

**Table S1.** Specimens and DNA sequences used in this study. No cytochrome *c* oxidase subunit 1 (COI) sequences were available in GenBank for the following three species of the *ornata* species-group: *Scopula concinnaria*, *S. honestata* and *S. subtilata*.

Sample ID	GenBank accession number / BOLD process ID	Genus	Species	Locality data	State ~ Province	Country	Lat (Dec. Deg.)	Long (Dec. Deg.)	Genitalia code	Source
RVcoll16D346	MG786130	<i>Scopula</i>	<i>decorata</i>	Kresna - Vlahi	Blagoevgrad	Bulgaria	41.730	23.200	2412	This study
IZBE Lep.868	EU443359	<i>Scopula</i>	<i>decorata</i>	Mändjala	Saaremaa	Estonia				Õunap et al. 2008
MM19018	JF854399	<i>Scopula</i>	<i>decorata</i>	Saeaere	Saaremaa	Estonia				Hausmann et al. 2013
BC ZSM Lep 45112	KF807123	<i>Scopula</i>	<i>decorata</i>	Strymon-Muendung	Thessaly	Greece	40.7833	23.85		Hausmann et al. 2013
BC ZSM Lep 45111	KF807143	<i>Scopula</i>	<i>decorata</i>	Vogatsikon (suedl. Kastoria)	Makedonia	Greece	40.4	21.2		Hausmann et al. 2013
BC ZSM Lep 12518	KF807522	<i>Scopula</i>	<i>decorata</i>	Bosco di Malabotta	Sicily	Italy	37.967	15.067		Hausmann et al. 2013
BC ZSM SS Lep 0062	KF807840	<i>Scopula</i>	<i>decorata</i>	Fiumara Trionto	Calabria	Italy	39.5553	16.7556		Hausmann et al. 2013
BC ZSM Lep 12862	KF808139	<i>Scopula</i>	<i>decorata</i>	M. Pollino 5 Km N Civita	Calabria	Italy	39.848	16.304		Hausmann et al. 2013
RVcoll16D341	MG786128	<i>Scopula</i>	<i>decorata</i>	Monfalcone	Friuli-Venezia-Giulia	Italy	45.822	13.535	2420	This study
RVcoll16D342	MG786134	<i>Scopula</i>	<i>decorata</i>	Monfalcone	Friuli-Venezia-Giulia	Italy	45.822	13.535	2421	This study
MM20568	KF807238	<i>Scopula</i>	<i>decorata</i>	Lps.	Akmenrags	Latvia				Hausmann et al. 2013
BC ZSM Lep 24248	GU687174	<i>Scopula</i>	<i>decorata</i>	Ferragudo	Faro	Portugal	37.1223	-8.5165		Hausmann et al. 2013
RVcoll15Q190	MG786133	<i>Scopula</i>	<i>decorata</i>	Enisala	Tulcea	Romania	44.883	28.834	2319	This study
RVcoll16D348	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala	Tulcea	Romania	44.883	28.834	2416	This study
RVcoll16D352	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala	Tulcea	Romania	44.883	28.834	2410	This study
RVcoll16D354	MG786135	<i>Scopula</i>	<i>decorata</i>	Enisala	Tulcea	Romania	44.883	28.834	2413	This study
n/a	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2450	This study
n/a	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2451	This study
n/a	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2452	This study
RVcoll16D343	MG786140	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2404	This study
RVcoll16D344	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2405	This study
RVcoll16D345	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2406	This study
RVcoll16D349	only genitalia	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2409	This study
RVcoll16D350	MG786132	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2408	This study

