

Annex 2 Database of dispersal capacities and habitat dependencies per species

Table S1. Available knowledge on dispersal capacities of grassland-related Odonata listed on Annex II or IV of the Habitats Directive
black text: based on scientific literature, blue text: caution required; either extrapolated from related species or marked by the author of existing study as unsure; red text: no of very limited knowledge available

General				Maximum dispersal distances				Dispersal barriers				Data sources		Notes
Suborder	Family	Species	Functional wings?	(Re)colonization	Genetic exchange	Habitat cross-dependency?*	Trans-habitat movement	Waterways	Railways	Roads	Other	Method**	References***	
Zygoptera	Coenagrionidae	Coenagrion hylas	Yes	21km	300m	Yes; Grassland - Freshwater	<100m	Potentially	Unlikely	Unknown	Hedgerows	MRR	Landmann et al. 2021, Jaeschke et al. 2010	disperses along river/lake shorelines. Limited dispersal across terrestrial habitats Evidence of river crossings up to 25m, but not at wider parts of the river (Landmann et al. 2021) not able to cross >100m through terrestrial habitats, shrub boundaries prevent dispersal success, likely other tall vegetation (dense hedgerows) unknown but likely similar to other species of the genus
Zygoptera	Coenagrionidae	Coenagrion mercuriale	Yes	1750m	300m	Yes; Grassland - Freshwater	<100m	Potentially	Unlikely	Unknown	Hedgerows	MRR, G	Hassal & Thompson 2012, Hunger & Roske 2001, Watts et al 2007, Purse et al. 2003	
Zygoptera	Coenagrionidae	Coenagrion ornatum	Yes	1750m	300m	Yes; Grassland - Freshwater	<100m	Potentially	Unlikely	Unknown	Hedgerows	-	Swaegers et al. 2014, Jaeschke et al. 2013	
Zygoptera	Lestidae	Sympecma paedisca	Yes	20km	300m	Yes; Grassland - Freshwater	<100m	Potentially	Unlikely	Unknown	Hedgerows	MRR	Manger & Beukema 2006	
Anisoptera	Cordulidae	Macromia splendens	Yes	Unknown	500m	Yes; Grassland - Wetland	500m	No	Unlikely	Unknown	-	-	-	Extrapolations based on Conrad et al. (2010)
Anisoptera	Cordulidae	Oxygastra curtisii	Yes	Unknown	500m	Yes; Grassland - Freshwater	500m	No	Unlikely	Unknown	-	-	-	
Anisoptera	Gomphidae	Lindenia tetraphylla	Yes	Unknown	500m	Yes; Grassland - Freshwater	500m	No	Unlikely	Unknown	-	-	-	
Anisoptera	Gomphidae	Ophiogomphus cecilia	Yes	10km	500m	Yes; Grassland - Freshwater	500m	No	Unlikely	Unknown	-	?	Jaeschke et al. 2010	
Anisoptera	Gomphidae	Stylurus flavipes	Yes	Unknown	500m	Yes; Grassland - Freshwater	500m	No	Unlikely	Unknown	-	-	-	
Anisoptera	Libellulidae	Leucorrhinia pectoralis	Yes	27km	500m	Yes; Grassland - Freshwater	500m	No	Unlikely	Unknown	-	?	Jaeschke et al. 2013, Corbet et al. 2006	

* based on connectivity functions: 1 = for commuting, 2 = for migration, 0 = no cross-dependency
**methods used for experimental assessment of dispersal distances: MRR = mark-release-recapture, T = telemetry, G = genetic, O = other
***see last sheet in this file for a full reference list

Table S2. Available knowledge on dispersal capacities of grassland-related Orthoptera listed on Annex II or IV of the Habitats Directive
 black text: based on scientific literature, **blue** text: caution required; either extrapolated from related species or marked by the author of existing study as unsure; **red** text: no of very limited knowledge available

