**CURRICULUM VITAE**

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# ACADEMIC TRAINING

BSc Agriculture, 1973, University of Buenos Aires, Argentina

MSc, Ecology, 1979, Colorado State University, USA

PhD, Ecology, 1982, Colorado State University, USA

# AWARDS AND HONORS

2013 **Ecological Society of America**, Fellow

2009 **American Association for the Advancement of Science**, Fellow

2004 **Andrew D. White Professor-at-Large, Cornell University**

2003 **American Academy of Arts and Sciences**, USA, Elected Member

2003 **National Academy of Physical and Natural Sciences**, Buenos Aires, Elected Member

2002 **National Academy of Sciences**, Córdoba, Argentina, Elected Member

1993 **Guggenheim Fellow**

2003 **Bernardo Houssay** award for scientific accomplishments, Argentina

1987 **Bernardo Houssay** award for scientific accomplishments, Argentina

# ACADEMIC EXPERIENCE

2010- Julie A. Wrigley Professor of Life Sciences and Sustainability, **Arizona State University**

2005-10 Sloan Lindemann Distinguished Professor of Biology, **Brown University**

2005-08 Director, Environmental Change Initiative, **Brown University**

2005-08 Director, Center for Environmental Studies, **Brown University**

1991-04 Professor, Department of Ecology, School of Agronomy, **University of Buenos Aires**

1982- 04 Research Scientist, **National Research Council**, Argentina

1999 Visiting Scholar, **Imperial College** at Silwood Park

1993-94 Visiting Scholar, Department of Biological Sciences, **Stanford University**, USA

1987-88 Chairman, Department of Ecology, School of Agronomy, **University of Buenos Aires**, Argentina

# 1987-90 Associate Professor, Department of Ecology, School of Agronomy, University of Buenos Aires, Argentina

1985-87 Research Scientist, Natural Resource Ecology Laboratory, **Colorado State University**, USA

1982-83 Assistant Professor, Department of Ecology, School of Agronomy, **University of Buenos Aires**, Argentina

1980-82 Assistant Professor, Range Science Department, **Colorado State University**, USA

**PROFESSIONAL SERVICE**

**Current**

* Co-Director, **SARAS** (South American Institute for Resilience and Sustainability Studies) 2010-
* Chair, External Advisory Board, School of Global Environmental Sustainability, **Colorado State University**, 2012-15.

# Previous

# \* LTER (Long Term Ecological Research) National Advisory Board, National Science Foundation, 2010-13

# \*Jury of Ramon Margalef Prize, Barcelona, Spain, 2008-2011

\*Scientific Advisory Board, **SCOPE Biofuels Project**, 2007-10

\* **Rhode Island, Ocean Special Area Management Plan**, Science Advisory Task Force, 2008

\*Advisor, **National Science Foundation**, Environmental Research and Education, 2007-09

\* Member, Global Agenda Council, **World Economic Forum,** 2008-09

\* President, **SCOPE**, Scientific Committee on Problems of the Environment, 2005-09

\* External Evaluation **CREAF**, Universidad Autónoma de Barcelona, Spain, 2008.

\* Member, Science Council, **The Nature Conservancy**, 2005-07

\* Secretary General, **SCOPE**, Scientific Committee on Problems of the Environment, 2001-05

\* Editorial Board of **Climate Research**, Inter Research, 1992-05

\* Editor of **Global Change Biology**, Blackwell Scientific, 2003-05

\* Editorial Board of **Ecosystems**, Springer Verlag, 1997-2004

\* Editorial Board of **Oecologia**, Springer Verlag, 1994-2004

\* Member at large Governing Board of the **Ecological Society of America**, 2002-04

\* Chair of “**Red LatinoAmericana de Botánica**”2001-2004

\* Scientific Committee for the **International Geosphere-Biosphere Programme (IGBP),** 1994-1996

\* Scientific Steering committee of **Global Change and Terrestrial Ecosystems** **(GCTE)**, a core project of the International Geosphere Biosphere Programme, 1991-1999

\* Leader, Global Change and Terrestrial Ecosystems **(GCTE)**. **Focus 4, Global Change and Ecological Complexity**, 1994-1999

\* Steering committee of **America's Interhemisphere Geo-Biosphere Organization** (**AMIGO**) 1991-1995

