Supplementary Material S1

Species occurrence data and sampling event metadata

Butterflies (Lepidoptera: Papilionoidea) of the southern Bolkar Mountains and adjacent Çukurova plain (Mersin, Türkiye): richness and turnover along a 2–2200 m elevational gradient. Yusuf Hüseyinoğlu.

Table S1.1 lists the 143 species recorded, with the sampling events at which each was found; event numbers correspond to Table S1.2 and to Table 1 of the manuscript. Together the two tables contain the 832 species-by-event records on which all analyses are based. Species marked † are those that cannot be separated reliably on external characters (Section 2.5); they are excluded from the indicator species analysis and from all inferences about endemism and conservation priority. A machine-readable version of both tables, in the comma-separated format read by the analysis code of Supplementary Material S2, is available from the author on request.

Table S1.1. Species occurrence records

Species	Provisional	Sampling events	n
Iphiclides podalirius		26, 29, 32, 37, 42, 44, 49	7
Papilio machaon		5, 14, 24, 32, 61	5
Parnassius mnemosyne		4, 15, 26, 29, 35	5
Archon apollinus		28, 46, 61	3
Zerynthia cerisy		9, 26, 29, 46, 47	5
Zerynthia deyrollei		9, 30, 61	3
Pelopidas thrax		50, 59, 67, 68	4
Gegenes pumilio		4	1
Ochlodes sylvanus		45	1
Hesperia comma		21, 22	2
Thymelicus acteon		6, 9, 19, 26, 27, 38, 39, 42, 44, 49, 64	11
Thymelicus hyrax		2, 3, 4, 8, 25, 26, 27, 29, 32, 38, 42, 44, 49, 62	14
Thymelicus sylvestris		23, 34, 35, 39, 42, 43, 44, 62	8
Thymelicus lineola		6, 18, 34, 39, 42, 44, 49, 62	8
Spialia orbifer		3, 4, 8, 20, 25, 26, 27, 34, 38, 42, 44, 45, 48, 49, 62	15
Carcharodus alceae		19, 25, 27, 34, 35, 38, 41, 42, 45, 48, 50	11
Muschampia tessellum		50, 62	2
Carcharodus orientalis		4, 25, 39, 42, 44, 67	6
Carcharodus stauderi		4	1
Erynnis tages		5, 39, 60	3
Pyrgus sidae †	yes	4	1
Pyrgus serratulae †	yes	4, 62, 63	3
Pyrgus armoricanus †	yes	10, 18, 35, 44, 48	5
Pyrgus melotis †	yes	10, 25, 48	3
Pyrgus cinarae †	yes	48	1
Leptidea duponcheli		46, 55	2
Leptidea sinapis		33, 60	2
Gonepteryx rhamni		27, 31	2
Gonepteryx farinosa		1, 6, 7, 25, 41, 42, 45, 46	8
Colias alfacariensis		4, 19, 23, 34, 35, 43, 44, 56, 64	9
Colias aurorina		17, 20	2
Colias croceus		1, 4, 8, 9, 12, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 34, 36, 38, 39, 41, 42, 43, 46, 47, 48, 49, 53, 54, 57, 58, 59, 61, 64, 65	38
Aporia crataegi		4, 60	2
Pontia edusa		1, 8, 9, 11, 12, 13, 15, 17, 19, 23, 26, 27, 31, 32, 34, 36, 37, 38, 39, 42, 43, 44, 45, 46, 47, 49, 57, 58, 59, 64	30
Pieris krueperi		7, 16	2
Pieris brassicae		1, 6, 7, 11, 12, 13, 15, 19, 23, 24, 25, 26, 30, 32, 34, 36, 38, 39, 41, 42, 43, 50, 64, 69	24

