

CURRICULUM VITAE ABREVIADO

Octubre 2023

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Lugar y fecha de nacimiento: Buenos Aires, Argentina.
8 de diciembre de 1961

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Dirección académica: Grupo de Ecología de la Polinización
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El Dr. Marcelo Aizen se graduó de Licenciado en Ciencias Biológicas en la Universidad de Buenos Aires en 1985 y de Ph.D. en la Universidad de Massachussets (EEUU) en 1992. En el presente, es Investigador Superior del Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) y Profesor Titular del del Departamento de Ecología de la Universidad Nacional del Comahue en Bariloche. Sus investigaciones han estado enfocadas en una diversidad de tópicos básicos y aplicados sobre las relaciones planta-polinizador y la ecología reproductiva de plantas, desde el estudio de las interacciones entre el polen y el pistilo a las

evaluaciones globales de la así llamada crisis de la polinización. Es autor de más de 150 artículos científicos. Algunos de sus artículos han sido publicados en revistas como Science, Nature, PNAS, PloSBiology, Current Biology, Ecology Letters entre otras. En los últimos años, con su grupo han estado estudiando las consecuencias de la invasión del abejorro europeo, *Bombus terrestris*, sobre la biota nativa de la Patagonia, y de las abejas invasoras, en general, sobre la agricultura.

ÁREAS DE INTERES

Interacciones mutualistas planta-animal . Ecología reproductiva de plantas . Ecología de comunidades . Biodiversidad . Conservación

SUBSIDIOS RECIBIDOS

Sigma Xi (1988), International Foundation for Science (1990, 1993, 1995), Universidad Nacional del Comahue (1994, 1996, 1997, 2001), CONICET (1997, 1999, 2005), National Geographic Society (1998, 2002, 2019), Fondo de Ciencia y Técnica (1998, 1999, 2008, 2016, 2018), Wildlife Conservation Society (2000), Fundación Antorchas (2000, 2002), CONICET (2005, 2008), Newton Fund (2018, 2019), European Commission (2023).

PREMIOS

Premio Konex en Ciencia y Tecnología como uno de los 100 científicos más destacados de la última década (2013-2022). Mayo 2023.

Premio Michel Bergeron para investigadores y científicos de América Latina y del Caribe otorgado por la Asociación Interciencia, federación de organizaciones científicas para el avance de la ciencia en las Américas y la Association Francophone pour le Savoir (ACFAS). Setiembre 2022.

Premio "Bunge & Born" en Ciencias Ambientales (junto con los Dres. Cecilia Ezcurra, Alejandro Farji-Brener, Thomas Kitzberger y Eduardo Rapoport). Abril 1999.

Premio "Robert H. Whittaker" de la "Ecological Society of America". Octubre 1996.

Premio "Lorenzo R. Parodi" de la Sociedad Argentina de Botánica. Octubre 1995.

Premio "Eduardo D.P. de Robertis" de la Secretaría de Ciencia y Tecnología de la Argentina. Noviembre 1993.

Premio "Rey Balduino" de la "International Foundation for Science". Mayo 1993.

DIRECCION DE TESIS

14 Tesinas de Licenciatura + 14 Tesis Doctorales (incluyendo dirigidas y co-dirigidas)

PUBLICACIONES

173 artículos científicos

1 libro editado

13 capítulos de libros

16 artículos de divulgación

6 informes técnicos de impacto internacional

5 informes técnicos de impacto nacional

Google Scholar: <https://scholar.google.com.ar/citations?hl=es&user=PIIGRS0AAAAJ>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=7007135615>

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H-index: 70. Número total de citas: 29270. Fuente: Google Scholar (GS); último acceso: Octubre 09, 2023.

Artículos científicos publicados en los últimos cinco años:

1. de Groot, G.S., S. Svampa, **M.A. Aizen**, R. Schmuki, & C.L. Morales. 2023. Disponibilidad espacio-temporal de recursos melíferos en la Región Andino-Norpatagónica, Argentina. *Ecología Austral* 33: 693-707.
2. Strelin, M., N. da Cunha, A. Rubini-Pisano, J. Fornoni, & **M.A. Aizen**. 2023. Darwin's