General				Maximum dispersal distances				Dispersal barriers			Data sources		Notes
Suborder	Family	Species	Functional wings?	(Re)colonization	Genetic exchange	Habitat cross-dependency?*	Trans-habitat	Waterways	Railways	Roads	Method**	References***	
Ensifera	Myrmecophilidae	<i>Myrmecophilus baronii</i>	No	unknown	unknown	No	-	Yes	unknown	unknown	-	-	
Ensifera	Tettigoniidae	<i>Baetica ustulata</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	Dorkova et al. 2020	
Ensifera	Tettigoniidae	<i>Isophya costata</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	Dorkova et al. 2020	
Ensifera	Tettigoniidae	<i>Isophya harzi</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	Dorkova et al. 2020	
Ensifera	Tettigoniidae	<i>Isophya stysi</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	Dorkova et al. 2020	
Ensifera	Tettigoniidae	<i>Pholidoptera transsylvanica</i>	No	1km	250m	No	-	Yes	unknown	unknown	MRR	Dorkova et al. 2020, Benedek et al. 2011	
Ensifera	Tettigoniidae	<i>Saga pedo</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	Dorkova et al. 2020	
Caelifera	Acrididae	<i>Odontopodisma rubripes</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	-	
Caelifera	Acrididae	<i>Paracaloptenus caloptenoides</i>	No	unknown	250m	No	-	Yes	unknown	unknown	-	-	
Caelifera	Acrididae	<i>Stenobothrus eurasius</i>	Yes	unknown	250m	No	-	unknown	Unlikely	unknown	-	-	

* based on connectivity functions: 1 = for commuting, 2 = for migration, 0 = no cross-dependency
 **methods used for experimental assessment of dispersal distances: MRR = mark-release-recapture, T = telemetry, G = genetic, O = other
 ***see last sheet in this file for a full reference list

Table S3. Available knowledge on dispersal capacities of grassland-related Coleoptera listed on Annex II or IV of the Habitats Directive

black text: based on scientific literature, blue text: caution required; either extrapolated from related species or marked by the author of existing study as unsure; red text: no of very limited knowledge available

General Suborder	Family	Species	Functional wings?	Maximum dispersal distances				Dispersal barriers			Data sources		Notes
				(Re)colonization	Genetic exchange	Habitat cross-dependency?*	Trans-habitat movement	Waterways	Railways	Roads	Method**	References***	
Adephaga	Carabidae	<i>Carabus hampei</i>	No	unknown	unknown	No	-	Yes	unknown	unknown	-	-	
Adephaga	Carabidae	<i>Carabus hungaricus</i>	No	1km	100m	No	-	Yes	unknown	unknown	MRR	Elek et al. 2014	
Adephaga	Carabidae	<i>Carabus variolosus</i>	No	1km	100m	Yes, Grassland - Wetland	100m	Yes	unknown	unknown	-	-	
Adephaga	Carabidae	<i>Carabus zawadzki</i>	No	unknown	unknown	No	-	Yes	unknown	unknown	-	-	
Phytophaga	Cerambycidae	<i>Cerambyx cerdo</i>	Yes	1500m	500m	No	-	No	unlikely	unknown	MRR	Torres-Vila et al. 2016	
Phytophaga	Cerambycidae	<i>Dorcadion fulvum cervae</i>	No	500m	100m	No	-	Yes	unknown	unknown	MRR	Baur et al. 2005	
Phytophaga	Cerambycidae	<i>Pilemia tigrina</i>	Yes	unknown	unknown	No	-	No	unlikely	unknown	-	-	
Phytophaga	Cerambycidae	<i>Pseudogauritina excellens</i>	Yes	unknown	unknown	No	-	No	unlikely	unknown	-	-	
Polyphaga	Geotrupidae	<i>Bolbelasmus unicornis</i>	Yes	unknown	unknown	No	-	No	unlikely	unknown	-	-	while males disperse up to 3km, the more limited dispersal of females (up to 1km) limits effective colonization. Males may contribute to genetic exchange over ranges of 3km.
Polyphaga	Scarabaeidae	<i>Osmoderma eremita</i> complex	Yes	unknown	200m	No	-	No	unlikely	unknown	MRR	Ranius & Hedin 2001	
Polyphaga	Lucanidae	<i>Lucanus cervus</i>	Yes	1km	3km	No	-	No	unlikely	unknown	T	Rink&Sinsch2006, Tini et al. 2018, Thomaes et al. 2018	
Polyphaga	Tenebrionidae	<i>Probatiscus subrugosus</i>	No	unknown	unknown	No	-	Yes	unknown	unknown	-	-	