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RVcoll16D351	MG786136	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2407	This study
RVcoll16D353	MG786137	<i>Scopula</i>	<i>decorata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2411	This study
RVcoll16D355	MG786126	<i>Scopula</i>	<i>decorata</i>	Gura Dobrogei	Constanta	Romania	44.470	28.493	2415	This study
RVcoll16D347	MG786138	<i>Scopula</i>	<i>decorata</i>	Hamcearca, Creasta Cardonului	Tulcea	Romania	45.096	28.388	2414	This study
RVcoll15Q191	MG786131	<i>Scopula</i>	<i>decorata</i>	Histria	Constanta	Romania	44.549	28.766	2320	This study
MM19019	JF854400	<i>Scopula</i>	<i>decorata</i>	Moskovo	Chelyabinskaya Oblast	Russia				Hausmann et al. 2013
MM19020	KF807699	<i>Scopula</i>	<i>decorata</i>	Moeckelmossen	Oland	Sweden				Hausmann et al. 2013
BC ZSM Lep 49217	JN285260	<i>Scopula</i>	<i>decorata</i>	Moeckelmossen (Resmo)	Oland	Sweden	56.5239	16.4601		Hausmann et al. 2013
BC ZSM Lep 06663	GWORC1023-08	<i>Scopula</i>	<i>drenowskii</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06666	GWORC1026-08	<i>Scopula</i>	<i>drenowskii</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06667	GWORC1027-08	<i>Scopula</i>	<i>drenowskii</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06668	GWORC1028-08	<i>Scopula</i>	<i>drenowskii</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06669	GWORC1029-08	<i>Scopula</i>	<i>drenowskii</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06670	GWORC1030-08	<i>Scopula</i>	<i>drenowskii</i>	south of Arzular	Gumushane	Turkey	40.399	39.648		Can 2009
RVcoll15Q189	MG786139	<i>Scopula</i>	<i>orientalis</i>	Enisala	Tulcea	Romania	44.883	28.834	2318	This study
BC ZSM Lep 06659	GWORC1019-08	<i>Scopula</i>	<i>orientalis</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06660	GWORC1020-08	<i>Scopula</i>	<i>orientalis</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06661	GWORC1021-08	<i>Scopula</i>	<i>orientalis</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06662	GWORC1022-08	<i>Scopula</i>	<i>orientalis</i>	east of Güllüce	Sivas	Turkey	39.652	37.016		Can 2009
BC ZSM Lep 06658	GWORC1018-08	<i>Scopula</i>	<i>orientalis</i>	south of Arzular	Gumushane	Turkey	40.399	39.648		Can 2009
TLMF Lep 08148	KF807279	<i>Scopula</i>	<i>ornata</i>	Bludesch, Bludescher Magerrasen E, Umg. Jordan	Vorarlberg	Austria	47.203	9.747		Hausmann et al. 2013
RCIM 0078	KF808126	<i>Scopula</i>	<i>ornata</i>	NP Mt. Biokovo, Rastovac	Splitsko-dalmatinska, Dalmatia	Croatia				Hausmann et al. 2013
IZBE Lep.867	EU443358	<i>Scopula</i>	<i>ornata</i>	Mõntu gravel pit	Saaremaa	Estonia				Õunap et al. 2008
MM10461	HM874736	<i>Scopula</i>	<i>ornata</i>	Hanko	Nylandia	Finland	59.808	22.9		Hausmann et al. 2013
MM07059	KF807391	<i>Scopula</i>	<i>ornata</i>			Finland				Hausmann et al. 2013
BC ZSM Lep 24086	GU687307	<i>Scopula</i>	<i>ornata</i>	Garmisch-Patenkirchen,	Bavaria	Germany				Hausmann et al. 2013