\* Scientific Advisory Committee of the **Biodiversity and Ecosystem Functioning: Soils and Sediment,** a program of the Scientific Committee on Problems of the Environment **(SCOPE)**, 1995-1999

\* Scientific Advisory Committee of **Diversitas**, An International Programme of Biodiversity Science, IUBS, SCOPE, UNESCO, ICSU, IGBP-GCTE, and IUMS, 1995- 2001

\* Scientific Steering Committee of **SCOPE**, Scientific Committee on Problems of the Environment, 1998-2001

\* Scientific Steering Committee of “**Red LatinoAmericana de Botánica**”1999-2001

\* Biology Panel, National Research Council of Argentina, 1989-1992

\* Vice-President **Ecological Society of Argentina**, 1991-1993

\* President **Ecological Society of Argentina**, 1997-1999 and 1999-2001

\* Editorial Board of **Vegetatio**, Kluwer academic publishers, 1990-1996

\* Editorial Board of **Global Change Biology**, Blackwell Scientific, 1994-2003

**RESEARCH GRANT EXPERIENCE**

2015-18 Water Availability Controls on Above-Belowground Productivity Partitioning: Herbivory versus Plant Response **National Science Foundation**, (PI) $718,935

2014-19 Drought-Net: A global network to assess terrestrial ecosystem sensitivity to drought **National Science Foundation**, (co-PI) $499,992

2012-13 Abrupt grass-woodland transitions: Determinants and consequences for ecosystem services **National Science Foundation**, $49,798

2012-18LTER: Long-Term Research at the Jornada Basin (LTER VI) **National Science Foundation**, (co-PI) $5,880,000

2012-14Woody-plant encroachment: Degradation or a shift in the portfolio of ecosystem services? **Keck Foundation**, $75,000

2009-13 Precipitation Controls of Carbon and Nitrogen Cycles in Arid-Semiarid Ecosystems **US National Science Foundation**, $799,439

2009-10 Vegetation structure constraints on ANPP in arid ecosystems: assessing the meristem limitation hypothesis **US National Science Foundation**, $14,804

2004-07 Global change and the carbon cycle in arid and semiarid ecosystems: Experiments in the Patagonian steppe. **University of Buenos Aires**

2004-07 Spatial and temporal controls of carbon cycling in arid and semiarid ecosystems **PICT, Agencia Nacional de Promoción Científica y Tecnológica**

2002-04 Ecophysiological consequences of infrequent massive flowering of monocarpic bamboo grasses (*Chusquea* spp) in temperate and tropical South America **US National Science Foundation**

2001-02 Biodiversity effect on ecosystem functioning: Diversity of species, functional groups, patches, and resources. **University of Buenos Aires**

2000-03 Global change effects on primary production in arid ecosystems: The Patagonian steppe as a model ecosystem. PICT, **Agencia Nacional de Promoción Científica y Tecnológica**

1999-06 The role of biodiversity and climate in the functioning of ecosystems: A comparative study of grasslands, savannas, and forests. **InterAmerican Institute for Global Change Research**

1998-01 Ecosystem responses to stratospheric ozone reduction in southernmost South America. **US National Science Foundation**

1998-00 Biodiversity effects on the functioning of ecosystems: Experiments and models at two scales in the Patagonian steppe. **UBA**

1998-00 The effect of global change on the functioning of the Patagonian steppe ecosystem. **Agencia Nacional de Promoción Científica y Tecnológica**

1998-01 Management technology to increase production and decrease erosion in grasslands and steppes. **Agencia Nacional de Promoción Científica y Tecnológica**

1997-01 Production and decomposition controls in the Patagonian steppe. **CONICET**

1997 Global Change Effects on Biodiversity and Ecosystem Functioning: Manipulation of a Keystone Process. **InterAmerican Institute for Global Change Research**

1996 Workshop “Biodiversity Scenarios” at UC Santa Barbara, California, USA. June 1996. **InterAmerican Institute for Global Change Research** and **National Center for Ecological Analysis and Synthesis UC Santa Barbara**

1995 Workshop “Global Change and Ecological Complexity” Cedar Creek, Minnesota, USA, September1995. **Electric Power Research Institute** and **International Geosphere Biosphere Programme**

