

Supplementary Material:

Resurrection of the Butterfly-winged Comber, *Serranus papilionaceus* Valenciennes, 1832 (Teleostei: Serranidae) and its phylogenetic position within genus *Serranus*.

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Table S1. Details of the sampling locations of *Serranus papilionaceus* and *Serranus scriba* specimens that were analysed in the current study (^a specimens utilized for measures and meristic counts).

Species	Date of	FAO Area	GPS
Specimen code	collection	Location	
<i>S. papilionaceus</i>			
		GSA 34	
Spap001	19/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5111, -16.1722
Spap002	19/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5111, -16.1722
Spap003	20/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5097, -16.1707
Spap004	28/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5108, -16.1738
Spap005	28/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5108, -16.1729
Spap006	28/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5108, -16.1729
Spap007	28/04/2017	Santa Cruz de Tenerife, Canary Islands	28.5108, -16.1729
Spap008 ^a	12/05/2017	Santa Cruz de Tenerife, Canary Islands	28.5083, -16.1763
Spap009 ^a	15/06/2017	Santa Cruz de Tenerife, Canary Islands	28.5083, -16.1763
Spap010 ^a	14/06/2017	Garachico, Tenerife, Canary Islands	28.3799, -16.7600
Spap011 ^a	14/06/2017	Garachico, Tenerife, Canary Islands	28.3799, -16.7600
Spap012 ^a	14/06/2017	Garachico, Tenerife, Canary Islands	28.3799, -16.7600
<i>S. scriba</i>			
		GSA 15	
Sscr160117137 ^a	17/01/2016	Grand Harbour, Valletta, Malta	35.8936, 14.5123
Sscr160117141 ^a	17/01/2016	Grand Harbour, Valletta, Malta	35.8936, 14.5123
Sscr160117145 ^a	17/01/2016	Grand Harbour, Valletta, Malta	35.8936, 14.5123
Sscr160130016 ^a	30/01/2016	Cirkewwa, Mellieha, Malta	35.9896, 14.3287
Sscr160131002 ^a	31/01/2016	Marsascala, Malta	35.8679, 14.5747
Sscr160214086 ^a	14/02/2016	Xghajra, Malta	35.8815, 14.5511
Sscr160214087 ^a	14/02/2016	Xghajra, Malta	35.8815, 14.5511
Sscr160214090 ^a	14/02/2016	Xghajra, Malta	35.8815, 14.5511
Sscr160417002 ^a	17/04/2016	Marsamxett Harbour, Valletta, Malta	35.9021, 14.5121
Sscr160501178 ^a	01/05/2016	Armier, Mellieha, Malta	35.9920, 14.3606
Sscr160515174 ^a	15/05/2016	Mellieha, Malta	35.9691, 14.3714
Sscr160605005 ^a	05/06/2016	Marsamxett Harbour, Valletta, Malta	35.9022, 14.5124
Sscr160620055 ^a	20/06/2016	Marsamxett Harbour, Valletta, Malta	35.9026, 14.5139
Sscr160626035 ^a	26/06/2016	Mtahleb, Rabat, Malta	35.8771, 14.3395
Sscr160626036 ^a	26/06/2016	Mtahleb, Rabat, Malta	35.8771, 14.3395

Table S2. Details of the *Serranus papilionaceus* and *Serranus scriba* GenBank accession numbers related to each specimen analysed in the current study.

Species	COI	ND2	Rhod	PTR
Specimen code				
<i>S. papilionaceus</i>				
Spap001	MW439283	MW447431	MW447458	MW447485
Spap002	MW439284	MW447432	MW447459	MW447486
Spap003	MW439285	MW447433	MW447460	MW447487
Spap004	MW439286	MW447434	MW447461	MW447488
Spap005	MW439287	MW447435	MW447462	MW447489
Spap006	MW439288	MW447436	MW447463	MW447490
Spap007	MW439289	MW447437	MW447464	MW447491
Spap008	MW439290	MW447438	MW447465	MW447492
Spap009	MW439291	MW447439	MW447466	MW447493
Spap010	MW439292	MW447440	MW447467	MW447494
Spap011	MW439293	MW447441	MW447468	MW447495
Spap012	MW439294	MW447442	MW447469	MW447496
<i>S. scriba</i>				
Sscr160117137	MW439295	MW447416	MW447443	MW447470
Sscr160117141	MW439296	MW447417	MW447444	MW447471
Sscr160117145	MW439297	MW447418	MW447445	MW447472
Sscr160130016	MW439298	MW447419	MW447446	MW447473
Sscr160131002	MW439299	MW447420	MW447447	MW447474
Sscr160214086	MW439300	MW447421	MW447448	MW447475
Sscr160214087	MW439301	MW447422	MW447449	MW447476
Sscr160214090	MW439302	MW447423	MW447450	MW447477
Sscr160417002	MW439303	MW447424	MW447451	MW447478
Sscr160501178	MW439304	MW447425	MW447452	MW447479
Sscr160515174	MW439305	MW447426	MW447453	MW447480
Sscr160605005	MW439306	MW447427	MW447454	MW447481
Sscr160620055	MW439307	MW447428	MW447455	MW447482
Sscr160626035	MW439308	MW447429	MW447456	MW447483
Sscr160626036	MW439309	MW447430	MW447457	MW447484

Table S3. List of species and GenBank Accession numbers for the COI sequences used in the construction of the phylogenetic tree.