- inflorescence syndrome is indeed associated with bee pollination. *Plant Reproduction*. <https://doi.org/10.1007/s00497-023-00480-9>
3. Strelin, M. M., Diggle, P. K., & **Aizen, M.A.** 2023. Flower heterochrony and crop yield. *Trends in Plant Science*. <https://doi.org/10.1016/j.tplants.2023.07.013>
 4. **Aizen, M.A.**; Gleiser, G.; Kitzberger, T. A.; Milla, R. 2023. Being a tree crop increases the odds of experiencing yield declines irrespective of pollinator dependence. *Peer Community Journal* 3: e69. <https://doi.org/10.24072/pcjournal.305>
 5. Daykin, G. M., **Aizen, M.A.**, Barrett, L. G., Bartlett, L. J., Batáry, P., Garibaldi, L. A., ... & Hood, A. S. 2023. AgroEcoList 1.0: A checklist to improve reporting standards in ecological research in agriculture. *Plos One*, 18(6), e0285478. <https://doi.org/10.1371/journal.pone.0285478>
 6. Montero-Castaño, A., **Aizen, M.A.**, González-Moreno, P., Cavallero, L., Vilà, M., & Morales, C. L. 2023. Influential factors and barriers change along the invasion continuum of an alien plant. *Biological Invasions* 25: 2977–2991. <https://doi.org/10.1007/s10530-023-03087-3>
 7. Cunha, N.L., & **Aizen, M.A.** 2023. Pollen production per flower increases with floral display size across animal-pollinated flowering plants. *American Journal of Botany* e16180. <https://doi.org/10.1002/ajb2.16180>
 8. Bogo, G., de Groot, G. S., Medici, S., Winter, J., **Aizen, M. A.**, & Morales, C. L. (2023). Honeys from Patagonia revealed notable pesticide residues in small-scale agricultural landscapes in the past decade. *International Journal of Pest Management* (publicado online). <https://doi.org/10.1080/09670874.2023.2185313>
 9. Cunha, N.L., N.P. Chacoff, A. Sáez, R. Schmucki, L. Galetto, M. Devoto, J. Carrasco, M.P. Mazzei, S.E. Castillo, T.P. Palacios, J.L. Vesprini, K. Agostini, A.M. Saraiva, B.A. Woodcock, J. Ollerton, **M.A. Aizen**. 2023. Soybean dependence on biotic pollination decreases with latitude. *Agriculture, Ecosystems & Environment* 347: 108376. <https://doi.org/10.1016/j.agee.2023.108376>
 10. Alejandre, E.M., L. Scherer, J.B. Guinée, **M.A. Aizen**, M. Albrecht, M.V. Balzan, I. Bartomeus, D. Bevk, L.A. Burkle, Yann Clough, Lorna J. Cole, Casey M. Delphia, Lynn V. Dicks, Michael P.D. Garratt, D. Kleijn, A. Kovács-Hostyánszki, Y. Mandelik, R.J. Paxton, T. Petanidou, S. Potts, M. Sárospataki, C.J.E. Schulp, M. Stavrínides, K. Stein, J. C. Stout, H. Szentgyörgyi, A.I. Varnava, B.A. Woodcock, & P.M. van Bodegom. 2023. Characterization factors to assess land use impacts on pollinator abundance in life cycle assessment. *Environmental Science & Technology*. <https://doi.org/10.1021/acs.est.2c05311>
 11. Cunha, N. L., & **Aizen, M.A.** 2023. Reduced pollination in bilateral flowers could reflect selfing avoidance. *Flora* 152220. <https://doi.org/10.1016/j.flora.2023.152220>
 12. Verdú, M., Garrido, J. L., Alcántara, J. M., Alicia, M., Salomón, A., **Aizen, M. A.**, ... & Regino, Z. 2022. RecruitNet: A global database of plant recruitment networks. *Ecology* e3923. <https://doi.org/10.1002/ecy.3923>
 13. Amico, G. C., di Virgilio, A., Schmeda-Hirschmann, G., & **Aizen, M.A.** 2022. Clinal versus disruptive latitudinal variation in fruit traits of a South American mistletoe. *Oecologia*. <https://doi.org/10.1007/s00442-022-05282-w>
 14. Gavini, S.S., Moreno, E., Zamorano-Menay, F., Morales, C.L., & **Aizen, M.A.** 2022. Bumblebee floral neighbors promote nectar robbing in a hummingbird-pollinated plant species in Patagonia. *Arthropod-Plant Interactions* 16: 183-190. <https://doi.org/10.1007/s11829-022-09895-z>
 15. Boyd, R. J., **Aizen, M.A.**, Barahona-Segovia, R.M., Flores-Prado, L., Fontúrbel, F.E.,