1995 Workshop “Global Change Impacts on Latin American Terrestrial Ecosystems and Feedbacks to the Globe” Buenos Aires March 1995. **Inter-American Institute for Global Change Research**

1995-98 Ecosystem Responses to Stratospheric Ozone Reduction in Southernmost South America, **US National Science Foundation**

1994-97 Seasonal dynamics of primary production, **UBA**

1994-97 The role of small rainfall events on nitrogen mineralization, **UBA**

1994-97 Constraints on Production and Decomposition in Temperate Semiarid Grasslands, **US National Science Foundation**

1992-95 Sustainability of natural and cultivated systems Inter American Development Bank- **CONICET**

1991-93 Environmental and management effects on plant available water in the Patagonian steppe, **UBA**

1991-93 Nutrient partitioning between shrubs and grasses in the Patagonian steppe, **UBA**

1991-93 Cyclical dynamics of vegetation patches in the Patagonian steppe, **UBA**

1991 Argentina-Chile scientific collaborative award. **Fundación Antorchas**

1991 Competition and facilitation between grasses and shrubs **Fundación Antorchas**

1989-93 Resource partitioning among grasses and shrubs in semi-arid regions, **CONICET**

1989-93 Cyclical succession in the Patagonian steppe. **CONICET**

1988-89 Water dynamics in the Patagonian steppe: A simulation modeling approach **UBA**

1988-89 Water partitioning among grasses and shrubs in the Patagonian arid steppe, **UBA**

1987-88 Grass-shrub interactions in two semi-arid regions, **US National Science Foundation**

1985-88 The effect of defoliation on the community dynamics of a grassland of the Flooding Pampas. **CONICET**

1985-88 Resource partitioning among life forms of the arid steppes. **CONICET**

1983-84 Resource partitioning among life forms in Southern Patagonia. **UBA**

1983-84 Convergence in the partitioning of resources among functional types in two semiarid regions, **US National Science Foundation-CONICET**

**GRADUATE STUDENTS AND POST DOCTORAL FELLOWS**

**Graduate Students**:

Josh Haussler (exp 2018)

Owen McKenna (exp 2016)

Laureano Gherardi 2014

Lara Reichmann, 2011

Pedro Flombaum, 2007

Marselle Alexander 2007

Victoria Marchesini, 2006

M. Laura Yahdjian.2004

Verónica Pancotto, 2004

Pablo Roset, 2000

Esteban Jobbágy, 1998

Adriana Beltrán, 1997

José M. Paruelo, 1991

Martín R. Aguiar, 1991

Rodolfo A. Golluscio, 1990

**Postdoctoral fellows**:

Laureano Gherardi, 2015-

José Anadón 2012-

Lara Reichmann, 2011-12

Erika Sudderth, 2009

M. Laura Yahdjian, 2005

Amy T. Austin, 1997-1999

Elisabeth Huber-Sannwald, 1996-97

Patricia Folgarait, 1995-1997

Silvia Cid, 1995-96

Miguel A. Brizuela, 1991-94

# TEACHING EXPERIENCE

Classes currently being taught at Arizona State University

Ecosystem Ecology (BIO 422/598 SOS 598)

Human Impact on Ecosystem Functioning (SOS494/598; BIO494/598)

Graduate Seminar in Sustainability Science (SOS/ /BIO 591)

Life Sciences Career Paths (BIO 189)

Sustainability Science: Interactions between Human and Environmental Systems (SOS 591)

Classes taught in the past:

Undergraduate Level:

Human Impact on Ecosystem Functioning (BIOL1490), Brown University

Biodiversity (BIOL2430), Brown University

Topics in Conservation Science (BIOL1940), Brown University

Ecology, UBA

Ecosystem Ecology, UBA

Plant Physiology, UBA

Range Ecophysiology (RS 351), Colorado State University

Graduate Level:

Biodiversity, UBA

Ecology of Arid Ecosystems, UBA

Grassland Ecology, UBA

Range Ecosystem Function (RS 651), Colorado State University

Advanced Topics in Ecology, UBA

Functional Diversity in Ecosystems, University of Concepción, Chile

Global Change and Biodiversity, UNAM, Mexico

# PUBLICATIONS (H = 73)

**197**. Knapp, A. K., D. L. Hoover, K. Wilcox, M. Avolio, S. Koerner, K. La Pierre, M. Loik, Y. Luo, O. E. Sala, and M. D. Smith. 2015. Characterizing differences in precipitation regimes of extreme wet and dry years: Implications for climate change experiments. **Global Change Biology** 21: 2624-2633

