

Supplementary Material S4.1:

Intraspecific trait variation and responses to land use: body mass and wing loading in grassland moth communities

Jule Mangels, Nico Blüthgen

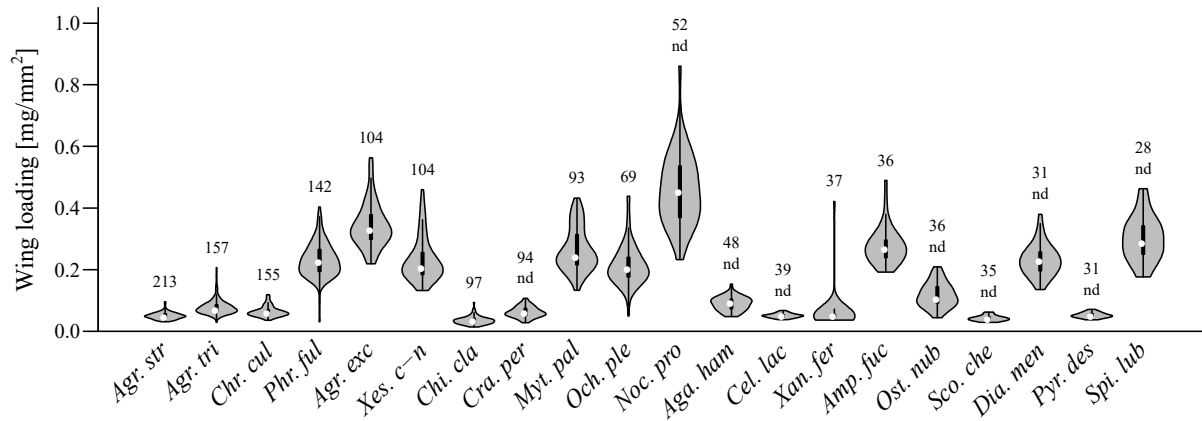


Fig. S4.1.1: Distribution of wing loading for each of the 20 most frequent species: *Agriphila straminella*, *Agriphila tristella*, *Chrysoteuchia culmella*, *Phragmatobia fuliginosa*, *Agrotis exclamationis*, *Xestia c-nigrum*, *Chiasmia clathrata*, *Crambus perlellus*, *Mythimna pallens*, *Ochropleura plecta*, *Noctua pronuba*, *Agapeta hamana*, *Celypha lacunana*, *Xanthorhoe ferrugata*, *Amphipoea fucosa*, *Ostrinia nubilalis*, *Scotopteryx chenopodiata*, *Diarsia mendica*, *Pyrausta despicata*, *Spilosoma lubricipeda*. Numbers indicate the number of individuals per species; nine species show a normal distribution (nd).

Tab. S4.1.1: Correlation coefficient (r) and its significance (p) between body mass and the land-use intensity index LUI (and its components grazing, mowing and fertilization).

