Supplementary material

Table S1. List of plant-pollinator networks compiled in this study.

network	latitude	longitude	Reference
1	-7.92083	-34.92083	Lima, G., Leite, A., Souza, C., Castro, C., de Santana Bezerra, E. (2020). A multilayer network in an herbaceous tropical community reveals multiple roles of floral visitors. Oikos.
2	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
3	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
4	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
5	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
6	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
7	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
8	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
9	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
10	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
11	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
12	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
13	-30.09222	-51.67222	Oleques, S., Vizentin-Bugoni, J., Overbeck, G. (2019). Influence of grazing intensity on patterns and structuring processes in plantpollinator networks in a subtropical grassland. Arthropod-Plant Interactions, 13(5), 757-770.
14	-30.10704	-51.09144	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
15	-30.08898	-51.09143	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
16	-30.10304	-51.23509	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
17	-30.10458	-51.23916	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
18	-30.10524	-51.24328	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
19	-30.17021	-51.11241	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.

20	-30.16236	-51.11332	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
21	-30.15819	-51.11624	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
22	-30.35022	-51.02771	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
23	-30.33753	-51.03851	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.)
24	-30.33957	-51.03858	Beal-Neves, M., Vogel Ely, C., Westerhofer Esteves, M., Blochtein, B., Lahm, R. A., Quadros, E. L., & Abreu Ferreira, P. M. (2020). The Influence of Urbanization and Fire Disturbance on Plant-floral Visitor Mutualistic Networks. Diversity, 12(4), 141.
25	28.27083	-16.63917	Lara-Romero, C., Seguí, J., Pérez-Delgado, A., Nogales, M., & Traveset, A. (2019). Beta diversity and specialization in plant–pollinator networks along an elevational gradient. Journal of Biogeography, 46(7), 1598-1610.
26	28.27083	-16.63917	Lara-Romero, C., Seguí, J., Pérez-Delgado, A., Nogales, M., & Traveset, A. (2019). Beta diversity and specialization in plant–pollinator networks along an elevational gradient. Journal of Biogeography, 46(7), 1598-1610.
27	28.27083	-16.63917	Lara-Romero, C., Seguí, J., Pérez-Delgado, A., Nogales, M., & Traveset, A. (2019). Beta diversity and specialization in plant–pollinator networks along an elevational gradient. Journal of Biogeography, 46(7), 1598-1610.
28	5.24132	10.97873	Dicks, LV, Corbet, SA and Pywell, RF 2002. Compartmentalization in plant–insect flower visitor webs. J. Anim. Ecol. 71: 32–43
29	-29.61667	30.13333	Ollerton, J., S. D. Johnson, L. Cranmer, and S. Kellie. 2003. The pollination ecology of an assemblage of grassland asclepiads in South Africa. Annals of Botany 92:807-834
30	51.57499	-2.5899	Memmott J. 1999. The structure of a plant-pollinator food web. Ecology Letters 2:276-280.
31	-36.45	148.26667	Inouye, D. W., and G. H. Pyke. 1988. Pollination biology in the Snowy Mountains of Australia: comparisons with montane Colorado, USA. Australian Journal of Ecology 13:191-210.
32	36.07539	-79.00184	Motten, A. F. 1982. Pollination Ecology of the Spring Wildflower Community in the Deciduous Forests of Piedmont North Carolina. Doctoral Dissertation thesis, Duke University, Duhram, North Carolina, USA; Motten, A. F. 1986. Pollination ecology of the spring wildflower community of a temperate deciduous forest. Ecological Monographs 56:21-42.
33	45.4	-75.5	Small, E. 1976. Insect pollinators of the Mer Bleue peat bog of Ottawa. Canadian Field Naturalist 90:22-28.
34	18.35389	-77.64528	Ingversen TT (2006). Plant–pollinator interactions on Jamaica and Dominica: The centrality, asymmetry and modularity of networks. Msc thesis (Univ of Aarhus, Aarhus, Denmark).
35	15.51889	-61.46722	Ingversen TT (2006). Plant–pollinator interactions on Jamaica and Dominica: The centrality, asymmetry and modularity of networks. Msc thesis (Univ of Aarhus, Aarhus, Denmark).
36	35.03333	135.78333	Kakutani, T., T. Inoue, M. Kato and H. Ichihashi (1990) Insect-flower relationship in the campus of Kyoto University, Kyoto: An overview of the flowering phenology and the seasonal pattern of insect visits. Contribution from the Biological Laboratory, Kyoto University, 27: 465-521.
37	35.65	136.08333	Kato & Miura (1996). Flowering phenology and anthophilous insect community at a threatened natural lowland marsh at Nakaikemi in Tsuruga, Japan. Kyoto University, Vol. 29: 1-48
38	42.2973	3.23522	Bartomeus, I., Vilà, M. & Santamaria, L., 2008. Contrasting effects of invasive plants in plant-pollinator networks. Oecologia 155: 761-770
39	-8.505	-37.20139	Bezerra ELS, Machado ICS, Mello MAR. 2009. Pollination networks of oil-flowers: a tiny world within the smallest of all worlds. Journal of Animal Ecology 78:1096–1101
40	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
41	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A

			quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
42	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
43	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
44	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
45	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
46	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
47	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
48	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
49	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
50	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
51	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
52	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
53	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
54	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
55	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
56	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
57	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A

			quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
58	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
59	-20.40075	57.4661	Kaiser-Bunbury, C. N., S. Muff, J. Memmott, C. B. Müller, and A. Caflisch. 2010. The robustness of pollination networks to the loss of species and interactions: A quantitative approach incorporating pollinator behaviour. Ecology Letters 13:442-452.
60	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
61	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
62	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
63	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
64	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
65	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
66	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
67	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
68	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
69	-4.66667	55.43333	Kaiser-Bunbury CN, Vázquez DP, Stang M, Ghazoul J. 2014. Determinants of the microstructure of plant-pollinator networks. Ecology, 95: 3314-3324.
70	27.95861	-15.5925	Trøjelsgaard, K., Jordano, P., Carstensen, D. W., & Olesen, J. M. (2015). Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B, 282(1802), 20142925.
71	27.95861	-15.5925	Trøjelsgaard, K., Jordano, P., Carstensen, D. W., & Olesen, J. M. (2015). Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B, 282(1802), 20142925.
72	28.26861	-16.60556	Trøjelsgaard, K., Jordano, P., Carstensen, D. W., & Olesen, J. M. (2015). Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B, 282(1802), 20142925.
73	47.5529	12.88416	Benadi, G., Hovestadt, T., Poethke, H. J., & Blüthgen, N. (2014). Specialization and phenological synchrony of plant–pollinator interactions along an altitudinal gradient. Journal of Animal Ecology, 83(3), 639-650.
74	47.53625	12.88638	Benadi, G., Hovestadt, T., Poethke, H. J., & Blüthgen, N. (2014). Specialization and phenological synchrony of plant–pollinator interactions along an altitudinal gradient. Journal of Animal Ecology, 83(3), 639-650.
75	47.5271	12.90783	Benadi, G., Hovestadt, T., Poethke, H. J., & Blüthgen, N. (2014). Specialization and phenological synchrony of plant–pollinator interactions along an altitudinal gradient. Journal of Animal Ecology, 83(3), 639-650.
76	28.26861	-16.60556	Trøjelsgaard, K., Jordano, P., Carstensen, D. W., & Olesen, J. M. (2015). Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B, 282(1802), 20142925.
77	28.26861	-16.60556	Trøjelsgaard, K., Jordano, P., Carstensen, D. W., & Olesen, J. M. (2015). Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B, 282(1802), 20142925.
78	0.28333	34.9	Hagen, M., & Kraemer, M. (2010). Agricultural surroundings support flower–visitor networks in an Afrotropical rain forest. Biological Conservation, 143(7), 1654-1663.
79	28.1	-17.13333	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
80	27.95861	-15.5925	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
81	28.26861	-16.60556	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
82	-19.34167	-43.60611	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.