* based on connectivity functions: 1 = for commuting, 2 = for migration, 0 = no cross-dependency

**methods used for experimental assessment of dispersal distances: MRR = mark-release-recapture, T = telemetry, G = genetic, O = other

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Table S4. Available knowledge on dispersal capacities of grassland-related Lepidoptera listed on Annex II or IV of the Habitats Directive

black text: based on scientific literature, blue text: caution required; either extrapolated from related species or marked by the author of existing study as unsure; red text: no of very limited knowledge available

General				Maximum dispersal distances				Dispersal barriers				Data sources		Notes
Suborder	Family	Species	Functional wings?	(Re)colonization	Genetic exchange	Habitat cross-dependency?*	Trans-habitat movement	Waterways	Railways	Roads	Other	Method**	References	
Rhopalocera	Hesperiidae	<i>Hesperia comma catena</i>	yes	8km	1km	No	-	No	unknown	unknown	-	?	Thomas & Jones 1993	Likely needs some nectar (flower availability) during longer dispersal
Rhopalocera	Lycaenidae	<i>Agriades glandon aquilo</i>	yes	10km	2km	No	-	No	unknown	unknown	-	?	Schweitzer 2001	
Rhopalocera	Lycaenidae	<i>Lycaena dispar</i>	yes	2km	750m	No	-	No	unknown	unknown	-	MRR	Seong-Joon et al 2014	
Rhopalocera	Lycaenidae	<i>Lycaena helle</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Lycaenidae	<i>Maculinea arion</i>	yes	1km	1km	No	-	No	unknown	unknown	-	MRR	Bonelli et al. 2013	
Rhopalocera	Lycaenidae	<i>Maculinea nausithous</i>	yes	5km	1500m	No	-	No	unknown	unknown	-	MRR	Nowicki et al. 2014	
Rhopalocera	Lycaenidae	<i>Maculinea teielus</i>	yes	5km	unknown	No	-	No	unknown	unknown	-	?	Popovic et al. 2024	
Rhopalocera	Lycaenidae	<i>Plebicula golgus</i>	yes	likely <1km	likely <1km	No	-	No	unknown	unknown	-	-	Habel et al. 2015	
Rhopalocera	Lycaenidae	<i>Polyommatus eroides</i>	yes	likely <1km	likely <1km	No	-	No	unknown	unknown	-	-	Habel et al. 2015	
Rhopalocera	Lycaenidae	<i>Pseudophilotes bavius</i>	yes	<120m	<120m	No	-	No	unknown	unknown	-	G	Bartoňová et al 2020	
Rhopalocera	Nymphalidae	<i>Clossiana improba</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	males fly further and can aid in gene flow, while females have limited dispersal but are a requirement for colonization
Rhopalocera	Nymphalidae	<i>Coenonympha hero</i>	yes	300m	1200m	No	-	No	unknown	unknown	-	MRR	Cassel-Lundhagen et al 2007	
Rhopalocera	Nymphalidae	<i>Coenonympha oedippus</i>	yes	250m	400m	No	-	No	unknown	unknown	-	MRR	Celik et al 2009	
Rhopalocera	Nymphalidae	<i>Erebia calcaria</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Nymphalidae	<i>Erebia christi</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Nymphalidae	<i>Erebia medusa polaris</i>	yes	unknown	unknown	No	-	No	unknown	unknown	forest	-	-	males fly further and can aid in gene flow, while females have limited dispersal but are a requirement for colonization
Rhopalocera	Nymphalidae	<i>Erebia sudetica</i>	yes	1600m	3km	No	-	No	unknown	unknown	-	MRR	Kuras et al 2003	
Rhopalocera	Nymphalidae	<i>Euphydryas aurinia</i>	yes	7km	3km	No	-	No	unknown	unknown	-	MRR	Johansson et al. 2019	
Rhopalocera	Nymphalidae	<i>Euphydryas maturna</i>	yes	1km	1km	Yes, Grassland - Woodland	250m	No	unknown	unknown	-	MRR	Cizek and Konvicka 2005; Vrabec et al 2019	
