN JOURNAL OF ZOOLOGY*  
Young, H. S., Miller-ter Kuile, A., McCauley, D. J., Dirzo, R.  
2017; 95 (3): 139-148
- **Conserving the World's Megafauna and Biodiversity: The Fierce Urgency of Now** *BIOSCIENCE*  
Ripple, W. J., Chapron, G., Vicente Lopez-Bao, J., Durant, S. M., MacDonald, D. W., Lindsey, P. A., Bennett, E. L., Beschta, R. L., Bruskotter, J. T., Campos-Arceiz, A., Corlett, R. T., Darimont, C. T., Dickman, et al  
2017; 67 (3): 197-200
- **Merging paleobiology with conservation biology to guide the future of terrestrial ecosystems** *SCIENCE*  
Barnosky, A. D., Hadly, E. A., Gonzalez, P., Head, J., Polly, P. D., Lawing, A. M., Eronen, J. T., Ackerly, D. D., Alex, K., Biber, E., Blois, J., Brashares, J., Ceballos, et al  
2017; 355 (6325): 594-?
- **Species traits and interaction rules shape a species-rich seed-dispersal interaction network.** *Ecology and evolution*  
Sebastián-González, E. n., Pires, M. M., Donatti, C. I., Guimarães, P. R., Dirzo, R. n.  
2017; 7 (12): 4496–4506
- **Promoting the Educational Success of Children and Youth Learning English Promising Futures Summary** *PROMOTING THE EDUCATIONAL SUCCESS OF CHILDREN AND YOUTH LEARNING ENGLISH: PROMISING FUTURES*  
Takanishi, R., Artiles, A., August, D. L., Botana, X., Conger, D., Duran, R. P., Espinosa, L. M., Garcia, E. E., Genesee, F., Hakuta, K., Hernandez, A., Houtchens, B., MacSwan, et al  
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- **Dual Language Learners and English Learners with Disabilities** *PROMOTING THE EDUCATIONAL SUCCESS OF CHILDREN AND YOUTH LEARNING ENGLISH: PROMISING FUTURES*  
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## PRESENTATIONS

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