83	-19.34167	-43.60611	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
84	0.28333	34.9	Hagen, M., & Kraemer, M. (2010). Agricultural surroundings support flower–visitor networks in an Afrotropical rain forest. Biological Conservation, 143(7), 1654-1663.
85	-19.34167	-43.60611	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
86	-18.28056	-52.04806	Souza, C. S., Maruyama, P. K., Aoki, C., Sigrist, M. R., Raizer, J., Gross, C. L., & de Araujo, A. C. (2018). Temporal variation in plant–pollinator networks from seasonal tropical environments: higher specialization when resources are scarce. Journal of Ecology, 106(6), 2409-2420.
87	-19.58118	-57.03967	Souza, C. S., Maruyama, P. K., Aoki, C., Sigrist, M. R., Raizer, J., Gross, C. L., & de Araujo, A. C. (2018). Temporal variation in plant–pollinator networks from seasonal tropical environments: higher specialization when resources are scarce. Journal of Ecology, 106(6), 2409-2420.
88	-21.70111	-57.885	Souza, C. S., Maruyama, P. K., Aoki, C., Sigrist, M. R., Raizer, J., Gross, C. L., & de Araujo, A. C. (2018). Temporal variation in plant–pollinator networks from seasonal tropical environments: higher specialization when resources are scarce. Journal of Ecology, 106(6), 2409-2420.
89	-20.544	-54.39833	Souza, C. S., Maruyama, P. K., Aoki, C., Sigrist, M. R., Raizer, J., Gross, C. L., & de Araujo, A. C. (2018). Temporal variation in plant–pollinator networks from seasonal tropical environments: higher specialization when resources are scarce. Journal of Ecology, 106(6), 2409-2420.
90	0.28333	34.9	Hagen, M., & Kraemer, M. (2010). Agricultural surroundings support flower–visitor networks in an Afrotropical rain forest. Biological Conservation, 143(7), 1654-1663.
91	39.94436	4.25016	Montero-Castaño, A., & Vilà, M. (2017). Influence of the honeybee and trait similarity on the effect of a non-native plant on pollination and network rewiring. Functional ecology, 31(1), 142-152.
92	28.1	-17.13333	Trøjelsgaard K, Jordano P, Carstensen DW, Olesen JM. 2015 Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B282: 20142925.
93	28.1	-17.13333	Trøjelsgaard K, Jordano P, Carstensen DW, Olesen JM. 2015 Geographical variation in mutualistic networks: similarity, turnover and partner fidelity. Proc. R. Soc. B282: 20142925.
94	-19.34167	-43.60611	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
95	-19.34167	-43.60611	Carstensen, D. W., Trøjelsgaard, K., Ollerton, J., & Morellato, L. P. C. (2018). Local and regional specialization in plant–pollinator networks. Oikos, 127(4), 531-537.
96	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
97	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
98	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
99	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
100	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
101	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering

			species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
102	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
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104	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
105	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
106	27.83333333	99.7	Zhao, Y. H., Memmott, J., Vaughan, I. P., Li, H. D., Ren, Z. X., Lázaro, A., ... & Wang, H. (2021). The impact of a native dominant plant, Euphorbia jolkin ii, on plant–flower visitor networks and pollen deposition on stigmas of co-flowering species in subalpine meadows of Shangri-La, SW China. Journal of Ecology, 109(5), 2107-2120.
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108	58.5801	23.5580	Motivans Švara, E., Ştefan, V., Sossai, E., Feldmann, R., Aguilon, D. J., Bontsutsnaja, A., ... & Neuenkamp, L. (2021). Effects of different types of low-intensity management on plant-pollinator interactions in Estonian grasslands. Ecology and evolution, 11(23), 16909-16926.
109	58.7169	23.7718	Motivans Švara, E., Ştefan, V., Sossai, E., Feldmann, R., Aguilon, D. J., Bontsutsnaja, A., ... & Neuenkamp, L. (2021). Effects of different types of low-intensity management on plant-pollinator interactions in Estonian grasslands. Ecology and evolution, 11(23), 16909-16926.