Rhopalocera	Nymphalidae	<i>Fabriciana elisa</i>	yes	650m	1100m	No	-	No	unknown	unknown	-	MRR	Ehl et al. 2019	
Rhopalocera	Nymphalidae	<i>Melanargia arge</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	males fly further and can aid in gene flow, while females have limited dispersal but are a requirement for colonization
Rhopalocera	Nymphalidae	<i>Proterebia afra dalmata</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Papilionidae	<i>Papilio alexanor</i>	yes	probably very far	probably very far	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Papilionidae	<i>Papilio hospiton</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Rhopalocera	Papilionidae	<i>Parnassius apollo</i>	yes	1750m	500m	No	-	No	unknown	unknown	-	MRR	Brommer & Fred 2007	
Rhopalocera	Papilionidae	<i>Parnassius mnemosyne</i>	yes	2km	200m	No	-	Potentially	unknown	unknown	-	MRR	Kuussari et al. 2015	Even few hundred meters takes several years, therefore constant habitat strips needed
Rhopalocera	Papilionidae	<i>Zerynthia cassandra</i>	yes	10km	unknown	No	-	No	unknown	unknown	-	MRR	Ghesisi et al. 2019	
Rhopalocera	Papilionidae	<i>Zerynthia polyxena</i>	yes	10km	3km	No	-	No	unknown	unknown	-	MRR	Slancarova et al. 2015	
Rhopalocera	Pieridae	<i>Colias myrmidone</i>	yes	200m	750m	No	-	No	unknown	unknown	-	MRR	Sielezniew et al. 2019	males fly further and can aid in gene flow, while females have limited dispersal but are a requirement for colonization
Rhopalocera	Pieridae	<i>Leptidea morsei</i>	yes	unknown	unknown	Yes, Grassland - Woodland	unknown	No	unknown	unknown	-	-	-	
Heterocera	Cossidae	<i>Catopta thrips</i>	yes	likely very limited	likely very limited	No	-	unknown	unknown	unknown	-	?	Iacob et al. 2021	flightless females, resulting in very limited colonization potential
Heterocera	Erebidae	<i>Euplagia quadripunctaria</i>	yes	26km	26km	Yes, Grassland - Woodland	unknown	No	unknown	unknown	-	?	Petrakis & Legrakis 2005	
Heterocera	Geometridae	<i>Chondrosoma fiduciarium</i>	males only	Very limited	unknown	No	-	Yes, females o	unknown	unknown	-	-	-	flightless females, resulting in very limited colonization potential
Heterocera	Geometridae	<i>Lignyopecta fumidaria</i>	males only	Very limited	unknown	No	-	Yes, females o	unknown	unknown	-	-	-	
Heterocera	Geometridae	<i>Phyllometra culminaria</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	potential
Heterocera	Glyptopterigidae	<i>Glyptopterix loricatella</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	
Heterocera	Lasiocampidae	<i>Eriogaster catax</i>	yes	unknown	unknown	Yes, Grassland - Scrubland	unknown	No	unknown	unknown	-	-	-	potential
Heterocera	Noctuidae	<i>Arytura musculus</i>	yes	unknown	2500m	Yes, Grassland - Wetland	2500m	No	unknown	unknown	-	MRR	Ambrus et al. 2006	
Heterocera	Noctuidae	<i>Cucullia mixta</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	potential
Heterocera	Noctuidae	<i>Gortyna borelii lunata</i>	yes	3km	<100m	No	-	Potentially	unknown	unknown	-	MRR	Ringwood et al. 2003	
Heterocera	Noctuidae	<i>Polymixis rufocincta isolata</i>	yes	unknown	unknown	No	-	No	unknown	unknown	-	-	-	potential
Heterocera	Sphingidae	<i>Proserpinus proserpina</i>	yes	likely very far	likely very far	No	-	No	unknown	unknown	-	-	-	