Species	r LUI	p LUI	r Grazing	p Grazing	r Mowing	p Mowing	r Fert.	p Fert.
<i>Acompsia cinerella</i>	-0.359	0.120	-0.025	0.917	-0.314	0.178	-0.260	0.269
<i>Agapeta hamana</i>	0.089	0.548	0.247	0.091	0.027	0.853	0.005	0.974
<i>Agapeta zoegana</i>	-0.251	0.300	-0.251	0.300	-0.251	0.300	-0.251	0.300
<i>Agriphila inquinatella</i>	-0.122	0.652	-0.117	0.665	-0.135	0.619	NA	NA
<i>Agriphila straminella</i>	0.222	0.001	-0.089	0.194	0.219	0.001	0.210	0.002
<i>Agriphila tristella</i>	0.161	0.037	0.172	0.025	0.168	0.029	0.075	0.332
<i>Agrotis cinerea</i>	-0.394	0.131	0.077	0.777	-0.500	0.049	-0.500	0.049
<i>Agrotis exclamationis</i>	0.298	0.002	0.132	0.182	0.133	0.178	0.271	0.005
<i>Amphipoea fucosa</i>	0.134	0.435	0.183	0.285	-0.032	0.854	0.139	0.419
<i>Anerastia lotella</i>	-0.033	0.927	-0.033	0.927	NA	NA	NA	NA
<i>Apamea lithoxylaea</i>	0.847	0.001	0.301	0.368	0.649	0.031	0.871	0.000
<i>Apamea monoglypha</i>	-0.218	0.275	-0.092	0.649	-0.201	0.315	-0.015	0.943
<i>Apamea sublustris</i>	0.619	0.139	0.555	0.196	0.266	0.564	0.593	0.160
<i>Autographa gamma</i>	0.145	0.733	0.408	0.316	0.188	0.656	0.051	0.905
<i>Axylia putris</i>	0.647	0.116	-0.171	0.714	0.107	0.819	0.657	0.109
<i>Bryotropha terrella</i>	-0.216	0.311	0.021	0.921	-0.121	0.575	-0.193	0.366
<i>Celypha lacunana</i>	0.220	0.172	0.046	0.778	0.274	0.087	0.106	0.516
<i>Celypha rufana</i>	0.679	0.022	0.125	0.714	0.476	0.139	0.706	0.015
<i>Celypha striana</i>	0.095	0.768	-0.147	0.648	0.206	0.521	0.042	0.897
<i>Charanyca trigrammica</i>	0.194	0.489	-0.332	0.227	0.345	0.208	0.307	0.266
<i>Chiasmia clathrata</i>	0.051	0.619	0.066	0.522	0.012	0.909	0.023	0.820
<i>Chrysoteuchia culmella</i>	-0.142	0.079	0.246	0.002	-0.176	0.028	-0.152	0.059
<i>Cnephasia asseclana</i>	0.094	0.678	0.382	0.079	-0.096	0.670	0.115	0.609
<i>Cnephasia stephensiana</i>	-0.409	0.130	0.492	0.063	-0.492	0.063	-0.364	0.183
<i>Crambus lathoniellus</i>	0.139	0.548	0.237	0.300	-0.004	0.985	0.061	0.792
<i>Crambus perlellus</i>	0.298	0.004	-0.121	0.245	0.005	0.961	0.374	0.000
<i>Crambus pratellus</i>	0.393	0.164	0.163	0.577	0.301	0.296	0.365	0.199
<i>Deltote bankiana</i>	0.876	0.022	-0.708	0.115	0.472	0.345	0.951	0.004
<i>Deltote deceptor</i>	-0.002	0.996	-0.134	0.633	0.041	0.884	0.041	0.884
<i>Diaphora mendica</i>	0.041	0.828	-0.078	0.676	0.065	0.729	-0.025	0.895
<i>Epirrhoe alternata</i>	-0.110	0.686	-0.079	0.772	-0.004	0.989	-0.057	0.833
<i>Epirrhoe tristata</i>	-0.411	0.359	0.263	0.569	-0.419	0.350	-0.441	0.322
<i>Eucosma cana</i>	0.166	0.669	0.206	0.595	0.096	0.807	0.096	0.807
<i>Eupithecia subfuscata</i>	-0.088	0.809	0.109	0.763	0.017	0.963	-0.034	0.926
<i>Eupithecia subumbrata</i>	0.467	0.291	-0.307	0.503	0.193	0.679	0.648	0.116
<i>Hada plebeja</i>	0.095	0.736	0.422	0.117	-0.003	0.992	0.058	0.837
<i>Hoplodrina octogenaria</i>	0.099	0.660	0.378	0.083	0.011	0.960	0.051	0.822
<i>Lathronympha strigana</i>	0.028	0.940	0.395	0.259	0.049	0.893	-0.333	0.347
<i>Melanchra persicariae</i>	-0.212	0.687	0.519	0.291	-0.018	0.973	-0.530	0.280
<i>Mesoligia furuncula</i>	0.449	0.313	-0.025	0.957	0.441	0.322	0.280	0.543
<i>Mythimna albipuncta</i>	-0.194	0.713	0.524	0.286	-0.311	0.548	-0.245	0.640
<i>Mythimna conigera</i>	0.005	0.985	0.259	0.270	0.003	0.991	-0.214	0.365
<i>Mythimna ferrago</i>	-0.532	0.075	0.186	0.562	-0.545	0.067	-0.356	0.256
<i>Mythimna pallens</i>	-0.178	0.087	0.350	0.001	-0.309	0.002	-0.242	0.019
<i>Noctua interposita</i>	-0.444	0.271	-0.519	0.187	NA	NA	-0.417	0.304
<i>Noctua pronuba</i>	-0.022	0.879	-0.039	0.786	-0.051	0.717	0.020	0.887
<i>Ochropleura plecta</i>	0.036	0.770	0.038	0.754	0.068	0.578	-0.060	0.624
<i>Oligia latruncula</i>	-0.435	0.389	0.153	0.772	-0.436	0.388	-0.354	0.492
<i>Oligia strigilis</i>	-0.369	0.215	-0.432	0.141	-0.460	0.113	0.010	0.974
<i>Oncocera semirubella</i>	0.178	0.465	-0.182	0.456	-0.043	0.863	0.412	0.080
<i>Ostrinia nubilalis</i>	0.067	0.692	0.184	0.276	0.222	0.186	-0.049	0.775