Pieris rapae		1, 4, 6, 8, 9, 10, 12, 13, 14, 15, 23, 24, 26, 27, 28, 29, 34, 35, 36, 37, 42, 43, 44, 45, 46, 49, 51, 53, 54, 56, 57, 58, 59, 64, 65, 67, 69, 70	38
Pieris mannii		17	1
Pieris ergane		56	1
Pieris napi		4, 28, 35, 54	4
Euchloe ausonia		29, 30, 53, 59	4
Anthocharis cardamines		25, 41	2
Anthocharis gruneri		31, 61	2
Anthocharis damone		25, 46, 61	3
Lycaena alciphron		2, 35, 43, 50, 63	5
Lycaena thetis		21, 33	2
Lycaena thersamon		2, 46, 47	3
Lycaena candens		2	1
Lycaena phlaeas		7, 8, 11, 18, 25, 26, 27, 34, 38, 39, 45, 58, 60	13
Lycaena tityrus		2, 63	2
Tomares nogelii		17	1
Callophrys rubi		25, 54	2
Satyrium ilicis		8, 9, 29, 30, 34, 45, 48, 49	8
Satyrium spini		9, 29, 30, 34, 45, 46, 48	7
Leptotes pirithous		67, 68	2
Lampides boeticus		1, 2, 4, 25, 26, 27, 29, 34, 40, 41, 42, 44, 51, 60, 62, 66	16
Celastrina argiolus		11, 34, 54, 60	4
Pseudophilotes bavius		1, 18, 41	3
Pseudophilotes vicrama		20, 21, 27	3
Iolana iolas		41	1
Glaucopsyche alexis		19, 25	2
Zizeeria karsandra		13, 67	2
Cupido osiris		4, 17, 20, 63	4
Freyeria trochylus		18, 19, 29, 38, 39, 40, 42, 44, 64	9
Plebejus argus		21, 62	2
Plebejus idas		62	1
Plebejus hyacinthus		19, 27, 31, 45, 46	5
Plebejidea loewii		21, 34, 35, 63	4
Eumedonia eumedon		62	1
Kretania eurypilos †	yes	20, 35, 50, 63	4
Kretania sephirus †	yes	15, 21, 32, 34, 35, 63	6
Kretania alcedo †	yes	46	1
Kretania pylaon †	yes	34, 35	2
Cyaniris bellis		15, 25, 41	3
Cyaniris semiargus		1, 17, 24, 25, 41	5
Aricia anteros		6, 25, 41	3
Aricia artaxerxes		29	1
Aricia agestis		9, 18, 24, 25, 27, 30, 34, 38, 39, 40, 42, 43, 45, 49, 50, 58, 59	17
Neolysandra coelestina		4	1
Lysandra bellargus		2, 3, 4, 15, 17, 20, 24, 29, 38, 39, 42, 60, 63	13
Polyommatus thersites †	yes	2, 4, 18, 20, 24, 43, 46, 47, 50, 60	10
Polyommatus daphnis †	yes	2, 20, 21, 22, 35, 43, 50	7
Polyommatus amandus †	yes	2, 4, 15, 63	4
Polyommatus dorylas †	yes	47	1
Polyommatus icarus		1, 4, 6, 7, 8, 11, 12, 15, 17, 18, 19, 20, 23, 24, 25, 27, 29, 30, 32, 34, 36, 38, 39, 42, 44, 45, 46, 47, 48, 49, 50, 51, 53, 54, 57, 58, 59, 60, 63, 64, 65, 67	42
Polyommatus actis †	yes	20, 22, 34	3
Polyommatus admetus †	yes	21, 34, 50	3
Polyommatus ripartii †	yes	20, 21, 34, 35	4
Polyommatus sertavulensis †	yes	21, 22, 35, 50	4
Polyommatus iphigenia †	yes	35, 43, 50, 63	4