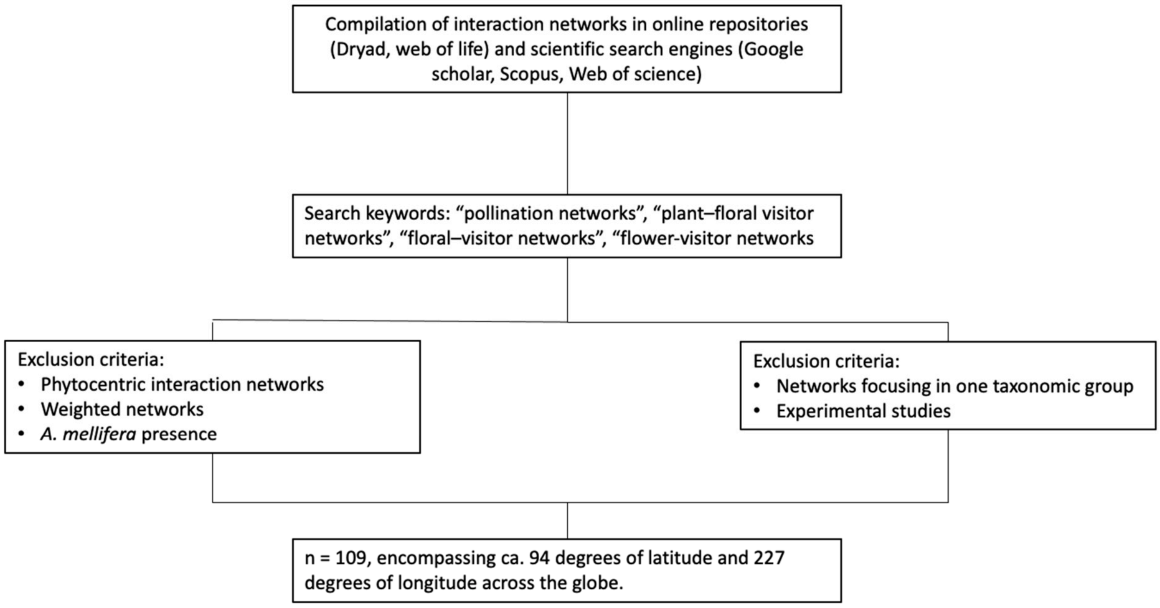

Figure S1. Flow diagram showing how the interaction networks search was done and what were the exclusion and inclusion criteria of this study.

File S1. Detailed information on the indices used to measure species centrality.

Species degree is the number of direct links of each species to other species and, therefore, species with higher number of links are more central than species with lower number of links (Borrett 2013).

Borrett, S. R. (2013). Throughflow centrality is a global indicator of the functional importance of species in ecosystems. Ecological Indicators, 32, 182-196.

$\boldsymbol{Betweeness(i) = \Sigma_{s \neq i \neq t \in i} = \frac{\sigma_{st}(i)}{\sigma_{st}}}$, where σ_{st} is total number of shortest paths from node *s* to node *t* and $\sigma_{st}(i)$ is the number of those paths that pass through *i*. Specifically, betweenness centrality quantifies the number of times a node acts as a bridge along the shortest path between two other nodes (Brandes 2008).

Brandes, U. (2008). On Variants of Shortest-Path Betweenness Centrality and their Generic Computation. Social Networks, 30, 136–145.