Species	<i>r</i> LUI	<i>p</i> LUI	<i>r</i> Grazing	<i>p</i> Grazing	<i>r</i> Mowing	<i>p</i> Mowing	<i>r</i> Fert.	<i>p</i> Fert.
<i>Pempeliella ornatella</i>	-0.058	0.913	-0.058	0.913	-0.058	0.913	-0.058	0.913
<i>Perizoma alchemillata</i>	-0.037	0.883	-0.532	0.023	0.062	0.807	0.017	0.946
<i>Phragmatobia fuliginosa</i>	-0.016	0.847	0.147	0.079	0.057	0.503	-0.110	0.191
<i>Plutella xylostella</i>	0.616	0.011	0.083	0.761	0.454	0.077	0.490	0.054
<i>Pyrausta despicata</i>	-0.231	0.058	-0.303	0.012	-0.071	0.563	-0.009	0.943
<i>Pyrausta purpuralis</i>	0.160	0.638	0.300	0.371	-0.081	0.813	NA	NA
<i>Rivula sericealis</i>	-0.227	0.067	-0.038	0.761	0.160	0.198	-0.300	0.014
<i>Scopula ornata</i>	-0.108	0.738	-0.106	0.743	NA	NA	NA	NA
<i>Scotopteryx chenopodiata</i>	-0.142	0.356	0.322	0.033	-0.248	0.105	-0.188	0.220
<i>Siona lineata</i>	0.282	0.589	-0.171	0.747	0.613	0.195	0.024	0.965
<i>Spilosoma lubricipeda</i>	-0.466	0.012	-0.102	0.605	-0.210	0.283	-0.393	0.039
<i>Stenoptilia pterodactyla</i>	0.089	0.783	-0.635	0.027	0.207	0.518	0.269	0.398
<i>Thalophila matura</i>	0.684	0.090	0.572	0.180	0.701	0.079	0.599	0.156
<i>Triodia sylvina</i>	0.285	0.425	0.286	0.424	NA	NA	NA	NA
<i>Xanthorhoe ferrugata</i>	-0.205	0.223	-0.106	0.531	-0.189	0.262	-0.138	0.414

Tab. S4.1.2: Correlation coefficient (*r*) and its significance (*p*) between wing area and the land-use intensity index LUI (and its components grazing, mowing and fertilization).

Species	<i>r</i> LUI	<i>p</i> LUI	<i>r</i> Grazing	<i>p</i> Grazing	<i>r</i> Mowing	<i>p</i> Mowing	<i>r</i> Fert.	<i>p</i> Fert.
<i>Acompsia cinerella</i>	0.007	0.977	0.402	0.079	-0.159	0.504	-0.334	0.150
<i>Agapeta hamana</i>	0.096	0.518	0.206	0.161	0.005	0.972	0.035	0.814
<i>Agapeta zoegana</i>	-0.289	0.230	-0.289	0.230	-0.289	0.230	-0.289	0.230
<i>Agriphila inquinatella</i>	0.422	0.092	0.469	0.058	0.135	0.605	NA	NA
<i>Agriphila straminella</i>	0.076	0.270	-0.032	0.638	0.039	0.567	0.084	0.223
<i>Agriphila tristella</i>	-0.035	0.659	-0.002	0.983	0.024	0.760	-0.079	0.310
<i>Agrotis cinerea</i>	-0.261	0.329	0.256	0.339	-0.404	0.121	-0.404	0.121
<i>Agrotis exclamationis</i>	0.012	0.905	0.125	0.208	-0.018	0.856	-0.042	0.670
<i>Amphipoea fucosa</i>	0.029	0.868	-0.128	0.456	0.061	0.722	0.036	0.834
<i>Anerastia lotella</i>	-0.074	0.838	-0.074	0.838	NA	NA	NA	NA
<i>Apamea lithoxylaea</i>	0.573	0.066	0.326	0.328	0.607	0.047	0.351	0.290
<i>Apamea monoglypha</i>	0.277	0.162	-0.021	0.916	-0.054	0.788	0.429	0.026
<i>Apamea sublustris</i>	0.556	0.195	-0.091	0.845	0.583	0.169	0.570	0.181
<i>Autographa gamma</i>	0.051	0.904	-0.088	0.836	0.164	0.699	0.017	0.967
<i>Axylia putris</i>	-0.345	0.448	0.664	0.104	-0.659	0.107	-0.290	0.528
<i>Bryotropha terrella</i>	0.263	0.215	-0.142	0.509	0.365	0.080	0.172	0.421
<i>Celypha lacunana</i>	0.233	0.153	0.063	0.705	0.233	0.153	0.126	0.443
<i>Celypha rufana</i>	0.119	0.728	0.129	0.706	-0.193	0.569	0.214	0.527
<i>Celypha striana</i>	0.022	0.946	-0.064	0.843	0.374	0.232	-0.171	0.595
<i>Charanyca trigrammica</i>	-0.204	0.465	-0.146	0.605	-0.088	0.754	-0.198	0.479
<i>Chiasmia clathrata</i>	0.269	0.008	-0.209	0.040	0.280	0.005	0.269	0.008
<i>Chrysoteuchia culmella</i>	-0.012	0.885	0.051	0.526	-0.133	0.099	0.068	0.404
<i>Cnephasia asseclana</i>	0.146	0.516	0.335	0.127	0.009	0.967	0.124	0.581
<i>Cnephasia stephensiana</i>	-0.609	0.016	0.755	0.001	-0.755	0.001	-0.537	0.039
<i>Crambus lathoniellus</i>	0.129	0.577	0.152	0.512	0.048	0.836	0.037	0.873
<i>Crambus perlellus</i>	0.353	0.000	-0.076	0.467	0.042	0.689	0.400	0.000
<i>Crambus pratellus</i>	-0.257	0.376	-0.042	0.886	-0.240	0.408	-0.196	0.503
<i>Deltote bankiana</i>	0.968	0.001	-0.360	0.484	0.576	0.231	0.898	0.015
<i>Deltote deceptor</i>	0.147	0.601	0.250	0.368	0.103	0.714	0.103	0.714
<i>Diaphora mendica</i>	-0.423	0.018	0.053	0.779	-0.296	0.106	-0.429	0.016
<i>Epirrhoe alternata</i>	-0.341	0.196	-0.244	0.362	-0.143	0.598	-0.277	0.300