- Francoy, T.M., Lopez-Aliste, M., Martinez, L., Morales, C.L., Ollerton, J., Pescott, O.L., Powney, G.D., Saraiva, A.M., Schmucki, R., Zattara, E.E., & Carvell, C. 2022. Inferring trends in pollinator distributions across the Neotropics from publicly available data remains challenging despite mobilization efforts. *Diversity and Distributions* 28:1404–1415. <https://doi.org/10.1111/ddi.13551>
16. **Aizen, M. A.**, Garibaldi, L. A., & Harder, L. D. 2022. Myth and reality of a global crisis for agricultural pollination. *Ecología Austral* 32: 599-820. <https://doi.org/10.25260/EA.22.32.2.1.1875>
 17. Sáez, A., Aguilar, R., Ashworth, L., Gleiser, G., Morales, C. L., Traveset, A., & **M.A. Aizen**. 2022. Managed honeybees decrease pollination limitation in self-compatible but not in self-incompatible crops. *Proceedings of the Royal Society B* 289: 20220086. <https://doi.org/10.1098/rspb.2022.0086>
 18. Cunha, N.L.D., G. Gleiser, A. Sáez, V.R. Chalcoff, C., Tur & **M.A. Aizen**. 2022. Increasing pollen production at high latitudes across animal-pollinated flowering plants. *Global Ecology and Biogeography* 31:940-953. <https://doi.org/10.1111/geb.13469>
 19. Morales, C. L., J. Montalva, M.P. Arbetman, **M.A. Aizen**, A.C. Martins & D.P. Silva. 2022. Does climate change influence the current and future projected distribution of an endangered species? The case of the southernmost bumblebee in the world. *Journal of Insect Conservation* 26:257-269. <https://doi.org/10.1007/s10841-022-00384-5>
 20. Galetto, L., **M.A Aizen**, M.D.C. Arizmendi, B.M. Freitas, L.A. Garibaldi, T.C. Giannini, Ariadna V. Lopes, M.M. do Espírito Santo, M.M. Maués, G. Nates-Parra, J.I. Rodriguez, J.J.G. Quezada-Euán, R. Vandame, B.F. Viana & V.L. Imperatriz-Fonseca. 2022. Risks and opportunities associated with pollinators' conservation and management of pollination services in Latin America. *Ecología Austral* 32: 055-076. <https://doi.org/10.25260/EA.22.32.1.0.1790>
 21. Rosenberger, N. M., **M.A. Aizen**, R.G. Dickson & L.D. Harder. 2022. Behavioural responses by a bumble bee to competition with a niche-constructing congener. *Journal of Animal Ecology* 91:580-592. <https://doi.org/10.1111/1365-2656.13646>
 22. Gavini, S.S., A. Sáez, C. Tur & **M.A. Aizen**. 2021. Pollination success increases with plant diversity in high-Andean communities. *Scientific Reports* 11: 22107 <https://doi.org/10.1038/s41598-021-01611-w>
 23. Osterman, J., **M.A. Aizen**, J. C. Biesmeijer, J. Bosch, B. G. Howlett, D. W. Inouye, C. Jung, D. J. Martins, R. Medel, A. Pauw, C. L. Seymour, and R. J. Paxton. 2021. Global trends in the number and diversity of managed pollinator species. *Agriculture, Ecosystems and Environment* 322:107653. <https://doi.org/10.1016/j.agee.2021.107653>
 24. Garibaldi, L. A., N. Pérez-Méndez, G. D. Cordeiro, A. Hughes, M. Orr, I. Alves-dos-Santos, B. M. Freitas, F. Freitas de Oliveira, G. LeBuhn, I. Bartomeus, **M.A. Aizen**, P. B. Andrade, B. Blochtein, D. Boscolo, P. M. Drumond, M. C. Gaglianone, B. Gemmill-Herren, R. Halinski, C. Krug, M. M. Maués, L. H. Piedade Kiill, M. Pinheiro, C. S. S. Pires, and B. F. Viana. 2021. Negative impacts of dominance on bee communities: does the influence of invasive honey bees differ from native bees? *Ecology*: e03526. <https://doi.org/10.1002/ecy.3526>
 25. Dicks, L. V., T. D. Breeze, H. T. Ngo, D. Senapathi, J. An, **M. A. Aizen**, P. Basu, D. Buchori, L. Galetto, L. A. Garibaldi, B. Gemmill-Herren, B. G. Howlett, V. L. Imperatriz-Fonseca, S. D. Johnson, A. Kovács-Hostyánszki, Y. J. Kwon, H. M. G. Lattorff, T. Lungharwo, C. L. Seymour, A. J. Vanbergen, and S. G. Potts. 2021. A global-