Species strength (i) **=** dji^P depicts the strength or dependence of the plant species i on the bee species j (i.e., the fraction of all bee visits accounted for by this particular bee species). Based on these dependences, we estimated species strength, which is the sum of dependencies of each species across all of its partners (counterpart). Specifically, species strength represents a quantitative extension of species degree, in which species with greater strength will represent proportionally higher visitation (Bascompte and Jordano, 2007).

Bascompte, J., & Jordano, P. (2007). Plant-animal mutualistic networks: the architecture of biodiversity. Annual Review of Ecology, Evolution, and Systematics, 567-593.

Katz centralitty (i) = $\boldsymbol{x_i = \alpha \sum_j a_{ij} x_j}$ $+\beta$, where *A* is the adjacency matrix of the graph *G* with eigenvalues λ. The parameter β controls the initial centrality and $\alpha < \frac{1}{\lambda_{max}}$. Specifically, it computes the centrality for a node based on the centrality of its immediate neighbors (direct paths) and also all other nodes in the network that connect to the node under consideration through these immediate neighbors (indirect paths) (Katz 1953).

Katz, L. (1953). A new status index derived from sociometric analysis. Psychometrika, 18: 39–43.

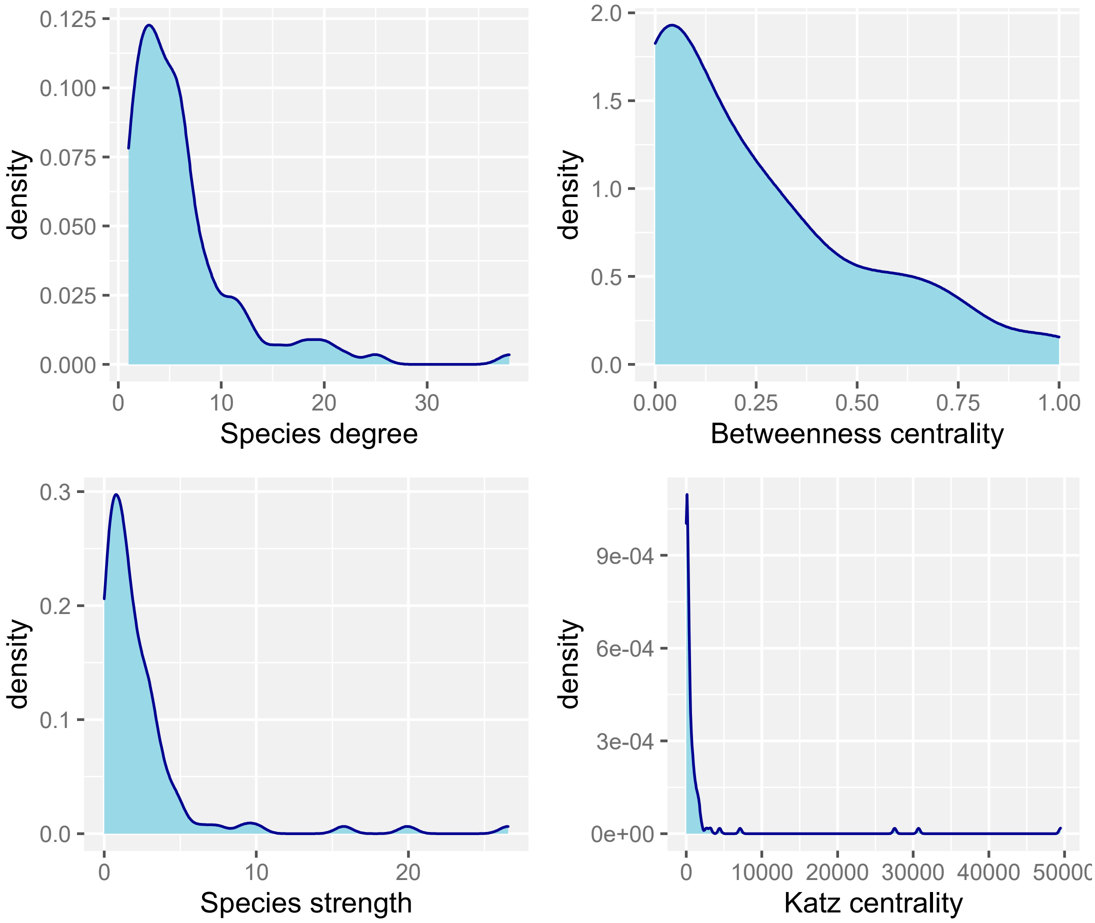

Figure S2. Density plots showing the distribution in the values of species degree, betweenness centrality, species strength, and Katz centrality.