Species	<i>r</i> LUI	<i>p</i> LUI	<i>r</i> Grazing	<i>p</i> Grazing	<i>r</i> Mowing	<i>p</i> Mowing	<i>r</i> Fert.	<i>p</i> Fert.
<i>Epirrhoe tristata</i>	-0.302	0.511	-0.390	0.387	-0.100	0.831	-0.018	0.970
<i>Eucosma cana</i>	0.147	0.705	-0.223	0.564	0.186	0.632	0.186	0.632
<i>Eupithecia subfuscata</i>	0.176	0.626	0.321	0.365	0.360	0.307	0.123	0.735
<i>Eupithecia subumbrata</i>	-0.095	0.839	0.035	0.940	-0.497	0.257	0.183	0.695
<i>Hada plebeja</i>	-0.109	0.699	0.062	0.826	-0.113	0.690	-0.170	0.545
<i>Hoplodrina octogenaria</i>	-0.323	0.142	0.069	0.761	-0.307	0.164	-0.201	0.369
<i>Lathronympha strigana</i>	-0.539	0.108	0.133	0.714	-0.215	0.552	-0.669	0.035
<i>Melanchra persicariae</i>	-0.900	0.015	0.109	0.838	-0.816	0.047	-0.623	0.186
<i>Mesoligia furuncula</i>	0.473	0.284	-0.093	0.843	0.574	0.177	0.267	0.563
<i>Mythimna albipuncta</i>	-0.114	0.830	0.404	0.427	-0.145	0.784	-0.189	0.720
<i>Mythimna conigera</i>	-0.320	0.169	0.168	0.479	-0.293	0.209	-0.197	0.406
<i>Mythimna ferrago</i>	-0.140	0.664	0.518	0.085	-0.144	0.655	-0.265	0.406
<i>Mythimna pallens</i>	-0.178	0.089	0.095	0.364	-0.030	0.774	-0.246	0.017
<i>Noctua interposita</i>	0.439	0.276	0.246	0.557	NA	NA	0.441	0.274
<i>Noctua pronuba</i>	0.088	0.535	-0.029	0.841	0.141	0.318	0.029	0.840
<i>Ochropleura plecta</i>	0.261	0.030	0.027	0.826	0.196	0.107	0.103	0.401
<i>Oligia latruncula</i>	0.149	0.778	0.012	0.982	0.160	0.762	0.085	0.873
<i>Oligia strigilis</i>	-0.340	0.256	-0.190	0.533	-0.177	0.564	-0.179	0.558
<i>Oncocera semirubella</i>	-0.575	0.010	-0.031	0.901	-0.409	0.082	-0.518	0.023
<i>Ostrinia nubilalis</i>	-0.133	0.434	0.217	0.196	-0.076	0.654	-0.149	0.380
<i>Pempeliella ornatella</i>	-0.774	0.071	-0.774	0.071	-0.774	0.071	-0.774	0.071
<i>Perizoma alchemillata</i>	0.060	0.813	-0.314	0.204	0.123	0.627	0.003	0.990
<i>Phragmatobia fuliginosa</i>	0.054	0.520	0.004	0.959	0.137	0.103	-0.017	0.840
<i>Plutella xylostella</i>	0.096	0.714	-0.124	0.636	0.030	0.910	0.056	0.832
<i>Pyrausta despicata</i>	0.058	0.756	-0.154	0.407	0.164	0.377	-0.054	0.773
<i>Pyrausta purpuralis</i>	0.647	0.032	0.653	0.029	0.577	0.063	NA	NA
<i>Scopula ornata</i>	-0.076	0.815	-0.079	0.806	NA	NA	NA	NA
<i>Scotopteryx chenopodiata</i>	-0.195	0.261	0.470	0.004	-0.349	0.040	-0.205	0.237
<i>Spilosoma lubricipeda</i>	-0.279	0.150	0.158	0.423	-0.095	0.632	-0.455	0.015
<i>Stenoptilia pterodactyla</i>	-0.045	0.889	-0.367	0.241	0.080	0.804	0.065	0.842
<i>Thalophila matura</i>	0.326	0.475	0.513	0.239	0.389	0.388	0.182	0.696
<i>Triodia sylvina</i>	0.487	0.154	0.487	0.154	NA	NA	NA	NA
<i>Xanthorhoe ferrugata</i>	-0.313	0.059	-0.169	0.317	-0.276	0.098	-0.262	0.117

Tab. S4.1.3: Correlation coefficient (*r*) and its significance (*p*) between wing loading and the land-use intensity index LUI (and its components grazing, mowing and fertilization).