Polyommatus hopfferi †	yes	34, 43, 50	3
Polyommatus ossmar †	yes	2, 4, 21, 40, 42, 50	6
Polyommatus phyllis †	yes	22	1
Polyommatus carmon †	yes	19, 64	2
Polyommatus eroides †	yes	19, 46, 49	3
Polyommatus poseidon †	yes	63	1
Polyommatus wagneri †	yes	21	1
Polyommatus syriacus †	yes	2, 4, 45	3
Polyommatus cornelia †	yes	2, 4, 20, 22, 39, 40, 50	7
Limenitis reducta		2, 45, 49	3
Issoria lathonia		4, 22, 49	3
Argynnis paphia		6, 22, 35, 38, 39, 42, 44, 48	8
Argynnis pandora		6, 9, 19, 20, 21, 22, 23, 34, 37, 38, 39, 40, 42, 50, 64	15
Speyeria aglaja		20, 47	2
Fabriciana niobe		2, 4, 34, 35, 43, 44	6
Fabriciana adippe		38, 39, 44	3
Vanessa cardui		1, 9, 12, 19, 20, 21, 22, 23, 24, 25, 27, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 49, 51, 53, 54, 57, 58, 59, 64, 65, 69	31
Vanessa atalanta		9, 19, 25, 35, 37, 41, 43, 51, 57, 58, 59, 63, 69	13
Aglais urticae		4	1
Polygonia c-album		6	1
Nymphalis polychloros		6, 25	2
Melitaea trivia		10, 12, 21, 22, 23, 24, 36, 38, 39, 42, 46, 47, 49, 66	14
Melitaea didyma		9, 20, 27, 34, 35, 43, 60, 62	8
Melitaea phoebe		15, 27, 40	3
Melitaea cinxia		5, 17, 35, 43, 62	5
Melitaea punica		27, 63	2
Libythea celtis		28, 56	2
Danaus chrysippus		51, 52, 65, 66, 67, 68, 69, 70, 71	9
Coenonympha pamphilus		1, 6, 12, 14, 15, 18, 19, 23, 24, 25, 34, 36, 37, 38, 39, 41, 44, 50, 64	19
Coenonympha leander		63	1
Kirinia roxelana		9, 18, 35, 43	4
Pararge aegeria		1, 7, 9, 12, 13, 18, 36	7
Lasiommata maera		7, 19, 20, 23, 35, 48, 64	7
Lasiommata megera		6, 7, 9, 13, 46, 60	6
Melanargia larissa		4, 8, 9, 18, 19, 20, 21, 22, 23, 25, 34, 37, 38, 39, 40, 44, 46, 47, 48, 49, 64	21
Melanargia syriaca		19, 23, 63, 64	4
Melanargia titea		45	1
Hipparchia syriaca		6, 7, 36, 38	4
Hipparchia statilinus		35, 50	2
Hipparchia mersina		6, 18, 36	3
Brintesia circe		1, 18, 19, 37, 45, 47, 64	7
Satyrus favonius		20	1
Satyrus ferula		20	1
Chazara briseis		20, 23, 34, 38, 39	5
Chazara persephone		20, 22, 34	3
Pseudochazara anthelea		34, 35	2
Pseudochazara mniszechii		22	1
Pseudochazara beroe		43, 50	2
Proterebia phegea		55	1
Hyponephele lycaon		22	1
Hyponephele lupina		9, 19, 46, 63, 64	5
Maniola jurtina		6, 9, 12, 18, 29, 32, 36, 46	8
Maniola telmessia		6, 9, 15, 18, 19, 23, 27, 29, 30, 32, 37, 44, 64	13

