Table S1. The total, mean, range, and standard deviation number of eggs laid by each female Dakota skipper used in this study.

ID	Total eggs	Mean (Range; SD) no. of eggs per day
FENR.050	116	16.5 (5-47; 14.4)
FENR.052	12	4.0 (3-5; 1.0)
FRIGG.006	121	13.4 (5-39; 10.2)
INDI.040.003	152	8.9 (1-35; 9.2)
INDI.040.004	104	11.6 (2-26; 9.7)
PINK.052.029	123	12.3 (3-24; 7.4)
TAPIR.F.040	10	5.0 (5-5; 0)
TIGER.007.058	20	6.7 (2-11; 4.5)
TIGER.007.059	29	14.5 (11-18; 4.9)
VIOLET.114.65.12.13	89	8.9 (1-18; 5.0)

Table S2. The total, mean, range, and standard deviation number of eggs laid by each female Poweshiek skipperling used in this study.

ID	Total eggs	Mean (Range; SD) no. of eggs per day
19.1.19.6.11.401	91	6.1 (1-14; 3.8)
20.5.10.47.318	97	6.5 (1-16; 4.3)
20.5.10.47.323	16	2.7 (1-6; 1.8)
21.3.10.333	62	4.4 (1-12; 3.1)
21.5.6.302	67	11.2 (2-26; 8.6)
21.5.7.340	62	6.2 (1-19; 6.1)
21.8.04.307	101	7.2 (1-19; 5.0)
21.8.12.341	34	4.9 (1-7; 2.3)
21.8.12.411	10	1.7 (1-3; 1.0)
22.2.308	82	7.5 (2-22; 6.8)
M19.1.19.6.11.308A	139	8.7 (1-26; 8.1)
P22.2.302	11	11 (11; *NA*)
P22.2.324	56	7.0 (1-21; 6.4)