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				NWR 65, Friedergries						
BC ZSM Lep 21080	HQ601537	<i>Scopula</i>	<i>ornata</i>	Oberschleissheim, Flughafen-Ost	Bavaria	Germany	48.24	11.5819		Hausmann et al. 2013
BC ZSM Lep 21424	HQ601536	<i>Scopula</i>	<i>ornata</i>	Oberschleissheim, Flughafen-o	Bavaria	Germany	48.2406	11.3986		Hausmann et al. 2013
BC ZSM Lep 22084	GU686911	<i>Scopula</i>	<i>ornata</i>	Oberschleissheim, Flughafen-Ost	Bavaria	Germany	48.24	11.5819		Hausmann et al. 2013
BC ZSM Lep 22401	HM393499	<i>Scopula</i>	<i>ornata</i>	Oberschleissheim, MW20	Bavaria	Germany	48.2572	11.545		Hausmann et al. 2013
BC ZSM Lep 01855	KF807289	<i>Scopula</i>	<i>ornata</i>	Regensburg - Kumpfmuehl	Bavaria	Germany	49.0062	12.0866		Hausmann et al. 2013
BC ZSM Lep 45113	KF807734	<i>Scopula</i>	<i>ornata</i>	Ahladokambos	Peloponnese	Greece	37.509	22.372		Hausmann et al. 2013
BC ZSM Lep 12515	KF808090	<i>Scopula</i>	<i>ornata</i>	Bosco di Malabotta	Sicily	Italy	37.967	15.067		Hausmann et al. 2013
BC ZSM Lep 12517	KF807795	<i>Scopula</i>	<i>ornata</i>	Bosco di Malabotta	Sicily	Italy	37.967	15.067		Hausmann et al. 2013
BC ZSM Lep 12741	KF807234	<i>Scopula</i>	<i>ornata</i>	Cristo di Maratea	Basilicata	Italy	39.988	15.72		Hausmann et al. 2013
RVcoll16D340	MG786129	<i>Scopula</i>	<i>ornata</i>	NE of Calaone	Veneto	Italy	45.256	11.676	2419	This study
BC MI 0022	GU686631	<i>Scopula</i>	<i>ornata</i>	Rometta sup. Gimello	Sicily	Italy	38.1408	15.4214		Hausmann et al. 2013
BC ZSM Lep 12516	KF807633	<i>Scopula</i>	<i>ornata</i>	Rometta sup. Gimello	Sicily	Italy	38.141	15.421		Hausmann et al. 2013
BC ZSM Lep 14099	KF807151	<i>Scopula</i>	<i>ornata</i>	Siniscola, Masonzos de Anne	Sardinia	Italy	40.5925	9.71083		Hausmann et al. 2013
BC ZSM Lep 14100	KF807974	<i>Scopula</i>	<i>ornata</i>	Torpe, Baddore	Sardinia	Italy	40.637	9.690		Hausmann et al. 2013
BC ZSM Lep 14101	KF807792	<i>Scopula</i>	<i>ornata</i>	Torpe, Baddore	Sardinia	Italy	40.637	9.690		Hausmann et al. 2013
BC ZSM Lep 12743	KF807505	<i>Scopula</i>	<i>ornata</i>	Valle Noce	Basilicata	Italy	39.992	15.801		Hausmann et al. 2013
BC ZSM Lep 12742	KF807722	<i>Scopula</i>	<i>ornata</i>	Valle Noce Trecchina	Basilicata	Italy	39.992	15.793		Hausmann et al. 2013
TLMF Lep 05416	KF807903	<i>Scopula</i>	<i>ornata</i>	Mavrovo NP, Radika valley, around bridge, 10 km NN		Macedonia	41.789	20.547		Hausmann et al. 2013
RVcoll16D356	MG786127	<i>Scopula</i>	<i>ornata</i>	Enisala, Cetatea Enisala	Tulcea	Romania	44.883	28.834	2417	This study
RVcoll16D357	n/a	<i>Scopula</i>	<i>ornata</i>	Gura Dobrogei	Constanta	Romania	44.470	28.493	2418	This study
RVcoll16B244	MG786141	<i>Scopula</i>	<i>ornata</i>	El Brull, Osona	Barcelona, Catalonia	Spain	41.812	2.294		This study
BC ZSM Lep 45171	KF807350	<i>Scopula</i>	<i>rubiginata</i>	Konitsa, Klidonia, Voidomatis	Epirus	Greece	39.9735	20.6585		Hausmann et al. 2013
RCIM 0079	KF807635	<i>Scopula</i>	<i>submutata</i>	NP Mt. Biokovo, Rastovac	Splitsko-dalmatinska, Dalmatia	Croatia				Hausmann et al. 2013
BC ZSM Lep 45093	KF807790	<i>Scopula</i>	<i>submutata</i>	Strymontal	Thessaly	Greece	40.8219	23.8441		Hausmann et al. 2013