Table S1.2. Sampling event metadata

Event	District	Locality	Elevation (m)	Belt (m)	Date	Month	Protected
1	Toroslar	Soğucak	900	401–1000	2016-05-26	May	
2	Toroslar	Cocakdere, valley	1500	1001–1500	2016-05-29	May	yes
3	Toroslar	Cocakdere, K. A.	1650	1501–2200	2016-05-29	May	yes
4	Toroslar	Cocakdere, Tepe	1700	1501–2200	2016-05-30	May	yes
5	Toroslar	Cocakdere, Teke	2100	1501–2200	2016-05-30	May	yes
6	Çamlıyayla	Ulumeres	1000	401–1000	2016-06-11	Jun	
7	Çamlıyayla	Fakılar	1000	401–1000	2016-06-12	Jun	yes
8	Tarsus	Böğrüeğri	1060	1001–1500	2016-06-20	Jun	
9	Tarsus	Böğrüeğri W.	1100	1001–1500	2016-06-23	Jun	
10	Akdeniz	Karaduvar	10	2–400	2016-07-25	Jul	
11	Toroslar	Bekiralanı	950	401–1000	2016-07-02	Jul	
12	Toroslar	Aladağ	900	401–1000	2016-07-15	Jul	
13	Toroslar	Çukurkeşlik	500	401–1000	2016-11-12	Nov	
14	Tarsus	Böğrüeğri S.	700	401–1000	2017-06-01	Jun	
15	Çamlıyayla	Tepensesi	1120	1001–1500	2017-06-01	Jun	
16	Tarsus	Böğrüeğri SE.	730	401–1000	2017-06-02	Jun	
17	Çamlıyayla	Zinat	1900	1501–2200	2017-06-09	Jun	yes
18	Toroslar	Yeniköy	750	401–1000	2017-07-10	Jul	
19	Çamlıyayla	Sebil N.	1200	1001–1500	2017-07-18	Jul	
20	Tarsus	Gülek, Karboğazı	1800	1501–2200	2017-08-16	Aug	
21	Tarsus	Karboğazı N.	2000	1501–2200	2017-08-19	Aug	
22	Tarsus	Gülek, Ardıçlı	2200	1501–2200	2017-08-22	Aug	
23	Tarsus	Gülek	1200	1001–1500	2017-08-26	Aug	
24	Toroslar	Kurudere	1200	1001–1500	2018-04-20	Apr	
25	Toroslar	Kepirli	900	401–1000	2018-04-23	Apr	
26	Toroslar	Darısekisi	1100	1001–1500	2018-05-15	May	
27	Çamlıyayla	Darıpınarı	550	401–1000	2018-05-19	May	
28	Çamlıyayla	Giden	900	401–1000	2018-05-22	May	
29	Çamlıyayla	Yalamık	800	401–1000	2018-05-25	May	
30	Çamlıyayla	Korucak	850	401–1000	2018-05-25	May	
31	Çamlıyayla	Korucak S.	850	401–1000	2018-05-31	May	
32	Çamlıyayla	Sarıkoyak	850	401–1000	2018-05-31	May	
33	Çamlıyayla	Sarıkavak	1000	401–1000	2018-05-31	May	
34	Toroslar	Tırtar N.	1600	1501–2200	2018-07-11	Jul	
35	Toroslar	Dümbelek	1900	1501–2200	2018-07-11	Jul	
36	Toroslar	Güzelyayla	900	401–1000	2018-07-15	Jul	
37	Toroslar	Hisarkale	1300	1001–1500	2022-07-15	Jul	
38	Toroslar	Alanyalı	1300	1001–1500	2022-07-15	Jul	yes
39	Toroslar	Alanyalı W.	1400	1001–1500	2022-07-15	Jul	yes
40	Toroslar	Atlılar N.	1450	1001–1500	2022-07-15	Jul	
41	Toroslar	Evrenli	600	401–1000	2022-05-19	May	
42	Toroslar	Tırtar	1400	1001–1500	2022-07-11	Jul	
43	Toroslar	Arslanköy N.	1800	1501–2200	2022-07-11	Jul	
44	Toroslar	Kızılkaya	1200	1001–1500	2022-07-17	Jul	yes
45	Çamlıyayla	Sarıkavak S.	800	401–1000	2023-06-28	Jun	
46	Çamlıyayla	Belçınar	1100	1001–1500	2023-06-30	Jun	
47	Çamlıyayla	Sebil	1100	1001–1500	2023-07-07	Jul	
48	Çamlıyayla	Cehennemdere	1050	1001–1500	2023-07-10	Jul	yes
49	Çamlıyayla	Sebil E.	1020	1001–1500	2023-07-10	Jul	
50	Toroslar	Arslanköy W.	1800	1501–2200	2023-08-19	Aug	
51	Akdeniz	Huzurkent	10	2–400	2023-10-24	Oct	
52	Tarsus	Yeşiltepe N.	10	2–400	2023-11-04	Nov	
53	Akdeniz	Deliçay	80	2–400	2024-03-25	Mar	
54	Toroslar	Gözne	950	401–1000	2024-03-28	Mar	
55	Tarsus	Çavdarlı W.	350	2–400	2024-04-21	Apr	
56	Tarsus	Dedeler	280	2–400	2024-04-30	Apr	
57	Akdeniz	Dikilitaş	40	2–400	2024-05-01	May	

58	Akdeniz	Çay	50	2–400	2024-05-11	May	
59	Toroslar	Mevlana	100	2–400	2024-05-28	May	
60	Çamlıyayla	Ergene	950	401–1000	2024-06-09	Jun	
61	Çamlıyayla	Çıkrıcak	1200	1001–1500	2024-06-15	Jun	yes
62	Toroslar	Cocakdere, M. P.	1650	1501–2200	2024-07-01	Jul	yes
63	Toroslar	Cocakdere, Anıt	2100	1501–2200	2024-07-01	Jul	yes
64	Çamlıyayla	Sebil W.	1100	1001–1500	2024-07-15	Jul	
65	Akdeniz	Adanalıoğlu	5	2–400	2024-08-30	Aug	
66	Tarsus	Kulak	10	2–400	2024-08-30	Aug	
67	Akdeniz	Kazanlı	2	2–400	2024-10-09	Oct	
68	Akdeniz	Adanalıoğlu, Limonlu	2	2–400	2024-10-16	Oct	
69	Akdeniz	Bekirde	50	2–400	2024-11-12	Nov	
70	Tarsus	Karabucak	10	2–400	2024-09-21	Sep	
71	Tarsus	Karabucak N.	10	2–400	2024-10-11	Oct	

“Protected” marks the 13 sampling events falling within the Cehennem Deresi and Kadıncık Vadisi Wildlife Development Areas (Section 2.1).