Species	<i>r</i> LUI	<i>p</i> LUI	<i>r</i> Grazing	<i>p</i> Grazing	<i>r</i> Mowing	<i>p</i> Mowing	<i>r</i> Fert.	<i>p</i> Fert.
<i>Acompsia cinerella</i>	-0.345	0.137	-0.307	0.188	-0.190	0.423	-0.011	0.962
<i>Agapeta hamana</i>	0.071	0.631	0.207	0.158	0.146	0.322	-0.051	0.733
<i>Agapeta zoegana</i>	-0.155	0.526	-0.155	0.526	-0.155	0.526	-0.155	0.526
<i>Agriphila inquinatella</i>	-0.199	0.461	-0.203	0.452	-0.158	0.560	NA	NA
<i>Agriphila straminella</i>	0.266	0.000	-0.076	0.270	0.266	0.000	0.245	0.000
<i>Agriphila tristella</i>	0.139	0.073	0.117	0.132	0.128	0.100	0.092	0.237
<i>Agrotis cinerea</i>	-0.504	0.047	-0.139	0.608	-0.554	0.026	-0.554	0.026
<i>Agrotis exclamationis</i>	0.328	0.001	0.072	0.465	0.156	0.114	0.332	0.001
<i>Amphipoea fucosa</i>	0.113	0.513	0.234	0.169	-0.045	0.797	0.103	0.548
<i>Anerastia lotella</i>	0.008	0.984	0.008	0.984	NA	NA	NA	NA
<i>Apamea lithoxylaea</i>	0.777	0.005	0.237	0.483	0.523	0.099	0.894	0.000
<i>Apamea monoglypha</i>	-0.353	0.071	-0.090	0.656	-0.159	0.429	-0.241	0.225
<i>Apamea sublustris</i>	0.377	0.404	0.586	0.166	0.018	0.969	0.346	0.447

