

Table 1: Mean relative abundance (individuales/count point) of Southeastern South America (SESA) grasslands bird species under two grazing management practices (CGM = continuous grazing management, EPM = ecological process-based management) in ranches of the Flooding Pampas in Argentina. B = broad grassland species, S = short-grass species, T = tall-grass species. National Conservation Status = NCS, Global Conservation Status = GCS. LC = Least Concern, NT = Near Threatened, VU = Vulnerable, EN = Endangered [1,2]

Species	CGM	EPM	NCS	GCS
Greater Rhea (<i>Rhea americana</i>)(B)	0.73	0.07	VU	NT
Red-winged Tinamou(<i>Rhynchotus rufescens</i>)(B)	0.05	0.03	LC	LC
Spotted Nothura (<i>Nothura maculosa</i>)(B)	0.47	0.55	LC	LC
Cattle Egret (<i>Bubulcus ibis</i>)(B)	0.01	1.96	LC	LC
Cinereous Harrier (<i>Circus cinereus</i>)(B)	0.01	0.02	LC	LC
Long-winged Harrier (<i>Circus buffoni</i>)(B)	0.11	0.05	VU	NT
Swainson's Hawk (<i>Buteo swainsoni</i>)(B)	0.21	0.01	LC	LC
Southern Lapwing (<i>Vanellus chilensis</i>)(S)	5.53	5.14	LC	LC
American Golden-Plover (<i>Pluvialis dominica</i>)(S)	3.95	1.53	LC	LC
Buff-breasted Sandpiper (<i>Calidris subruficollis</i>)(S)	0.08	0	EN	VU
Burrowing Owl (<i>Athene cunicularia</i>)(S)	0.01	0.01	LC	LC
Campo Flicker (<i>Colaptes campestris</i>)(B)	0.07	0.15	LC	LC
Southern Caracara (<i>Caracara plancus</i>)(B)	0.45	0.26	LC	LC
Chimango Caracara (<i>Milvago chimango</i>)(B)	0.61	0.74	LC	LC
American Kestrel (<i>Falco sparverius</i>)(B)	0.03	0.01	LC	LC
Apomado Falcon (<i>Falco femoralis</i>)(B)	0.01	0.01	LC	LC
Rufous Hornero (<i>Furnarius rufus</i>)(B)	0.05	0.09	LC	LC
Freckle-breasted Thornbird (<i>Phacellodomus striatcollis</i>)(T)	0.01	0.03	LC	LC
Firewood-gatherer (<i>Anumbius annumbi</i>)(B)	0.03	0.11	LC	LC
Hudson's Canastero (<i>Asthenes hudsoni</i>)(B)	0.13	0.11	EN	VU
Sulphur-bearded Reedhaunter (<i>Limnortites sulphuriferus</i>)(T)	0	0.01	LC	LC
Bay-capped Wren-spinetail (<i>Spartonoica maluroides</i>)(T)	0.10	0.08	VU	NT
Bearded Tachuri (<i>Polystictus pectoralis</i>)(T)	0.01	0.02	VU	NT
Warbling Doradito (<i>Pseudocolopteryx flaviventris</i>)(T)	0.03	0.08	LC	LC
Spectacled Tyrant (<i>Hymenops perspicillatus</i>)(B)	0.33	0.19	LC	LC
Cattle Tyrant (<i>Machetornis rixosa</i>)(B)	0	0.01	LC	LC
Fork-tailed Flycatcher (<i>Tyrannus savana</i>)(B)	0.39	0.54	LC	LC
Brown-chested Martin (<i>Progne tapera</i>)(B)	0.17	0.01	LC	LC
White-rumped Swallow (<i>Tachycineta leucorrhoa</i>)(B)	0.37	0.78	LC	LC
Chilean Swallow (<i>Tachycineta leucopyga</i>)(B)	0	0.01	LC	LC
Barn Swallow (<i>Hirundo rustica</i>)(B)	0.19	0.38	LC	LC
Grass Wren (<i>Cistothorus platensis</i>)(T)	0.13	0	LC	LC
Chalk-browed Mockingbird (<i>Mimus saturninus</i>)(B)	0.01	0.13	LC	LC
Yellowish Pipit (<i>Anthus lutescens</i>)(S)	0.08	0	LC	LC
Short-billed Pipit (<i>Anthus furcatus</i>)(S)	0.65	0.12	LC	LC
Correndera Pipit (<i>Anthus correndera</i>)(B)	2.76	2.86	LC	LC
Pampas Pipit (<i>Anthus chacoensis</i>)(B)	0.01	0	LC	LC
Grassland Yellow-Finch (<i>Sicalis luteola</i>)(B)	4.99	5.18	LC	LC
Great Pampa-Finch (<i>Embernagra platensis</i>)(B)	0.55	0.23	LC	LC
Yellow-winged Blackbird (<i>Agelasticus thilius</i>)(B)	0.24	0.73	LC	LC
Brown-and-yellow Marshbird (<i>Pseudoleistes virescens</i>)(B)	0.58	1.75	LC	LC
Screaming Cowbird (<i>Molothrus rufoaxillaris</i>)(B)	0	0.01	LC	LC
Shiny Cowbird (<i>Molothrus bonariensis</i>)(B)	0.49	1.72	LC	LC
White-browed Meadowlark (<i>Leistes superciliaris</i>)(B)	0.88	1.23	LC	LC

Table 2: Marginal (model with fixed effects) and conditional (model with fixed and random effects) R^2 values for generalized linear mixed models of bird assemblage variables (SESA birds = South Eastern South America grassland birds), and the association with management practice and tussock presence in ranches of the Flooding Pampas, Argentina.

Variable	Marginal R^2	Conditional R^2
SESA birds abundance	0.02	0.13
Short-grass species abundance	0.02	0.13
Broad species abundance	0.12	0.24
Tall-grass species abundance	0.14	0.28
SESA birds richness	0.01	0.2

Table 3: Canonical correspondence analysis (CCA) of count data for 37 SESA grasslands bird species and 6 vegetation structure variables in the Flooding Pampas in Argentina.

		CCA Axis 1	CCA Axis 2
Eigenvalue		0.74	0.49
Cumulative percentage variance	Species data	13,5%	22,4%
	Species-environment relation	5,5%	7,9%
Significance of first canonical axis: $F = 17.49, p - value : < 0.01$			
Test significance of all canonical axes: $F = 5.51, p - value : < 0.01$			
Vegetation variable	Weight (CCA Axis 1)	3	Weight (CCA Axis 2)
Short grass cover	-0.22		-0.17
Medium grass cover	0.27		0.03
Tall grass cover	0.18		0.21
Heterogeneity (Simpson)	0.25		0.11
Tussock presence	0.24		0.14
Lowland presence	-0.04		0.27

1 References

1. Birdlife International [online] 2023. Threatened birds of the world. Species fact-sheets. <http://www.birdlife.org> (Accessed August 2023)
2. Ministerio de Ambiente y Desarrollo Sustentable de la República Argentina, Aves Argentinas. Categorización de las Aves de la Argentina (2015). Informe del Ministerio de Ambiente y Desarrollo Sustentable de la Nación y de Aves Argentinas, edición electrónica. C. A. Buenos Aires, Argentina, 2017.