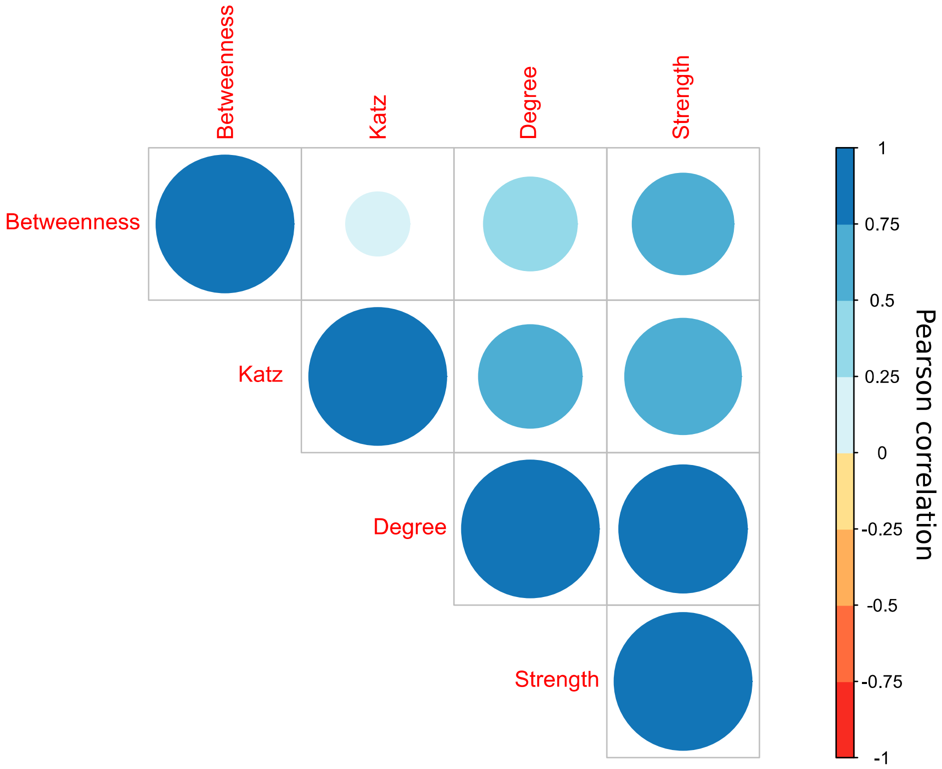

Figure S3. Correlation coefficients between each species-level descriptor used to measure the interactive role of *Apis mellifera*. Dark blue and bigger circles indicate a strong and positive correlation between centrality metrics, while dark red and bigger circles indicate a strong and negative correlation between centrality metrics.