Species	<i>r</i> LUI	<i>p</i> LUI	<i>r</i> Grazing	<i>p</i> Grazing	<i>r</i> Mowing	<i>p</i> Mowing	<i>r</i> Fert.	<i>p</i> Fert.
<i>Autographa gamma</i>	0.156	0.712	0.453	0.259	0.079	0.853	0.114	0.788
<i>Axylia putris</i>	0.758	0.048	-0.442	0.321	0.318	0.487	0.755	0.050
<i>Bryotropha terrella</i>	-0.325	0.121	0.090	0.677	-0.270	0.201	-0.269	0.203
<i>Celypha lacunana</i>	0.022	0.895	-0.035	0.833	0.166	0.312	-0.037	0.825
<i>Celypha rufana</i>	0.567	0.069	0.107	0.755	0.459	0.155	0.569	0.068
<i>Celypha striana</i>	0.091	0.779	-0.177	0.583	0.031	0.924	0.144	0.655
<i>Charanyca trigrammica</i>	0.270	0.330	-0.296	0.283	0.378	0.165	0.391	0.149
<i>Chiasmia clathrata</i>	-0.110	0.285	0.155	0.129	-0.133	0.193	-0.139	0.173
<i>Chrysoteuchia culmella</i>	-0.151	0.060	0.278	0.000	-0.128	0.113	-0.212	0.008
<i>Cnephasia asseclana</i>	0.038	0.866	0.264	0.236	-0.134	0.552	0.095	0.675
<i>Cnephasia stephensiana</i>	-0.333	0.225	0.374	0.170	-0.374	0.170	-0.302	0.273
<i>Crambus lathoniellus</i>	-0.019	0.934	0.004	0.988	0.110	0.636	-0.100	0.665
<i>Crambus perlellus</i>	0.232	0.024	-0.099	0.343	-0.015	0.890	0.308	0.002
<i>Crambus pratellus</i>	0.568	0.034	0.229	0.430	0.442	0.113	0.510	0.063
<i>Deltote bankiana</i>	-0.010	0.985	-0.745	0.089	-0.082	0.877	0.250	0.633
<i>Deltote deceptor</i>	-0.115	0.682	-0.344	0.209	-0.034	0.905	-0.034	0.905
<i>Diaphora mendica</i>	0.202	0.276	-0.105	0.574	0.168	0.365	0.142	0.445
<i>Epirrhoe alternata</i>	0.001	0.998	0.068	0.803	0.008	0.975	0.054	0.843
<i>Epirrhoe tristata</i>	-0.148	0.751	0.440	0.323	-0.288	0.531	-0.308	0.502
<i>Eucosma cana</i>	0.004	0.992	0.313	0.413	-0.075	0.848	-0.075	0.848
<i>Eupithecia subfuscata</i>	-0.196	0.588	-0.240	0.504	-0.305	0.392	-0.090	0.805
<i>Eupithecia subumbrata</i>	0.171	0.714	0.100	0.831	0.605	0.150	-0.126	0.788
<i>Hada plebeja</i>	0.303	0.272	0.553	0.032	0.155	0.581	0.336	0.220
<i>Hoplodrina octogenaria</i>	0.227	0.310	0.332	0.131	0.133	0.556	0.137	0.543
<i>Lathronympha strigana</i>	0.411	0.238	0.384	0.274	0.207	0.566	0.055	0.879
<i>Melanchra persicariae</i>	0.094	0.859	0.542	0.266	0.281	0.589	-0.365	0.477
<i>Mesoligia furuncula</i>	0.382	0.398	-0.005	0.992	0.269	0.560	0.300	0.514
<i>Mythimna albipuncta</i>	-0.102	0.847	0.226	0.666	-0.193	0.714	-0.102	0.848
<i>Mythimna conigera</i>	0.145	0.543	0.142	0.551	0.153	0.520	-0.116	0.627
<i>Mythimna ferrago</i>	-0.458	0.135	0.042	0.898	-0.463	0.130	-0.261	0.413
<i>Mythimna pallens</i>	-0.142	0.175	0.370	0.000	-0.336	0.001	-0.199	0.055
<i>Noctua interposita</i>	-0.655	0.078	-0.625	0.097	NA	NA	-0.631	0.094
<i>Noctua pronuba</i>	-0.057	0.687	-0.012	0.934	-0.114	0.421	0.005	0.971
<i>Ochropleura plecta</i>	-0.027	0.826	0.108	0.376	0.025	0.841	-0.114	0.353
<i>Oligia latruncula</i>	-0.332	0.520	0.156	0.767	-0.326	0.528	-0.293	0.574
<i>Oligia strigilis</i>	-0.236	0.438	-0.402	0.174	-0.400	0.176	0.105	0.734
<i>Oncocera semirubella</i>	0.581	0.009	-0.188	0.441	0.291	0.226	0.754	0.000
<i>Ostrinia nubilalis</i>	0.132	0.435	0.134	0.428	0.316	0.057	-0.010	0.954
<i>Pempeliella ornatella</i>	0.697	0.124	0.697	0.124	0.697	0.124	0.697	0.124
<i>Perizoma alchemillata</i>	-0.130	0.607	-0.544	0.020	-0.030	0.906	-0.025	0.921
<i>Phragmatobia fuliginosa</i>	-0.011	0.892	0.169	0.044	0.032	0.707	-0.106	0.210
<i>Plutella xylostella</i>	0.482	0.058	0.166	0.539	0.370	0.159	0.381	0.145
<i>Pyrausta despicata</i>	-0.162	0.385	-0.008	0.964	-0.248	0.179	0.130	0.484
<i>Pyrausta purpuralis</i>	-0.416	0.203	-0.329	0.324	-0.530	0.094	NA	NA
<i>Scopula ornata</i>	-0.062	0.849	-0.057	0.860	NA	NA	NA	NA
<i>Scotopteryx chenopodiata</i>	-0.008	0.962	0.034	0.845	-0.019	0.914	-0.027	0.878
<i>Spilosoma lubricipeda</i>	-0.400	0.035	-0.177	0.368	-0.202	0.303	-0.237	0.225
<i>Stenoptilia pterodactyla</i>	0.134	0.678	-0.470	0.123	0.169	0.599	0.263	0.408
<i>Thalophila matura</i>	0.819	0.024	0.547	0.203	0.808	0.028	0.776	0.040
<i>Triodia sylvina</i>	-0.062	0.864	-0.061	0.866	NA	NA	NA	NA
<i>Xanthorhoe ferrugata</i>	-0.191	0.259	-0.110	0.516	-0.172	0.309	-0.123	0.468

Tab. S4.1.4: Number of individuals per species number of plots, where they occur, mean values and coefficients of variation of the morphological traits (body mass, wing area and wing loading) and the abundance-weighted means of the land-use intensity index LUI and its components (grazing, mowing and fertilization)