* based on connectivity functions: 1 = for commuting, 2 = for migration, 0 = no cross-dependency

**methods used for experimental assessment of dispersal distances: MRR = mark-release-recapture, T = telemetry, G = genetic, O = other

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Table S5. Available knowledge on dispersal capacities of grassland-related Mantodea listed on Annex II or IV of the Habitats Directive

black text: based on scientific literature, blue text: caution required; either extrapolated from related species or marked by the author of existing study as unsure; red text: no or very limited knowledge available

General			Maximum dispersal distances				Dispersal barriers			Data sources		Notes
Family	Species	Functional wings?	(Re)colonization	Genetic exchange	Habitat cross-dependency?*	Trans-habitat movement	Waterways	Railways	Roads	Method**	References***	
Amelidae	Apteromantis aptera	No	Likely very limited	Likely very limited	No	-	Yes	Unknown	Unknown	-	Boieiro et al. 2007	

* based on connectivity functions: 1 = for commuting, 2 = for migration, 0 = no cross-dependency

**methods used for experimental assessment of dispersal distances: MRR = mark-release-recapture, T = telemetry, G = genetic, O = other

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Table S6. Habitat preferences per usage type (foraging and breeding) and conclusion on habitat cross-dependency for completion of an individual life cycle.

Grassland usage: F = foraging, B = breeding; Alternative habitats follow the types as in Halada et al. 2021, E = exclusive, P = preferred, S = suitable, O = occasional