**196**. Sala, O. E., L. Gherardi, and D. P. C. Peters. 2015. Enhanced Precipitation Variability Effects on Water Losses and Ecosystem Functioning: Differential Response of Arid and Mesic Regions. **Climatic Change** 131: 213-227

**195**. Scheffer, M., J. Bascompte, T. Bjordam, S. Carpenter, L. B. Clarke, C. Folke, P. Marquet, N. M. Mazzeo, M., O. E. Sala, and F. Westley. 2015. Dual Thinking for Scientists. **Ecology and Society** 20(2): 3. doi.org/10.5751/ES-07434-200203

**194**. Vandegehuchte, M. L., Z. A. Sylvain, L. G. Reichmann, C. Milano de Tomasel, U. N. Nielsen, D. H. Wall, and O. E. Sala. 2015. Responses of a desert nematode community to changes in water availability. **Ecosphere** 6 (3):1-15.

**193**. Yahdjian, L., O. E. Sala, and K. M. Havstad. 2015. Rangeland ecosystem services: shifting focus from supply to reconciling supply and demand. **Frontiers in Ecology and the Environment** **13**:44-51.

**192**. Monger, C., O. E. Sala, M. C. Duniway, H. Goldfus, I. A. Meir, R. M. Poch, H. L. Throop, and E. R. Vivoni. 2015. Legacy effects in linked ecological-soil-geomorphic systems of drylands. **Frontiers in Ecology and the Environment** **13**:13-19.

**191**. Peters, D. P., K. M. Havstad, S. R. Archer, and O. E. Sala. 2015. Beyond desertification: new paradigms for dryland landscapes. **Frontiers in Ecology and the Environment** **13**:4-12.

**190**. Sala, O. E. and F. T. Maestre. 2014. Grass-woodland transitions: Determinants and consequences for ecosystem functioning and provisioning of services. **Journal of Ecology** **102**: 1357-1362.

**189**. Anadón, J. D., O. E. Sala, and F. T. Maestre. 2014. Climate change will increase savannas at the expense of forests and treeless vegetation in tropical and subtropical Americas. **Journal of Ecology 102**: 1363-1373.

**188**. Jobbágy, E. and O. E. Sala. 2014. The imprint of crop-choice on global nutrient needs. **Environmental Research Letters** **9**. http://dx.doi.org/10.1088/1748-9326/9/8/084014

**187**. Anadón, J. D., O. E. Sala, B. L. Turner, and E. M. Bennett. 2014. The effect of woody-plant encroachment on livestock production in North and South America. **Proceedings of National** **Academy of Sciences** 111: 12948-12953.

**186**. Reichmann, L. G. and O. E. Sala. 2014. Differential sensitivities of grassland structural components to changes in precipitation mediate productivity response in a desert ecosystem. **Functional Ecology** 28: 1292-1298

**185**. Sylvain, Z. A., D. H. Wall, K. L. Cherwin, D. P. C. Peter, L. G. Reichmann, and O. E. Sala. 2014. Soil animal responses to moisture availability are largely scale, not ecosystem dependent: Insight from a cross-site study. **Global Change Biology** 20: 2631-2643.

**184**. Flombaum, P., O. E. Sala, and E. B. Rastetter. 2014. Interactions among resource partitioning, sampling effect, and facilitation on the biodiversity effect: a modeling approach. **Oecologia** 174: 559-566.

**183**. Yahdjian, L., L. Gherardi, and O. E. Sala. 2014. Grasses have larger response than shrubs to increased nitrogen availability: A fertilization experiment in the Patagonian steppe. **Journal of Arid Environments** **102**:17-20.

**182**. Herrick, J. E., O. E. Sala, and J. W. Karl. 2013. Land degradation and climate change: a sin of omission? **Frontiers in Ecology and the Environment** **11**:283-283.