Species	N	N Plots	mean body mass	CV body mass	mean wing area	CV wing area	mean wing loading	CV wing loading	mean LUI	mean Grazing	mean Mowing	mean Fert.
<i>Acompsia cinerella</i>	20	5	1.452	0.144	19.085	0.114	0.077	0.150	0.889	71.122	0.429	0.164
<i>Agapeta hamana</i>	48	16	5.288	0.666	37.293	0.527	0.137	0.252	1.784	76.595	1.469	41.490
<i>Agapeta zoegana</i>	19	3	3.545	0.353	31.866	0.192	0.111	0.270	0.780	63.054	0.182	2.507
<i>Agriphila inquinatella</i>	16	4	NA	NA	45.019	0.109	NA	NA	0.665	49.658	0.120	5.520
<i>Agriphila straminella</i>	213	22	2.940	0.274	31.906	0.109	0.092	0.216	2.168	98.023	1.491	66.320
<i>Agriphila tristella</i>	169	17	6.987	0.249	NA	NA	NA	NA	1.536	100.782	0.910	31.090
<i>Agrotis cinerea</i>	16	4	62.974	0.298	121.361	0.140	0.512	0.207	0.589	39.948	0.091	2.848
<i>Agrotis exclamationis</i>	104	17	53.220	0.230	109.795	0.099	0.485	0.210	1.632	72.058	1.138	34.744
<i>Amphipoea fucosa</i>	36	10	34.435	0.188	96.866	0.122	0.360	0.216	1.939	89.525	1.436	50.308
<i>Anerastia lotella</i>	10	2	3.932	0.237	32.949	0.220	0.120	0.156	1.750	447.782	0.000	0.000
<i>Apamea lithoxylaea</i>	11	6	72.184	0.328	156.873	0.131	0.456	0.242	1.231	79.841	0.667	23.096
<i>Apamea monoglypha</i>	27	16	92.301	0.290	205.977	0.163	0.456	0.294	1.486	77.926	1.033	23.267
<i>Apamea sublustris</i>	7	4	65.057	0.227	157.787	0.109	0.415	0.251	1.729	81.399	1.143	34.286
<i>Autographa gamma</i>	8	5	26.120	0.167	152.578	0.174	0.174	0.179	2.213	120.947	1.333	73.556
<i>Axylia putris</i>	7	6	24.428	0.396	79.235	0.154	0.312	0.381	2.139	121.408	1.625	58.500
<i>Bryotropha terrella</i>	24	11	2.123	0.317	16.717	0.129	0.127	0.284	1.490	88.458	1.042	21.913
<i>Celypha lacunana</i>	40	16	1.611	0.218	NA	NA	NA	NA	1.519	61.055	1.175	23.409
<i>Celypha rufana</i>	11	6	2.117	0.360	26.093	0.117	0.082	0.443	2.076	77.996	1.182	70.636
<i>Celypha striana</i>	12	6	3.429	0.295	34.223	0.138	0.099	0.213	1.942	102.503	1.333	51.000
<i>Charanyca trigrammica</i>	15	7	52.940	0.155	115.482	0.064	0.459	0.154	0.716	39.809	0.250	8.600
<i>Chiasmia clathrata</i>	97	17	6.488	0.310	141.623	0.235	0.048	0.356	1.326	76.767	0.952	13.737
<i>Chrysoteuchia culmella</i>	155	19	4.232	0.328	36.632	0.133	0.115	0.267	1.617	69.618	1.517	23.303
<i>Cnephasia asseclana</i>	22	11	2.082	0.433	22.834	0.212	0.089	0.290	1.532	57.161	1.045	38.545
<i>Cnephasia stephensiana</i>	15	4	4.580	0.448	35.204	0.177	0.126	0.325	1.258	156.329	0.267	9.200
<i>Crambus lathoniellus</i>	21	10	3.200	0.171	31.968	0.224	0.112	0.618	1.624	66.380	1.278	34.175