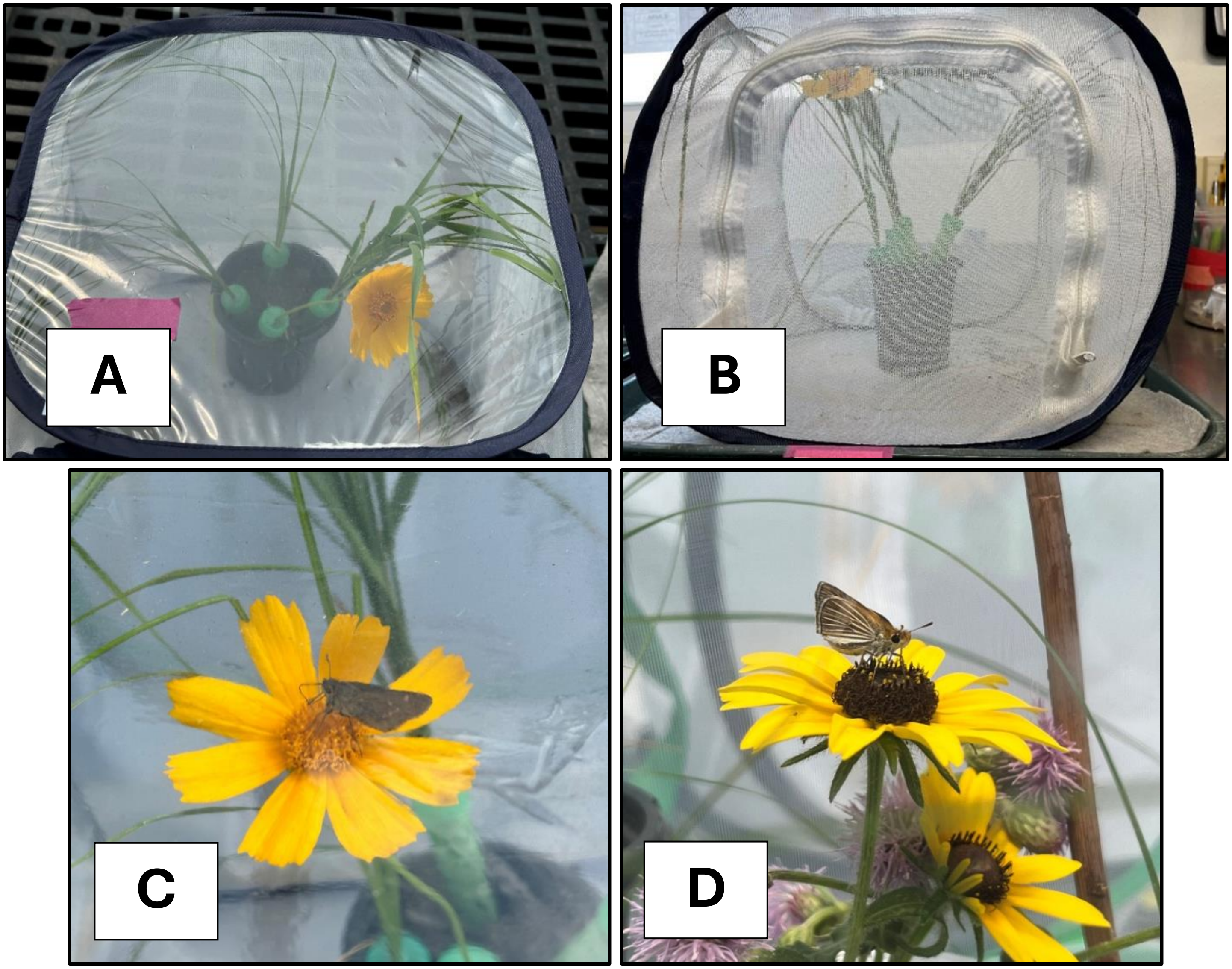

Figure S1. A top-down view (**A**) and side view (**B**) of the oviposition cage setup, and a female Dakota skipper (**C**) and Poweshiek skipperling (**D**). The pots in the oviposition cages were filled with soil to hold the water tubes in place. In the top-down image, the graminoids being held in place by the water tubes are prairie dropseed (left), tussock sedge (middle) and smooth brome (right).

