

Table S1. Species records, AUC values under all climate scenarios, and the importance of BioClim variables in Maxent analysis, with the greatest values in red and the smallest values in green.

Species	No. of points	AUC values						
		Current	2050s			2070s		
			RCP2.6	RCP4.5	RCP8.5	RCP2.6	RCP4.5	RCP8.5
Parnassiinae								
<i>Parnassius acco</i>	36	0.902	0.904	0.893	0.901	0.918	0.916	0.927
<i>Parnassius accestis</i>	26	0.904	0.922	0.917	0.904	0.899	0.903	0.884
<i>Parnassius cephalus</i>	90	0.856	0.881	0.855	0.855	0.879	0.876	0.888
<i>Parnassius epaphus</i>	44	0.791	0.821	0.826	0.788	0.796	0.764	0.785
<i>Parnassius hide</i>	11	0.924	0.932	0.938	0.928	0.923	0.924	0.922
<i>Parnassius imperator</i>	65	0.783	0.807	0.803	0.770	0.801	0.811	0.792
<i>Parnassius labeyriei</i>	14	0.982	0.973	0.981	0.980	0.982	0.981	0.981
<i>Parnassius mercurius</i>	35	0.868	0.873	0.864	0.884	0.856	0.852	0.887
<i>Parnassius orleans</i>	63	0.792	0.838	0.815	0.795	0.814	0.840	0.808
<i>Parnassius simo</i>	26	0.863	0.894	0.882	0.854	0.889	0.899	0.857
<i>Parnassius szechenyi</i>	28	0.865	0.864	0.867	0.864	0.879	0.888	0.885
<i>Bhutanitis lidderdalii</i>	19	0.982	0.982	0.982	0.981	0.982	0.982	0.980
<i>Bhutanitis mansfieldi</i>	9	0.962	0.939	0.969	0.950	0.970	0.973	0.949
<i>Bhutanitis thaidina</i>	39	0.958	0.956	0.961	0.961	0.953	0.956	0.956
Papilioninae								
<i>Lamproptera curius</i>	22	0.984	0.984	0.981	0.982	0.985	0.985	0.984
<i>Lamproptera meges</i>	18	0.983	0.982	0.984	0.983	0.988	0.988	0.988
<i>Iphiclides podalirinus</i>	13	0.976	0.975	0.975	0.980	0.958	0.958	0.967
<i>Graphium chironides</i>	19	0.986	0.988	0.986	0.986	0.989	0.988	0.988
<i>Graphium cloanthus</i>	52	0.976	0.976	0.974	0.975	0.973	0.972	0.974
<i>Graphium confucius</i>	9	0.853	0.858	0.854	0.840	0.927	0.926	0.919
<i>Graphium doson</i>	15	0.984	0.984	0.985	0.985	0.990	0.990	0.990
<i>Graphium eurous</i>	21	0.984	0.987	0.988	0.989	0.985	0.989	0.987
<i>Graphium mandarinus</i>	34	0.978	0.981	0.981	0.980	0.964	0.977	0.977
<i>Graphium parus</i>	19	0.983	0.986	0.988	0.983	0.977	0.987	0.984
<i>Graphium sarpedon</i>	40	0.980	0.985	0.980	0.979	0.974	0.973	0.974
<i>Graphium sichuanica</i>	8	0.987	0.988	0.988	0.988	0.989	0.989	0.989
<i>Graphium tamerlanus</i>	16	0.992	0.991	0.992	0.991	0.996	0.996	0.996
<i>Teinopalpus imperialis</i>	8	0.976	0.976	0.984	0.982	0.978	0.989	0.984
<i>Pachliopta aristolochiae</i>	33	0.989	0.988	0.989	0.990	0.988	0.988	0.987
<i>Troides aeacus</i>	42	0.963	0.960	0.962	0.962	0.961	0.962	0.964
<i>Byasa confusus</i>	9	0.987	0.986	0.987	0.987	0.987	0.987	0.986
<i>Byasa daemonius</i>	26	0.978	0.979	0.972	0.976	0.974	0.972	0.971
<i>Byasa dasarada</i>	26	0.985	0.987	0.983	0.984	0.991	0.990	0.991
<i>Byasa genestieri</i>	11	0.989	0.989	0.989	0.989	0.989	0.988	0.987
<i>Byasa hedistus</i>	46	0.958	0.945	0.961	0.961	0.960	0.962	0.964
<i>Byasa latreillei</i>	15	0.992	0.992	0.991	0.991	0.993	0.994	0.992
<i>Byasa nevillei</i>	83	0.975	0.976	0.974	0.975	0.978	0.979	0.980
<i>Byasa plutonius</i>	71	0.968	0.966	0.966	0.968	0.967	0.970	0.971
<i>Byasa polyeuctes</i>	101	0.959	0.957	0.962	0.960	0.961	0.962	0.962
<i>Byasa rhadinus</i>	12	0.989	0.988	0.981	0.983	0.986	0.985	0.982
<i>Meandrusa lachinus</i>	13	0.980	0.976	0.978	0.978	0.981	0.979	0.988
<i>Meandrusa sciron</i>	13	0.992	0.993	0.993	0.992	0.994	0.994	0.994
<i>Papilio agestor</i>	18	0.981	0.986	0.980	0.982	0.982	0.982	0.981
<i>Papilio alcmenor</i>	25	0.987	0.975	0.977	0.978	0.977	0.976	0.974
<i>Papilio arcturus</i>	23	0.984	0.982	0.980	0.981	0.981	0.981	0.981
<i>Papilio bianor</i>	60	0.972	0.968	0.972	0.972	0.970	0.969	0.969
<i>Papilio bootes</i>	32	0.969	0.966	0.968	0.968	0.980	0.979	0.978
<i>Papilio epycides</i>	37	0.978	0.979	0.978	0.980	0.977	0.979	0.981
<i>Papilio helenus</i>	33	0.966	0.967	0.966	0.967	0.964	0.965	0.966
<i>Papilio krishna</i>	18	0.965	0.961	0.966	0.964	0.983	0.983	0.983
<i>Papilio maackii</i>	42	0.955	0.944	0.956	0.955	0.961	0.963	0.962
<i>Papilio machaon</i>	56	0.952	0.945	0.954	0.952	0.950	0.957	0.955
<i>Papilio macilentus</i>	7	0.987	0.988	0.988	0.988	0.987	0.987	0.988
<i>Papilio memnon</i>	27	0.986	0.987	0.984	0.986	0.986	0.987	0.985
<i>Papilio nephelus</i>	22	0.978	0.979	0.977	0.977	0.980	0.979	0.979
<i>Papilio paris</i>	24	0.979	0.979	0.976	0.976	0.977	0.978	0.977
<i>Papilio polytes</i>	78	0.961	0.954	0.966	0.963	0.955	0.960	0.958
<i>Papilio protenor</i>	59	0.969	0.971	0.971	0.972	0.967	0.969	0.969

<i>Papilio xuthus</i>	77	0.963	0.960	0.966	0.963	0.958	0.960	0.959
Minimum	—	0.783	0.807	0.803	0.770	0.796	0.764	0.785
Maximum	—	0.992	0.993	0.993	0.992	0.996	0.996	0.996
Mean	—	0.954	0.956	0.956	0.954	0.957	0.958	0.957
SD	—	0.053	0.046	0.048	0.054	0.047	0.048	0.049
>0.9 (%)	—	86.4	86.4	84.7	86.4	86.4	88.1	86.4
0.8–0.9 (%)	—	8.5	13.6	15.3	8.5	11.9	10.2	10.2