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MM20553	KF807855	<i>Scopula</i>	<i>submutata</i>	Xerolimni	Makedonia	Greece				Hausmann et al. 2013
BC ZSM SS Lep 0079	KF807429	<i>Scopula</i>	<i>submutata</i>	Monte Cocuzzo	Calabria	Italy	39.2197	16.1414		Hausmann et al. 2013
TLMF Lep 02543	JF860080	<i>Scopula</i>	<i>submutata</i>	Montiggl/ Kleiner Priol	South Tyrol	Italy	46.428	11.3		Huemer & Hebert 2012
BC ZSM Lep 12747	KF807892	<i>Scopula</i>	<i>submutata</i>	Valle Noce Trecchina	Basilicata	Italy	39.992	15.793		Hausmann et al. 2013
BC ZSM Lep 12748	KF807914	<i>Scopula</i>	<i>submutata</i>	Valle Noce Trecchina	Basilicata	Italy	39.992	15.793		Hausmann et al. 2013
TLMF Lep 05401	KF807596	<i>Scopula</i>	<i>submutata</i>	Mavrovo NP, Radika valley, around bridge, 10 km NN		Macedonia	41.789	20.547		Hausmann et al. 2013
TLMF Lep 05402	KF807680	<i>Scopula</i>	<i>submutata</i>	Mavrovo NP, Radika valley, around bridge, 10 km NN		Macedonia	41.789	20.547		Hausmann et al. 2013
BC ZSM Lep 12358	KF807327	<i>Scopula</i>	<i>submutata</i>	Candasnos	Catalonia	Spain	41.5167	0.000		Hausmann et al. 2013
BC ZSM Lep 45092	KF807694	<i>Scopula</i>	<i>vigilata</i>	Galaxidi-Itea	Fokida	Greece	38.379	22.3814		Hausmann et al. 2013
BC ZSM Lep 45158	KF807720	<i>Scopula</i>	<i>vigilata</i>	Mani Ag. Nikolaos	Peloponnese	Greece	36.8241	22.47		Hausmann et al. 2013
BC ZSM Lep 12724	KF807531	<i>Scopula</i>	<i>vigilata</i>	Cristo di Maratea	Basilicata	Italy	39.988	15.72		Hausmann et al. 2013
BC ZSM Lep 23629	GU686691	<i>Scopula</i>	<i>vigilata</i>	Fiumara Trionto	Calabria	Italy	39.600	16.750		Hausmann et al. 2013
BC ZSM SS Lep 0081	KF807804	<i>Scopula</i>	<i>vigilata</i>	Fiumara Trionto	Calabria	Italy	39.5553	16.7556		Hausmann et al. 2013
BC ZSM Lep 12726	KF807625	<i>Scopula</i>	<i>vigilata</i>	Fiume Noce	Calabria	Italy	39.992	15.801		Hausmann et al. 2013
BC MI 0030	GU686623	<i>Scopula</i>	<i>vigilata</i>	Lagheti di Marinello	Sicily	Italy	38.1406	15.0506		Hausmann et al. 2013
BC MI 0093	GU686564	<i>Scopula</i>	<i>vigilata</i>	Lagheti di Marinello	Sicily	Italy	38.1406	15.0506		Hausmann et al. 2013
BC ZSM SS Lep 0082	KF808055	<i>Scopula</i>	<i>vigilata</i>	Lago dell' Angitola	Calabria	Italy	38.7283	16.2244		Hausmann et al. 2013
BC MI 0029	GU686622	<i>Scopula</i>	<i>vigilata</i>	Rometta sup. Gimello	Sicily	Italy	38.1408	15.4214		Hausmann et al. 2013
BC ZSM Lep 12547	KF807954	<i>Scopula</i>	<i>vigilata</i>	Rometta sup. Gimello	Sicily	Italy	38.141	15.421		Hausmann et al. 2013
BC ZSM Lep 12548	KF807598	<i>Scopula</i>	<i>vigilata</i>	Rometta sup. Gimello	Sicily	Italy	38.141	15.421		Hausmann et al. 2013
BC ZSM Lep 12549	KF807453	<i>Scopula</i>	<i>vigilata</i>	Rometta sup. Gimello	Sicily	Italy	38.141	15.421		Hausmann et al. 2013
BC ZSM Lep 12725	KF808045	<i>Scopula</i>	<i>vigilata</i>	SP Aieta	Calabria	Italy	39.924	15.793		Hausmann et al. 2013
BC ZSM Lep 22480	GU655171	<i>Scopula</i>	<i>vigilata</i>	Melliela env. Pawles Valley		Malta	35.9336	14.3935		Hausmann et al. 2013
BC ZSM Lep 16502	KF714699	<i>Rhodostrophia</i>	<i>vibicaria</i>	Alto Adige, 2km NE Taufers	South Tyrol	Italy	46.6556	10.4753		Hausmann et al. 2013
BC ZSM Lep 45120	KF808088	<i>Thetidia</i>	<i>smaragdaria</i>	Florina, Mt.Verno	West Macedonia	Greece	40.6318	21.4064		Hausmann et al. 2013

## References

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