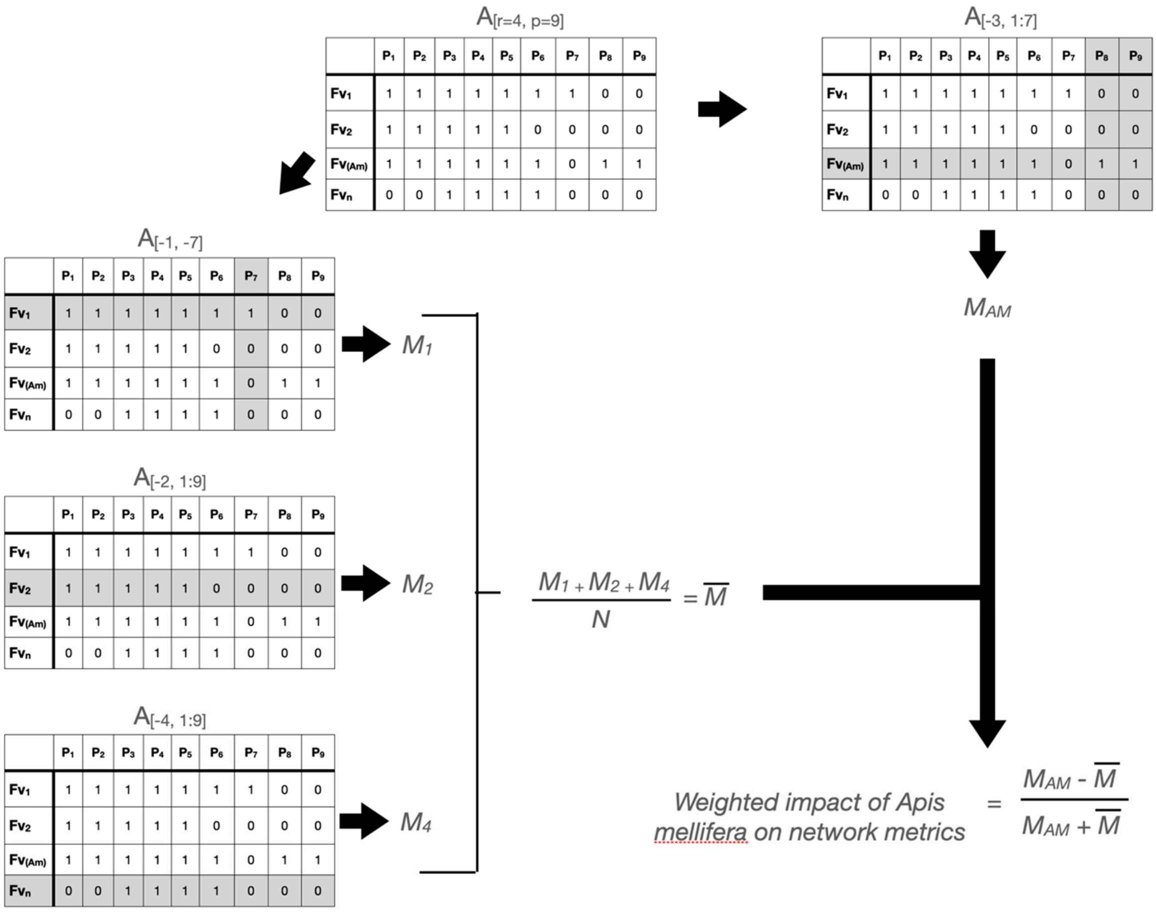

Figure S4 Schematic diagram of the calculation of the weighted impact of *Apis mellifera* on network metrics. *A* represent the original matrix network representation of a given site with *v* (4) floral visitor and *p* (9) plant species. $A_{[i,j]}$ represent matrixes where one row (floral visitor) is deleted (grey shadow) together with those columns (plants) that exclusively interacted with the deleted row. The specific case when *A. mellifera* was removed is shown in the upper right section of the diagram. M_i represent network metric value based on *A* with *v-1 f*loral visitor species, *N* is the number of metric values based on *A* with *v-1* floral visitor species but all including *A. mellifera*, while M_{Am} is the metric estimate when *A. mellifera* was excluded. $\overline{M}$ is the average of metric values based on *A* with *v-1* floral visitor species but all including *A. mellifera*.

Positive subindex indicate row/columns included, subindex speared by colon represent sequence on integers, and negative subindex indicate rows/columns excluded. For each network, N = r-1.