**181.** Gherardi, L. A., O. E. Sala, and L. Yahdjian. 2013. Preference for different inorganic-nitrogen forms among plant-functional types and species of the Patagonian steppe. **Oecologia** 173: 1075-1081**.**

**180.** Gherardi, L. and O. E. Sala. 2013. Automated rainfall manipulation system: A reliable and inexpensive tool for ecologists. **Ecosphere** 4: art 18.

**179.** Sala, O. E., L. Vivanco, and P. Flombaum. Grassland Ecosystems. 2013. Vol 4 Pages 1-7 in S. A. Levin, editor. **Encyclopedia of Biodiversity (Second Edition)**. Academic Press.

**178.** Peters, D. P. C., S. A. Archer, B. T. Bestelmeyer, M. L. Brooks, J. R. Brown, A. C. Comrie, H. R. Gimblett, J. H. Goldstein, K. M. Havstad, L. López-Hoffman, H. C. Monger, G. S. Okin, A. Rango, O. E. Sala, C. E. Tweedie, and E. R. Vivoni. 2013. Desertification of Rangelands. Pages 239-258 *in* T. R. Seastedt and K. N. Suding, editors. Ecosystem Functions and Services. Elsevier.

**177.** Reichmann, L. G., O. E. Sala, and D. P. C. Peters. 2013. Water controls on nitrogen transformations and stocks in an arid ecosystem. **Ecosphere** 4(1):11. http://dx.doi.org/10.1890/ES12-00263.1

**176.** Reichmann, L. G., O. E. Sala, and D. P. C. Peters. 2013 Precipitation legacies in desert-grassland primary production occur through previous-year tiller density. **Ecology** 94 (2): 435-443.

**175.** Sala, O. E., L. Gherardi, L. Reichmann, E. Jobbágy, and D. Peters. 2012. Legacies of precipitation fluctuations on primary production: Theory and data synthesis. **Philosophical Transactions of the Royal Society B** 367: 3135-3144.

**174.** Schwartz, M. W., J. J. Hellmann, J. M. McLachlan, S. D.F., J. O. Borevitz, J. Brennan, A. E. Camacho, G. Ceballos, J. R. Clark, H. Doremus, R. Early, J. R. Etterson, D. Fielder, J. L. Gill, P. Gonzalez, N. Green, L. Hannah, D. W. Jamieson, J. D., B. A. Minteer, J. Odenbaugh, S. Polasky, D. M. Richardson, T. L. Root, H. D. Safford, O. E. Sala, S. H. Schneider, A. R. Thompson, J. W. Williams, M. Vellend, P. Vitt, and S. Zellmer. 2012. Managed Relocation: integrating the scientific, regulatory and ethical challenges **Bioscience:**  62: 732-743.

**173.** Yao, J., O. E. Sala, and D. Peters. 2013. Cross-site studies "by design": Experiments and observations that provide new insights.*in* D. P. C. Peters, C. Laney, A. Lugo, S. Collins, C. Driscoll, P. Groffman, J. Grove, A. Knapp, T. Kratz, M. Ohman, R. Waide, and J. Yao, editors. Long-Term Trends in Ecological Systems: A Basis for Understanding Responses to Global Change. USDA Agricultural Research Service, Washington, DC, USA.

**172**. Sala, O. E., R. A. Golluscio, W. K. Lauenroth, and P. A. Roset. 2012. Contrasting Nutrient-Capture Strategies in Shrubs and Grasses of a Patagonian Arid Ecosystem. **Journal of Arid Environments** 82: 130-135.

**171**. Peters, D. P. C., J. Yao, O. E. Sala, and J. Anderson. 2012. Directional Climate Change and Potential Reversal of Desertification in Arid and Semiarid Ecosystems. **Global Change Biology** 18-151-163**.**

**170.** Flombaum, P. and O. E. Sala. 2012. Effects of plant species traits on ecosystem processes: Experiments in the Patagonian steppe. **Ecology 93 (2): 227-234.**

**169**. Throop, H., L. Reichmann, O. E. Sala, and S. Archer. 2012. Response of dominant grass and shrub species to water manipulation: An ecophysiological basis for shrub invasion in a Chihuahuan Desert Grassland. **Oecologia** 169:373-383**.**

**168**. Montti, L., P. I. Campanello, M. G. Gatti, C. Blundo, A. T. Austin, O. E. Sala, and G. Goldstein. 2011. Understory bamboo flowering provides a very narrow light window of opportunity for canopy-tree recruitment in a neotropical forest of Misiones, Argentina. **Forest Ecology and Management**. 262:1360-1369.