- scale expert assessment of drivers and risks associated with pollinator decline. *Nature, Ecology and Evolution*. <https://doi.org/10.1038/s41559-021-01534-9>
26. Debnam, S., A. Sáez, **M.A. Aizen** & R.M. Callaway. 2021. Exotic insect pollinators and native pollination systems. *Plant Ecology*, 1-14. <https://doi.org/10.1007/s11258-021-01162-0>
 27. Borchardt, K.E., C.L. Morales, **M.A. Aizen** & A.L. Toth. 2021. Plant-pollinator conservation from the perspective of systems-ecology. *Current Opinion in Insect Science* 47: 154-151.
 28. Hünicken, P.L., C.L. Morales, C. L., **M.A. Aizen**, G.K. Anderson, N. García & L.A. Garibaldi. 2021. Insect pollination enhances yield stability in two pollinator-dependent crops. *Agriculture, Ecosystems & Environment*, 320, 107573.
 29. Fernandez, A., A. Sáez, C. Quintero, G. Gleiser & **M.A. Aizen**. 2021 Intentional and unintentional selection during plant domestication: herbivore damage, plant defensive traits and nutritional quality of fruit and seed crops. *New Phytologist* 4: 1586-1598.
 30. Garibaldi, L., **M.A. Aizen**, A. Sáez, G. Gabriela; M. Strelin, L.D. Harder. 2021. The influences of progenitor filtering, domestication selection and the boundaries of nature on the domestication of grain crops. *Functional Ecology* 35: 1998-2011.
 31. Zattara, E. & **M.A. Aizen**. 2021. Worldwide occurrence records suggest a global decline in bee species richness. *One Earth* 4: 114-123.
 32. de Groot, G.S., **M.A. Aizen**, A. Sáez, & C.L. Morales. 2021. Large-scale monoculture reduces honey yield: The case of soybean expansion in Argentina. *Agriculture, Ecosystems & Environment* 306: 107203.
 33. Gleiser, G., N. Leme da Cunha, N., A. Sáez, A., & **M.A. Aizen** (2021). Ecological correlates of crop yield growth and interannual yield variation at a global scale. *Web Ecology* 21: 15-43.
 34. Vanbergen A.J, **M.A. Aizen**, S. Cordeau, L.A. Garibaldi, M.P. Garratt, A. Kovács-Hostyánszki, L. Lecuyer L, H.T. Ngo, S.G. Potts, J. Settele, & E. Skrimizea. 2020. Transformation of agricultural landscapes in the Anthropocene: Nature's contributions to people, agriculture and food security. *Advances in Ecological Research* 63: 193-253.
 35. **Aizen, M.A.**, M.P. Arbetman, N.P. Chacoff, V.R. Chalcoff, P. Feinsinger, L.A. Garibaldi, L.D. Harder, C.L. Morales, A. Sáez, & A.J. Vanbergen. 2020. Invasive bees and their impact on agriculture. *Advances in Ecological Research* 63: 49-92.
 36. Gavini, S., C. Ezcurra, & **M.A. Aizen**. 2020. Patch-level facilitation fosters high-Andean plant diversity at regional scales. *Journal of Vegetation Science* 31: 1133-1143. (doi: 10.1111/jvs.12922).
 37. Sáez, A., **M.A. Aizen**, S. Medici, S., M. Viel, E. Villalobos, & P. Negri. 2020. Bees increase crop yield in an alleged pollinator-independent almond variety. *Scientific Reports* 10: 3177. (doi: 10.1038/s41598-020-59995-0).
 38. Garibaldi, L.A., A. Sáez, **M.A. Aizen**, T. Fijen, & i. Bartomeus. 2020. Crop pollination management needs flower visitor monitoring and target values. *Journal of Applied Ecology* (publicado online, doi: 10.1111/1365-2664.13574).
 39. Pérez-Méndez, N., G.K.Andersson, F. Requier, J. Hipólito, **M.A. Aizen**, C.L. Morales,, N, García, G.P. Gennari, & L.A. Garibaldi. 2020. The economic cost of losing native