Species	N	N Plots	mean body mass	CV body mass	mean wing area	CV wing area	mean wing loading	CV wing loading	mean LUI	mean Grazing	mean Mowing	mean Fert.
<i>Crambus perlellus</i>	94	19	4.519	0.393	38.881	0.173	0.113	0.282	1.721	64.445	1.426	35.053
<i>Crambus pratellus</i>	14	7	3.557	0.249	35.115	0.148	0.102	0.234	0.841	34.390	0.478	9.441
<i>Deltote bankiana</i>	6	5	5.900	0.191	54.349	0.166	0.109	0.098	1.575	119.011	1.455	12.545
<i>Deltote deceptor</i>	15	4	5.640	0.282	66.095	0.172	0.086	0.253	0.751	59.882	0.125	8.625
<i>Diaphora mendica</i>	31	12	32.926	0.228	106.517	0.091	0.310	0.224	1.738	81.044	0.938	41.875
<i>Epirrhoe alternata</i>	16	13	6.789	0.332	97.541	0.164	0.070	0.299	1.343	60.465	1.065	15.881
<i>Epirrhoe tristata</i>	7	6	7.339	0.219	98.680	0.139	0.076	0.290	1.687	36.300	1.600	35.830
<i>Eucosma cana</i>	9	5	2.788	0.207	27.901	0.170	0.103	0.274	0.995	76.922	0.222	15.333
<i>Eupithecia subfuscata</i>	10	9	3.885	0.222	66.439	0.194	0.060	0.211	1.616	44.093	1.200	40.415
<i>Eupithecia subumbrata</i>	7	6	4.167	0.301	69.963	0.398	0.075	0.677	1.624	49.514	1.000	50.143
<i>Hada plebeja</i>	15	6	39.698	0.257	117.516	0.220	0.339	0.180	0.901	55.951	0.385	12.154
<i>Hoplodrina octogenaria</i>	22	11	28.082	0.248	88.056	0.099	0.321	0.269	1.741	97.110	1.160	45.000
<i>Lathronympha strigana</i>	10	9	1.482	0.275	16.600	0.158	0.089	0.199	1.690	134.399	1.000	31.909
<i>Melanchra persicariae</i>	6	3	40.415	0.194	153.688	0.067	0.263	0.183	1.570	148.737	1.333	9.000
<i>Mesoligia furuncula</i>	7	7	10.405	0.230	63.548	0.143	0.162	0.136	2.321	114.347	1.444	81.111
<i>Mythimna albipuncta</i>	6	4	31.711	0.135	109.248	0.091	0.292	0.138	2.607	151.038	1.500	98.667
<i>Mythimna conigera</i>	20	8	38.120	0.207	104.060	0.098	0.371	0.258	1.158	130.650	0.400	3.046
<i>Mythimna ferrago</i>	12	11	47.874	0.283	124.606	0.075	0.388	0.323	1.862	82.370	1.083	50.167
<i>Mythimna pallens</i>	94	20	32.188	0.305	NA	NA	NA	NA	1.782	124.439	1.210	33.890
<i>Noctua interposita</i>	8	3	94.658	0.249	167.564	0.129	0.571	0.263	2.588	59.275	2.000	103.500
<i>Noctua pronuba</i>	52	18	163.638	0.263	245.848	0.105	0.668	0.250	1.530	53.955	1.146	29.608
<i>Ochropleura plecta</i>	69	19	24.765	0.371	75.550	0.155	0.324	0.304	1.746	93.222	1.186	34.672
<i>Oligia latruncula</i>	6	3	15.470	0.197	64.876	0.147	0.248	0.327	1.637	98.307	1.143	27.429
<i>Oligia strigilis</i>	13	8	16.470	0.302	66.565	0.117	0.247	0.253	1.510	127.883	1.000	13.397
<i>Oncocera semirubella</i>	19	7	9.572	0.127	51.613	0.098	0.187	0.169	1.079	136.106	0.182	4.217
<i>Ostrinia nubilalis</i>	37	9	14.494	0.426	91.676	0.158	0.154	0.335	1.954	77.783	1.571	49.143
<i>Pempeliella ornatella</i>	6	2	4.040	0.107	37.598	0.123	0.109	0.148	0.714	65.512	0.040	1.600
<i>Perizoma alchemillata</i>	18	12	3.273	0.331	62.280	0.110	0.052	0.258	1.665	75.484	1.111	39.897
<i>Phragmatobia fuliginosa</i>	143	17	29.942	0.250	90.557	0.124	0.330	0.229	1.673	114.433	1.544	18.373
<i>Plutella xylostella</i>	16	11	NA	NA	11.928	0.213	NA	NA	1.534	97.540	1.000	23.831

Species	N	N Plots	mean body mass	CV body mass	mean wing area	CV wing area	mean wing loading	CV wing loading	mean LUI	mean Grazing	mean Mowing	mean Fert.
<i>Pyrausta despicata</i>	68	10	2.795	0.205	NA	NA	NA	NA	1.268	71.810	1.138	3.871
<i>Pyrausta purpuralis</i>	11	5	3.019	0.133	44.074	0.152	0.069	0.164	0.919	84.473	0.462	0.088
<i>Rivula sericealis</i>	66	9	3.815	0.233	NA	NA	NA	NA	1.925	53.599	1.537	51.269
<i>Scopula ornata</i>	12	3	4.222	0.137	86.131	0.098	0.049	0.136	0.612	55.139	0.000	0.000
<i>Scotopteryx chenopodiata</i>	44	9	10.726	0.249	NA	NA	NA	NA	1.027	80.078	0.302	15.078
<i>Siona lineata</i>	6	4	13.616	0.129	NA	NA	NA	NA	2.326	83.197	1.667	84.667
<i>Spilosoma lubricipeda</i>	28	6	65.635	0.255	157.931	0.116	0.416	0.240	1.862	68.301	1.574	36.840
<i>Stenoptilia pterodactyla</i>	12	6	1.982	0.188	24.991	0.123	0.080	0.154	1.600	108.206	0.750	34.917
<i>Thalophila matura</i>	7	4	45.651	0.356	147.647	0.156	0.302	0.243	1.114	84.569	0.429	19.714
<i>Triodia sylvina</i>	10	5	40.906	0.306	90.429	0.204	0.453	0.219	1.006	142.578	0.077	0.000
<i>Xanthorhoe ferrugata</i>	37	12	4.841	0.269	79.105	0.163	0.063	0.402	1.649	95.490	0.947	41.166