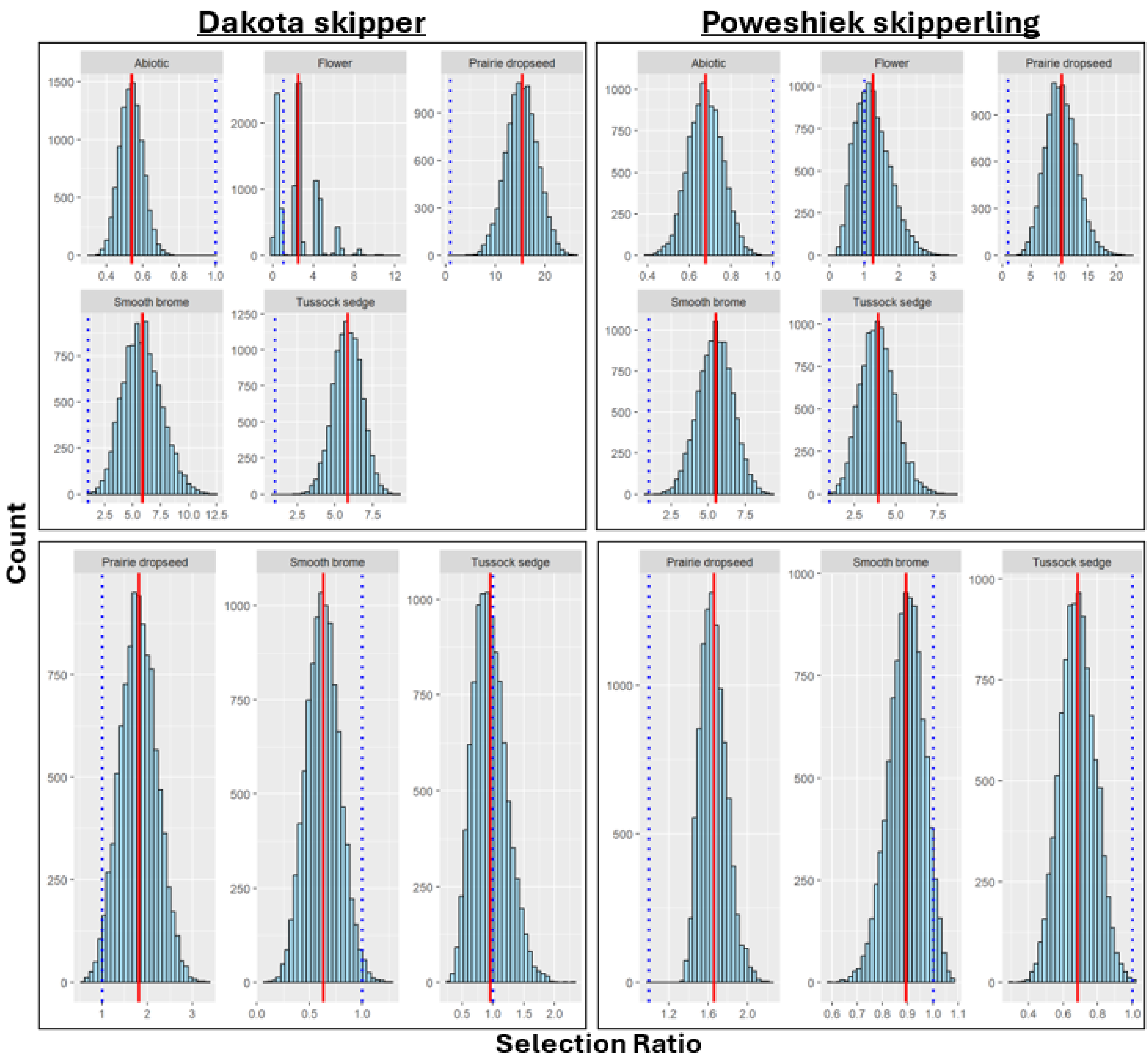

Figure S2. The bootstrap distributions of the individual selection ratios for the analyses considering all potential substrates and only graminoid substrates for Dakota skipper (top left and bottom left) and Poweshiek skipperling (top right and bottom right). The solid red line indicates the sample statistic, and the dotted blue line indicates a neutral selection ratio of 1.