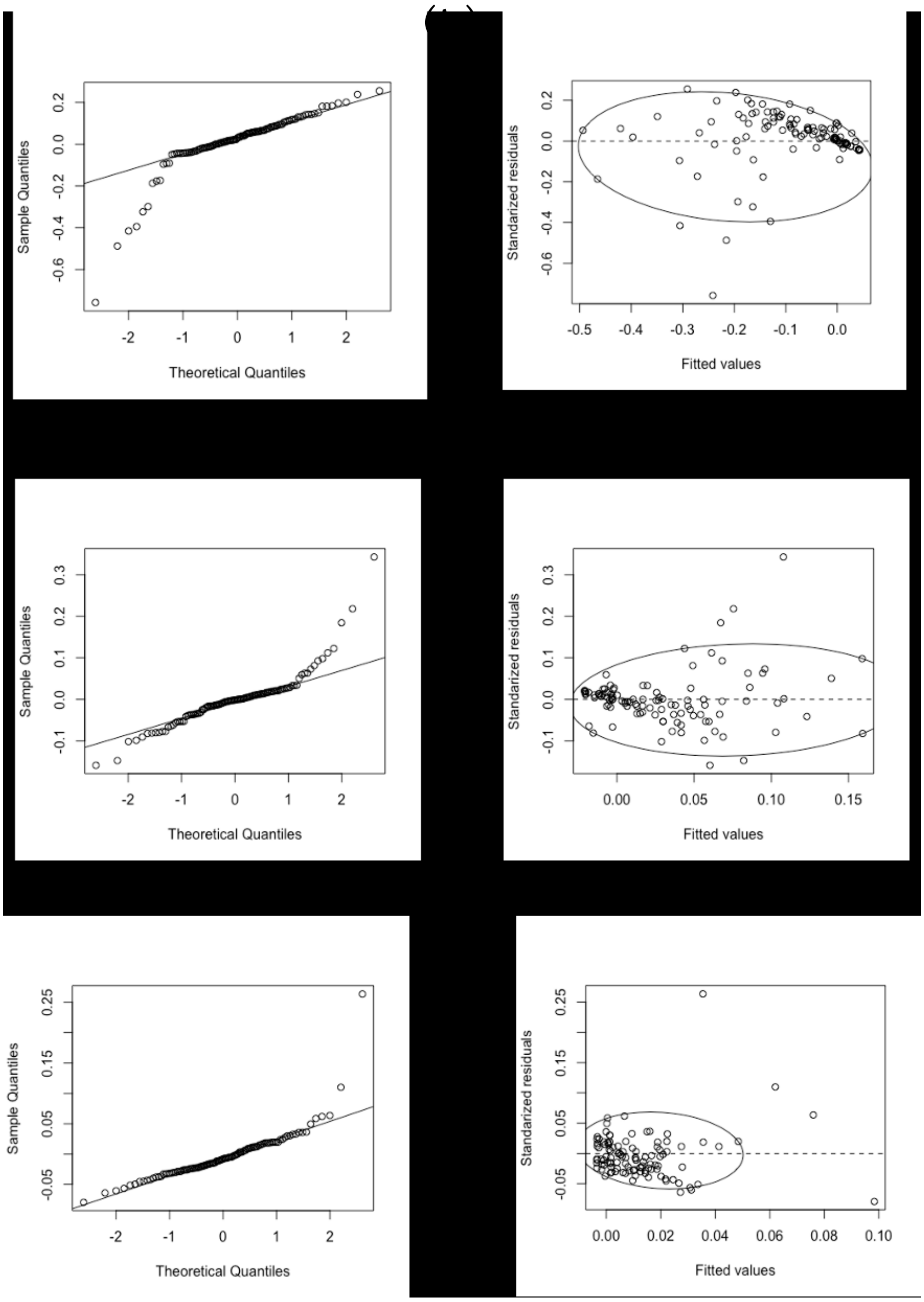

Figure S5. Behavior of residuals of fitted GAMM models (A: Plants' niche overlap – *NO*; B) Specialiation - H_2'; C) Robustness to species extinction - *R*. Ellipses enclosed 95% of the residuals.