**167**. Yahdjian, L., L. Gherardi, and O. E. Sala. 2011. Nitrogen limitation in arid-subhumid ecosystems: A meta-analysis of fertilization studies. **Journal Arid Environments** 75:675-680.

**166.** Yahdjian, L. and O. E. Sala. 2011. El Futuro de los Pastizales Sudamericanos. **Interciencia** 36 (2): 153-159.

**165.** Flombaum, P. and O. E. Sala. 2011. Efectos de la biodiversidad sobre el funcionamiento de los ecosistemas. Pages 49-62. In J.A. Simonetti and R. Dirzo, editors. **Conservación Biológica: Perspectivas desde América Latina**. Editorial Universitaria, Universidad de Chile, Santiago.

**164**. Yahdjian, L. and O. E. Sala. 2010. Size of Precipitation Pulses Controls Nitrogen Transformations and Losses in an Arid Patagonian Steppe. **Ecosystems** 13:575-585.

**163**. Richardson, D. M., J. Hellmann, J. McLachlan, D. Sax, M. Schwartz, J. Brennan, P. Gonzalez, T. Root, O. E. Sala, S. Schneider, D. Ashe, A. Camacho, J. Rappaport Clark, R. Early, J. Etterson, D. Fielder, J. Gill, B. Minteer, S. Polasky, H. Safford, A. Thompson, and M. Vellend. 2009. Multidimensional evaluation of managed relocation. **Proceedings of the National Academy of Sciences** 106: 9721-9724.

**162.** Downs, M., and O. E. Sala. 2009. Grasslands.Pages 614-618 *in* S. A. Levin, editor. **The Princeton Guide to Ecology**. Princeton University Press, Princeton.

**161.** Zaller, J. G., Caldwell MM, Flint SD, Ballaré C, Scopel A, and O. E. Sala. 2009. Solar UV-B and warming affect decomposition and earthworms in a fen ecosystem in Tierra del Fuego, Argentina. **Global Change Biology** 15:2493-2502.

**160.** Golluscio, R. A., A. Austin, G. C. García Martínez, M. Gonzalez-Polo, O. E. Sala, and R. B. Jackson. 2009. Sheep grazing decreases organic carbon and nitrogen pools in the Patagonian steppe: combination of direct and indirect effects. **Ecosystems** 12:686-697.

**159**. Marchesini, V. A., O. E. Sala, and A. T. Austin. 2009. Ecological consequences of a massive flowering event of bamboo (Chusquea culeou) in a temperate forest of Patagonia, Argentina. **Journal of Vegetation Science** 20:424-432.

**158**. Sala, O. E., D. Sax, and H. Leslie. 2009. Biodiversity Consequences of Increased Biofuel production. Pages 127-137 in R. W. Howarth and S. Bringezu, editors. **Biofuels: Environmental Consequences and Interactions with Changing Land Use**. Cornell University Press.

**157**. Howarth, R. W., S. Bringezu, L. Martinelli, R. Santoro, D. Messem, and O. E. Sala. 2009. Introduction: Biofuels and the Environment in the 21st Century. Pages 15-36 in R. W. Howarth and S. Bringezu, editors. **Biofuels: Environmental Consequences and Interactions with Changing Land Use**. Cornell University Press, Ithaca.

**156**. Ojima, D., C. Field, P. Leadley, O. E. Sala, D. Messem, J. Petersen, J. Born, L. VanWey, and M. Wright. 2009. Mitigation Strategies: Biofuel Development Considerations to Minimize Impacts on the Socio-Environmental System. Pages 287-302 in R. W. Howarth and S. Bringezu, editors. **Biofuels: Environmental Consequences and Interactions with Changing Land Use**. Cornell University Press, Ithaca.

**155**. Flombaum, P. and O. E. Sala. 2009. Cover is a good predictor of aboveground biomass in arid systems. **Journal of Arid Environments** 73: 597-598.