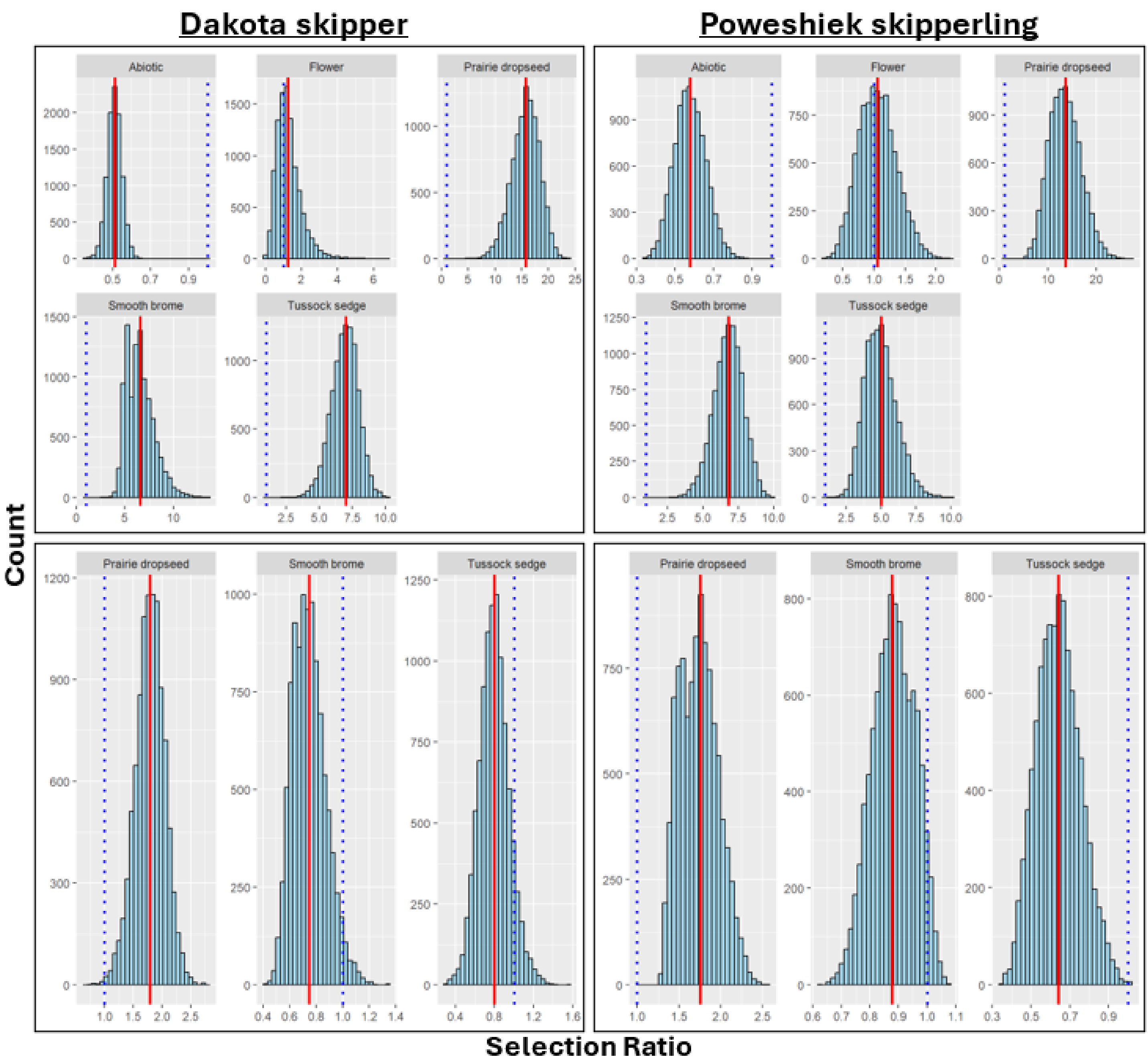

Figure S3. The bootstrap distributions of the population-level selection ratios for the analyses considering all potential substrates and only graminoid substrates for Dakota skipper (top left and bottom left) and Poweshiek skipperling (top right and bottom right). The solid red line indicates the sample statistic, and the dotted blue line indicates a neutral selection ratio of 1.

