

Supplementary Material

Table S1. Comparison of candidate models evaluating changes in structural and demographic variables across censuses conducted in quadrats of *Ligustrum lucidum* forests in the Sierra de San Javier, Tucumán, Argentina. Values in the table correspond to AIC. The lowest AIC values are highlighted in bold and represent the models selected for interpretation.

Tabla S1. Comparación de modelos candidatos que evalúan los cambios en las variables estructurales y demográficas entre censos realizados en cuadrantes de bosques de *Ligustrum lucidum* en la Sierra de San Javier, Tucumán, Argentina. Los valores de la tabla corresponden al AIC. Los valores más bajos del AIC aparecen resaltados en negrita y representan los modelos seleccionados para la interpretación.

Model description	Model structure	Tree density	Tree biomass	Tree mortality rate	Tree recruitment rate
M1: GLM assuming independent observations	Variable ~ Census year	2244	1573	991	684
M2: GLMM with random intercepts for quadrants nested within plots	Variable ~ Census year, random = ~1 Plot/Quadrant	1459	1067	978	675
M3: GLMM including plot × census interactions	Variable ~ Census year*Plot, random = ~1 Plot/Quadrant	1386	1006	966	681
M4: GLMM including quadrant coordinates (x, y) as fixed effects	Variable ~ Census year*Plot+x+y, random = ~1 Plot/Quadrant	1390	1009	982	679

Table S2. Comparison of candidate models evaluating changes in structural and demographic variables across censuses for the species *Ligustrum lucidum*. Values in the table correspond to AIC. The lowest AIC values are highlighted in bold and represent the models selected for interpretation.

Tabla S2. Comparación de modelos candidatos que evalúan los cambios en las variables estructurales y demográficas entre censos para la especie *Ligustrum lucidum*. Los valores de la tabla corresponden al AIC. Los valores más bajos del AIC aparecen resaltados en negrita y representan los modelos seleccionados para la interpretación.

Model description	Model structure	Tree density	Tree biomass	Tree mortality rate	Tree recruitment rate
M1: GLM assuming independent observations	Variable ~ Census year	2165	1387	765	933
M2: GLMM with random intercepts for quadrants nested within plots	Variable ~ Census year, random = ~1 Plot/Quadrant	1164	920	767	902
M3: GLMM including plot × census interactions	Variable ~ Census year*Plot, random = ~1 Plot/Quadrant	1131	838	768	913
M4: GLMM including quadrant coordinates (x,y) as fixed effects	Variable ~ Census year*Plot+x+y, random = ~1 Plot/Quadrant	1140	847	798	920

Table S3. Changes in *Ligustrum lucidum* density and biomass between 2009 and 2024 in forest quadrants monitored in the Sierra de San Javier, Tucumán, Argentina. Each row in the table represents the interaction between forest plot and census year.

Tabla S3. Cambios en la densidad y biomasa arbórea de *Ligustrum lucidum* entre 2009 y 2024 en cuadrantes de bosque monitoreados en la Sierra de San Javier, Tucumán, Argentina. Cada fila en la tabla representa la interacción entre la parcela de bosque y el año del censo.

Response variable	Explanatory variable	β	Standard error	DF	t	P
Tree density	Census:LIG15	0.1200	0.0289	204	4.146	<0.0001
	Census:LIG25	0.0487	0.0271	204	1.799	0.0734
	Census:LIG40	-0.0890	0.0359	204	-2.476	0.1410
	Census:LIG60	-0.0402	0.0350	204	-1.149	0.2518
Tree biomass	Census:LIG15	0.1759	0.0180	203	9.760	<0.0001
	Census:LIG25	0.0562	0.0168	203	3.326	0.0010
	Census:LIG40	0.0370	0.0222	203	1.661	0.0982
	Census:LIG60	0.0192	0.0217	203	0.880	0.3797

Table S4. Comparisons of *Ligustrum lucidum* mortality and recruitment rates among intercensal periods in forest quadrants in the Sierra de San Javier, Tucumán, Argentina.

Tabla S4. Comparaciones de las tasas de mortalidad y reclutamiento de *Ligustrum lucidum* entre períodos intercensales en cuadrantes de bosque en la Sierra de San Javier, Tucumán, Argentina.

Variable	Comparison between intercensal periods	Estimation	Standard error	DF	P
Tree mortality rate	(2009-2014) vs. (2014-2019)	-0.268	0.247	137	0.525
	(2009-2014) vs. (2019-2024)	-0.818	0.247	137	0.003
	(2014-2019) vs. (2019-2024)	-0.549	0.247	137	0.071
Tree recruitment rate	(2009-2014) vs. (2014-2019)	0.779	0.282	137	0.017
	(2009-2014) vs. (2019-2024)	0.693	0.283	137	0.040
	(2014-2019) vs. (2019-2024)	-0.086	0.283	137	0.949