**154.** Sala, O. E., L. A. Meyerson, and C. Parmesan, editors. 2009. **Biodiversity Change and Human Health: From Ecosystem Services to Spread of Disease**. Island Press, Washington, DC.

**153**. Sala, O. E., L. A. Meyerson, and C. Parmesan. 2009. Changes in biodiversity and their consequences for human health. Pages 1-12 *in* O. E. Sala, L. A. Meyerson, and C. Parmesan, editors. **Biodiversity Change and Human Health: From Ecosystem Services to Spread of Disease**. Island Press, Washington DC.

**152**. Meyerson, L. A., O. E. Sala, A. Froment, C. Friedman, K. Hund-Rinke, P. Martens, A. Mazumder, A. Purohit, M. Thomas, and A. Wilby. 2009. Sustainable allocation of biodiversity to improve human health and well-being. Pages 83-98 *in* O. E. Sala, L. A. Meyerson, and C. Parmesan, editors. **Biodiversity Change and Human Health: From Ecosystem Services to Spread of Disease**. Island Press, Washington DC.

**151**. Meyerson, F. A. B., L. A. Meyerson, C. Parmesan, and O. E. Sala. 2009. Human health, biodiversity and ecosystem services: the intertwined challenging future. Pages 281-285 *in* O. E. Sala, L. A. Meyerson, and C. Parmesan, editors. **Biodiversity Change and Human Health: From Ecosystem Services to Spread of Disease**. Island Press, Washington, DC.

**150.** Lauenroth, W. K., D. G. Milchunas, O. E. Sala, I. Burke, and J. A. Morgan. 2008. Net Primary Production in the Shortgrass Steppe. Pages 270-305 in W. K. Lauenroth and I. Burke, editors. **Ecology of the Shortgrass Steppe**. Oxford University Press, Oxford.

**149.** Melillo, J. M., and O. E. Sala. 2008. Ecosystem Services. Pages 75-115 in E. Chivian and A. Bernstein, editors. **Sustaining Life: How Human Health Depends on Biodiversity**. Oxford University Press, Oxford.

**148**. Flombaum, P., and O. E. Sala. 2008. Higher effect of plant species diversity on productivity in natural than artificial ecosystems. **Proceedings of the National Academy of Sciences**. 105: 6087-6090.

**147**. Yahdjian, L., and O. E. Sala. 2008. Climate Change Impacts on South American Rangelands. **Rangelands**. DOI: 10.2111/1551-501X(2008)30[34:CCIOSA]2.0.CO;2.

**146**. Armas, C., F. I. Pugnaire, and O. E. Sala. 2008. Patch structure dynamics and mechanisms of cyclical succession in a Patagonian steppe (Argentina). **Journal of Arid Environments** 72:1552-1561

**145.** Cipriotti, P. A., P. Flombaum, O. E. Sala, and M. Aguiar. 2008. Does drought control emergence and survival of grass seedlings in semia-arid rangelands? An example with a Patagonian species. **Journal Arid Environments** 72:162-174.

**144.**Cid, M. S., C. M. Ferri, M. A. Brizuela, and O. E. Sala. 2008. Structural heterogeneity and productivity of a tall fescue pasture grazed rotationally by cattle at four stocking densities. **Grassland Science** 54: 9-16.

**143.**Yahdjian, L., and O. E. Sala. 2008. Do litter decomposition and nitrogen mineralization show the same trend in the response to dry and wet years in the Patagonian steppe? **Journal Arid Environments** 72: 687-695.

**142.**Flombaum, P., and O. E. Sala. 2007. A non-destructive and rapid method to estimate biomass and aboveground net primary production in arid environments. **Journal Arid Environments** 69:352-358.

**141**. Knapp, A. K., J. M. Briggs, D. L. Childers, and O. E. Sala. 2007. Estimating Aboveground Net Primary Production in Grassland and Herbaceous Dominated Ecosystems. Pages 27-48 in T. J. Fahey and A. K. Knapp, editors. **Principles and Standards for Measuring Primary Production**. Oxford University Press, Oxford.

**140**. Peters, D., O. Sala, C. Allen, A. Covich, and M. Brunson. 2007. Cascading events in linked ecological and socio-economic systems: Predicting change in an uncertain world. **Frontiers in Ecology and the Environment:**  5 (4): 221-224

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