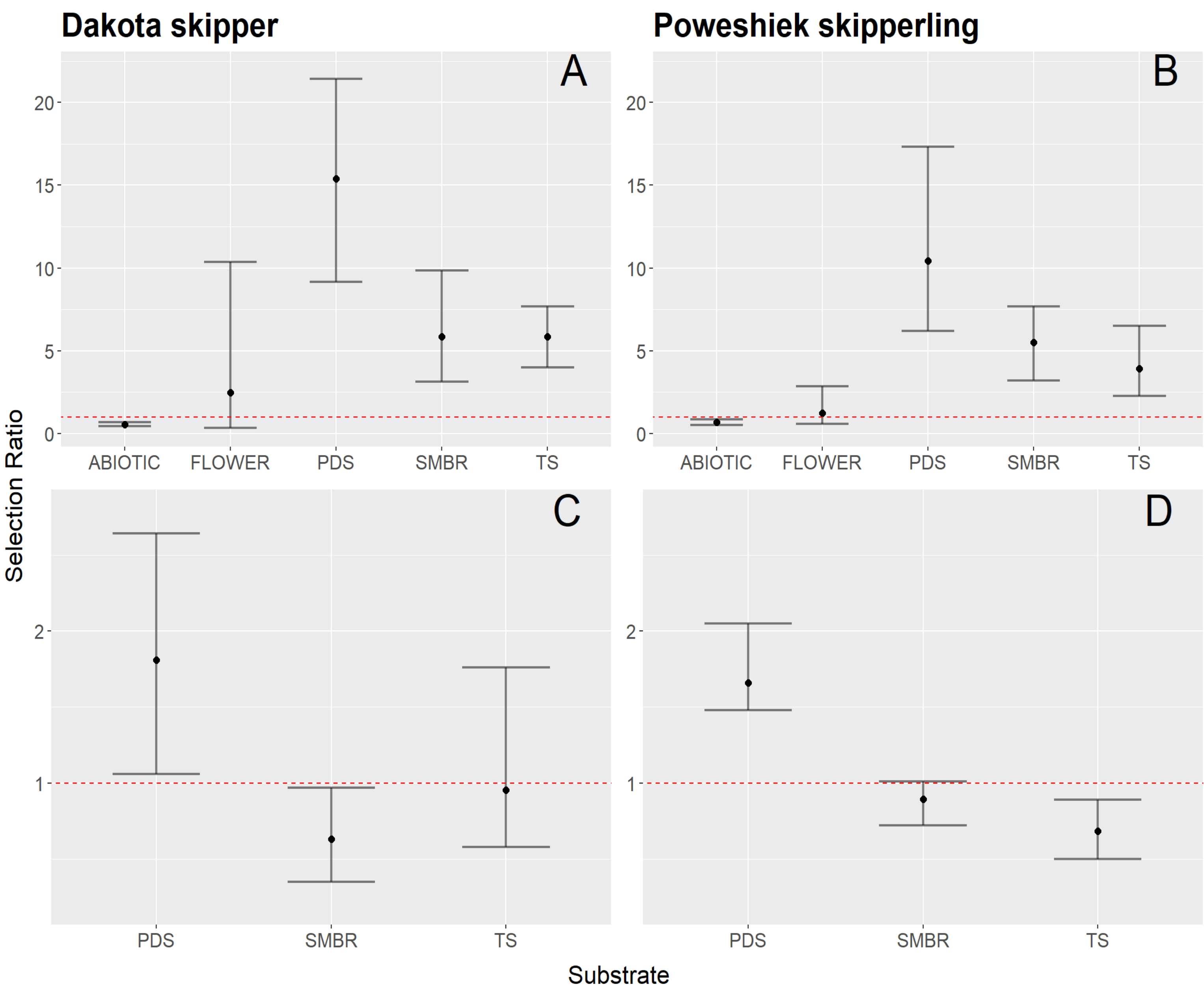

Figure S4. The individual selection ratios and their 95% CIs for the analyses considering all substrates for Dakota skipper (**A**) and Poweshiek skipperling (**B**), and for the analyses considering only the graminoid substrates for Dakota skipper (**C**), and Poweshiek skipperling (**D**). The substrate abbreviations are ABIOTIC (abiotic), FLOWER (flower), PDS (prairie dropseed), SMBR (smooth brome), and TS (tussock sedge). The dashed line represents a selection ratio of 1.

Full data set: Dakota skipper with all substrates: Abiotic: 0.54 (95% CI = 0.43–0.68), Flower: 2.46 (95% CI = 0.35–10.37), Prairie dropseed: 15.39 (95% CI = 9.16–21.41), Smooth brome: 5.84 (95% CI = 3.13–9.84), Tussock sedge: 5.86 (95% CI = 3.99–7.66). Poweshiek skipperling with all substrates: Abiotic: 0.68 (95% CI = 0.52–0.84), Flower: 1.24 (0.57–2.86), Prairie dropseed: 10.42 (95% CI = 6.19–17.31), Smooth brome: 5.50 (95% CI = 3.21–7.66), Tussock sedge: 3.92 (95% CI

= 2.27–6.51). Dakota skipper with only graminoid substrates: Prairie dropseed: 1.81 (95% CI = 1.06–2.64), Smooth brome: 0.63 (95% CI = 0.35–0.97), Tussock sedge: 0.95 (95% CI = 0.58–1.76). Poweshiek skipperling with only graminoid substrates: Prairie dropseed: 1.66 (95% CI = 1.48–2.05), Smooth brome: 0.89 (95% CI = 0.72–1.01), Tussock sedge: 0.68 (95% CI = 0.50–0.89).