order	family	species	Grassland preference	Grassland usage	Alternative habitat (breeding)	Alternative habitat (foraging)	Cross-dependency	Notes
Donata	Coenagrionidae	Coenagrion hylas	Occasional	F	Freshwater (E) + Mountain (E)	Agricultural (O) + Wetlands (P) + Freshwater (P) + Mountair	Yes; Grassland - Freshwater	
Donata	Coenagrionidae	Coenagrion mercuriale	Occasional	F	Freshwater (E)	Agricultural (O) + Scrubs (S) + Wetlands (P) + Freshwater (P)	Yes; Grassland - Freshwater	
Donata	Coenagrionidae	Coenagrion ornatum	Occasional	F	Freshwater (E)	Agricultural (O) + Scrubs (O) + Wetlands (P) + Freshwater (P)	Yes; Grassland - Freshwater	
Donata	Corduliidae	Macromia splendens	Occasional	F	Wetlands (E)	Agricultural (O) + Scrubs (S) + Forests (S) + Wetlands (P) + F	Yes; Grassland - Wetland	
Donata	Corduliidae	Oxygastra curtisii	Suitable	F	Freshwater (E) + Mountain (S)	Agricultural (S) + Scrubs (S) + Forests (O) + Wetlands (P) + F	Yes; Grassland - Freshwater	
Donata	Gomphidae	Lindenia tetraphylla	Occasional	F	Freshwater (P) + Coastal (S)	Agricultural (O) + Scrubs (S) + Forests (O) + Wetlands (P) + F	Yes; Grassland - Freshwater	
Donata	Gomphidae	Ophiogomphus cecilia	Occasional	F	Freshwater (E)	Agricultural (O) + Scrubs (O) + Forests (S) + Wetlands (P) + F	Yes; Grassland - Freshwater	
Donata	Gomphidae	Stylurus flavipes	Suitable	F	Freshwater (E)	Agricultural (S) + Scrubs (O) + Wetlands (P) + Freshwater (P)	Yes; Grassland - Freshwater	
Donata	Lestidae	Sympecma paedisca	Occasional	F	Freshwater (E)	Agricultural (S) + Scrubs (S) + Wetlands (P) + Freshwater (S)	Yes; Grassland - Freshwater	
Donata	Libellulidae	Leucorrhinia pectoralis	Suitable	F	Freshwater (E)	Agricultural (O) + Scrubs (S) + Forests (O) + Wetlands (P) + F	Yes; Grassland - Freshwater	
Orthoptera	Acrididae	Odontopodisma rubripes	Suitable	F+B	O	O	No	Only grasslands with bushes or high herbs
Orthoptera	Acrididae	Paracaloptenus caloptenoides	Preferred	F+B	O	O	No	Only grasslands with bushes
Orthoptera	Acrididae	Stenobothrus eurasius	Preferred	F+B	O	O	No	
Orthoptera	Myrmecophilidae	Myrmecophilus baronii	Suitable	F+B	O	O	No	Only in sparsely vegetated grasslands with nest
Orthoptera	Tettigoniidae	Baetica ustulata	Occasional	F+B	O	O	No	Only grasslands with gaps within the stone pile:
Orthoptera	Tettigoniidae	Isophya costata	Preferred	F+B	O	O	No	
Orthoptera	Tettigoniidae	Isophya harzi	Suitable	F+B	O	O	No	
Orthoptera	Tettigoniidae	Isophya stysi	Preferred	F+B	O	O	No	
Orthoptera	Tettigoniidae	Pholidoptera transsylvanica	Suitable	F+B	O	O	No	Only grasslands near forest margins
Orthoptera	Tettigoniidae	Saga pedo	Suitable	F+B	O	O	No	
Coleoptera	Scarabaeidae	Osmoderma eremita	Occasional	F+B	O	O	No	Only grasslands with solitary old trees with holl
Coleoptera	Carabidae	Carabus hampei	Suitable	F+B	O	O	No	
Coleoptera	Carabidae	Carabus hungaricus	Preferred	F+B	O	O	No	
Coleoptera	Carabidae	Carabus variolosus	Suitable	F	Wetland (P)	Wetland (P)	Yes, Grassland - Wetland	
Coleoptera	Carabidae	Carabus zawadzki	Preferred	F+B	O	O	No	
Coleoptera	Cerambycidae	Cerambyx cerdo	Occasional	F+B	O	O	No	Only grasslands with solitary old trees
Coleoptera	Cerambycidae	Dorcadion fulvum cervae	Preferred	F+B	O	O	No	
Coleoptera	Cerambycidae	Pilemia tigrina	Preferred	F+B	O	O	No	
Coleoptera	Cerambycidae	Pseudogauratina excellens	Suitable	F+B	O	O	No	Only grasslands with the sward of Lonicera nigra
Coleoptera	Geotrupidae	Bolbelasmus unicornis	Suitable	F+B	O	O	No	Grasslands with fungi in underground
Coleoptera	Lucanidae	Lucanus cervus	Occasional	F+B	O	O	No	Only grasslands with solitary old trees
Coleoptera	Tenebrionidae	Probatiscus subrugosus	Preferred	F+B	O	O	No	
Lepidoptera	Cossidae	Catopta thrips	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Erebidae	Euplagia quadripunctaria	Suitable	F	Woodland (P)	Woodland (S)	Yes, Grassland - Woodland	
Lepidoptera	Geometridae	Chondrosoma fiduciarium	Preferred	F+B	O	O	No	
Lepidoptera	Geometridae	Lignyopectera fumidaria	Preferred	F+B	Wetland (S)	Wetland(S)	No	
Lepidoptera	Geometridae	Phyllometra culminaria	Preferred	F+B	O	O	No	
Lepidoptera	Glyphipterigidae	Glyphipterix loricatella	Preferred	F+B	Forests (O)	Forests (S)	No	
Lepidoptera	Hesperiidae	Hesperia comma catena	Preferred	F+B	O	O	No	
Lepidoptera	Lasiocampidae	Eriogaster catax	Suitable	F	Shrubland (P)	Shrubland (P)	Yes, Grassland - Scrubland	
Lepidoptera	Lycaenidae	Agriades glandon aquilo	Preferred	F+B	O	O	No	
Lepidoptera	Lycaenidae	Lycaena dispar	Preferred	F+B	O	O	No	
Lepidoptera	Lycaenidae	Lycaena helle	Preferred	F+B	O	O	No	
Lepidoptera	Lycaenidae	Maculinea arion	Occasional	F+B	O	O	No	Steppe grasslands
Lepidoptera	Lycaenidae	Maculinea nausithous	Preferred	F+B	O	O	No	
Lepidoptera	Lycaenidae	Maculinea teleius	Preferred	F+B	O	O	No	
Lepidoptera	Lycaenidae	Plebicula golgus	Preferred	F+B	Rocky slopes (S)	Rocky slopes (S)	No	
Lepidoptera	Lycaenidae	Polyommatus eroides	Preferred	F+B	Rocky slopes (S)	Rocky slopes (S)	No	
Lepidoptera	Lycaenidae	Pseudophilotes bavius	Preferred	F+B	Rocky slopes (S)	Rocky slopes (S)	No	
Lepidoptera	Noctuidae	Arytrura musculus	Occasional	F	Wetland (P)	Wetland (P)	Yes, Grassland - Wetland	
Lepidoptera	Noctuidae	Cucullia mixta	Preferred	F+B	O	O	No	Xerotherm grasslands
Lepidoptera	Noctuidae	Gortyna borelii lunata	Preferred	F+B	Agricultural (S)	Agricultural (S)	No	
Lepidoptera	Noctuidae	Polymixis rufocincta isolata	Preferred	F+B	Rocky slopes (S)	Rocky slopes (S)	No	