- pollinator species for orchard production. *Journal of Applied Ecology* (publicado online, doi: 10.1111/1365-2664.13561).
40. Gavini, S., G.M. Suárez, C. Ezcurra, & **M.A. Aizen**. 2019. Facilitation of vascular plants by cushion mosses in high-Andean communities. *Alpine Botany* 129: 137-148. (doi: 10.1007/s00035-019-00222-6).
41. **Aizen, M.A.**, S. Aguiar, J.C. Biesmeijer, L.A. Garibaldi, D.W. Inouye, C. Jung, D.J. Martins, R. Medel, C.L. Morales, H. Ngo, A. Pauw, R.J. Paxton, A. Sáez, & C.L. Seymour 2019. Global agricultural productivity is threatened by increasing pollinator dependence without a parallel increase in crop diversification. *Global Change Biology* 25: 3516-3527. (doi: 10.1111/gcb.14736).
42. Harder, L.D., M. Strelin, I. Clocher, M. Kulbaba, & **M.A. Aizen**. 2019. The dynamic mosaic phenotypes of flowering plants. *New Phytologist* 224: 1021-1034. (doi: 10.1111/nph.15916).
43. Coulin C., **M.A. Aizen M.A.**, & L.A. Garibaldi. 2019. Contrasting responses of plants and pollinators to woodland disturbance. *Austral Ecology* 44: 1040-1051. (doi: 10.1111/aec.12771).
44. Gavini, S., C. Ezcurra, & **M.A. Aizen**. 2019. Plant–plant interactions promote alpine diversification. *Evolutionary Ecology* 33: 195–209. (doi: 10.1007/s10682-019-09972-5).
45. Teixido, A.L. & **M.A. Aizen**. 2019. Reproductive assurance weakens pollinator-mediated selection on flower size in an annual mixed-mating species. *Annals of Botany* 123: 1067-1077. (doi: 10.1093/aob/mcz014).
46. Sáez, A., P. Negri, M. Viel, & **M.A. Aizen**. 2019. Pollination efficiency of artificial and bee pollination practices in kiwifruit. *Scientia Horticulturae* 246: 1017-1021.
47. Gleiser, G., K.L. Speziale, S.A. Lambertucci, F. Hiraldo, J.L. Tella, & **M.A. Aizen**. 2019. Uncoupled evolution of male and female cone sizes in an ancient conifer lineage. *International Journal of Plant Sciences* 180: 72-80.
48. **Aizen, M.A.**, C. Smith-Ramírez, C.L. Morales, L. Viel, A. Sáez, R.M. Barahona-Segovia, M.P. Arbetman, J. Montalva, L.A. Garibaldi, D.W. Inouye, & L. D. Harder. 2019. Coordinated global species-importation policies are needed to reduce serious invasions globally: the case of alien bumble bees in South America. *Journal of Applied Ecology* 56: 100–106.
49. Strelin, M.M. & **M.A. Aizen**. 2018. The interplay between ovule number, pollination and resources as determinants of seed set in a modular plant. *PeerJ* 6, e5384.
50. Cavallero L., C.L. Morales, A. Montero-Castaño, J.H. Gowda, & **M.A. Aizen**. 2018. Scale-dependent effects of conspecific flower availability on pollination quantity and quality in an invasive shrub. *Oecologia* 188: 501-513.
51. Nuismer, S.L., B. Week, & **M.A. Aizen**. 2018. Coevolution slows the disassembly of mutualistic networks. *American Naturalist* 192: 490-502.
52. Agüero, J.I., O. Rollin, J.P. Torretta, **M.A. Aizen**, F. Requier, & L.A. Garibaldi. 2018. Impactos de la abeja melífera sobre plantas y abejas silvestres en hábitats naturales. *Ecosistemas* 27: 60-69.
53. Sáez, A., J.M. Morales, C.L. Morales, L.D. Harder & **M.A. Aizen**. 2018. The costs and benefits of pollinator dependence: empirically-based simulations predict raspberry fruit quality. *Ecological Applications* 28: 1215-1222.

54. Speziale, K.L., S.A. Lambertucci, G. Gleiser, J.L. Tella, F. Hiraldo, & **M.A. Aizen**. 2018. An overlooked plant-parakeet mutualism counteracts human overharvesting on an endangered tree. *Royal Society Open Science* 5: 171456. (doi: 10.1098/rsos.171456).
55. Vanbergen, A.J., A. Espíndola, & **M.A. Aizen**. 2018. Risks to pollinators and pollination from invasive alien species. *Nature Ecology & Evolution* 2: 16–25.
56. Gleiser, G., I. Chybicki, S. González-Martínez, & **M.A. Aizen**. 2018. Phenological match drives pollen-mediated gene flow in a temporally dimorphic tree. *Plant Biology* 20: 93–100. (doi:10.1111/plb.12651).