Lepidoptera	Nymphalidae	<i>Clossiana improba</i>	Preferred	F+B	0	0	No	
Lepidoptera	Nymphalidae	<i>Coenonympha hero</i>	Preferred	F+B	0	0	No	
Lepidoptera	Nymphalidae	<i>Coenonympha oedippus</i>	Preferred	F+B	0	0	No	
Lepidoptera	Nymphalidae	<i>Erebia calcaria</i>	Preferred	F+B	0	0	No	
Lepidoptera	Nymphalidae	<i>Erebia christi</i>	Preferred	F+B	0	0	No	Xerotherm grasslands
Lepidoptera	Nymphalidae	<i>Erebia medusa polaris</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Nymphalidae	<i>Erebia sudetica</i>	Preferred	F+B	0	0	No	
Lepidoptera	Nymphalidae	<i>Euphydryas aurinia</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Nymphalidae	<i>Euphydryas maturna</i>	Suitable	F	Woodland (P)	Woodland (P)	Yes, Grassland - Woodland	
Lepidoptera	Nymphalidae	<i>Fabriciana elisa</i>	Preferred	F+B	Forests (S)	Forests (S)	No	
Lepidoptera	Nymphalidae	<i>Melanargia arge</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Nymphalidae	<i>Proterebia afra dalmata</i>	Preferred	F+B	Limestone rocks (S)	Limestone rocks (S)	No	
Lepidoptera	Papilionidae	<i>Papilio alexanor</i>	Suitable	F+B	0	0	No	Xerotherm grasslands
Lepidoptera	Papilionidae	<i>Papilio hospiton</i>	Suitable	F+B	0	0	No	Steppe grasslands
Lepidoptera	Papilionidae	<i>Parnassius apollo</i>	Suitable	F+B	0	0	No	Xerotherm grasslands
Lepidoptera	Papilionidae	<i>Parnassius mnemosyne</i>	Preferred	F+B	Agricultural (S) + Forests (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Papilionidae	<i>Zerynthia cassandra</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Papilionidae	<i>Zerynthia polyxena</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Pieridae	<i>Colias myrmidone</i>	Preferred	F+B	Agricultural (S)	Agricultural (S) + Scrubs (S) + Forests (S) + Urban (O)	No	
Lepidoptera	Pieridae	<i>Leptidea morsei</i>	Occasional	F	Woodland (P)	Woodland (P)	Yes, Grassland - Woodland	
Lepidoptera	Sphingidae	<i>Proserpinus proserpina</i>	Suitable	F+B	0	0	No	Steppe grasslands
Mantodea	Amelidae	<i>Apteromantis aptera</i>	Occasional	F+B	0	0	No	

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