Species	BOLD BIN ID	Reference	Species	BOLD BIN ID	Reference
GenBank ID / BOLD ID	Sampling location		GenBank ID / BOLD ID	Sampling location	
<i>S. scriba</i>	BOLD:AAN9242		<i>S. cabrilla</i> (cont.)		
KC501473	Turkey	Keskin and Atar, 2013	KC501456	Turkey	Keskin & Atar 2013
KC501474	Turkey	Keskin and Atar, 2013	KC501457	Turkey	Keskin & Atar 2013
KC501475	Turkey	Keskin and Atar, 2013	KC501458	Turkey	Keskin & Atar 2013
KC501476	Turkey	Keskin and Atar, 2013	KC501459	Turkey	Keskin & Atar 2013
KC501477	Turkey	Keskin and Atar, 2013	KC501460	Turkey	Keskin & Atar 2013
KC501478	Turkey	Keskin and Atar, 2013	KC501461	Turkey	Keskin & Atar 2013
KC501479	Turkey	Keskin and Atar, 2013	KC501462	Turkey	Keskin & Atar 2013
KC501480	Turkey	Keskin and Atar, 2013	KC501463	Turkey	Keskin and Atar 2013
KC501481	Turkey	Keskin and Atar, 2013	KC501464	Turkey	Keskin and Atar 2013
KC501482	Turkey	Keskin and Atar, 2013	KC501465	Turkey	Keskin and Atar 2013
KC501483	Turkey	Keskin and Atar, 2013	KC501466	Turkey	Keskin and Atar 2013
KC501484	Turkey	Keskin and Atar, 2013	KC501467	Turkey	Keskin and Atar 2013
KC501485	Turkey	Keskin and Atar, 2013	KC501468	Turkey	Keskin and Atar 2013
KC501486	Turkey	Keskin and Atar, 2013	KC501469	Turkey	Keskin and Atar 2013
KC501487	Turkey	Keskin and Atar, 2013	KC501470	Turkey	Keskin and Atar 2013
KC501488	Turkey	Keskin and Atar, 2013	KC501471	Turkey	Keskin and Atar 2013
KC501489	Turkey	Keskin and Atar, 2013	KC501472	Turkey	Keskin and Atar 2013
KC501490	Turkey	Keskin and Atar, 2013	KJ709623	Sicily, Italy	Landi et al. 2014
KC501491	Turkey	Keskin and Atar, 2013	KJ709624	Sicily, Italy	Landi et al. 2014
KC501492	Turkey	Keskin and Atar, 2013	KJ709625	Sicily, Italy	Landi et al. 2014
KJ709632	Sicily, Italy	Landi et al. 2014	KJ709626	Sicily, Italy	Landi et al. 2014
KX925354	Malta	Vella and Vella, 2016	KJ709627	Sicily, Italy	Landi et al. 2014
KX925355	Malta	Vella and Vella, 2016	KJ709628	Sicily, Italy	Landi et al. 2014
KX925356	Malta	Vella and Vella, 2016	KJ709630	Sicily, Italy	Landi et al. 2014
KX925357	Malta	Vella and Vella, 2016	KJ709902	Malta	Landi et al. 2014
MW439295	Malta	current study	KJ709903	Malta	Landi et al. 2014
MW439296	Malta	current study	KJ709904	Malta	Landi et al. 2014
MW439297	Malta	current study	KJ709905	Malta	Landi et al. 2014
MW439298	Malta	current study	KJ709906	Malta	Landi et al. 2014
MW439299	Malta	current study	KJ709907	Malta	Landi et al. 2014
MW439300	Malta	current study	KJ709908	Malta	Landi et al. 2014
MW439301	Malta	current study	KJ768309	Portugal	Landi et al. 2014
MW439302	Malta	current study	KX925338	Malta	Vella and Vella, 2016
MW439303	Malta	current study	KC501465	Turkey	Keskin and Atar 2013
MW439304	Malta	current study	KX925339	Malta	Vella and Vella 2016
MW439305	Malta	current study	KX925340	Malta	Vella and Vella 2016
MW439306	Malta	current study	KX925341	Malta	Vella and Vella 2016
MW439307	Malta	current study	KX925342	Malta	Vella and Vella 2016
MW439308	Malta	current study	KX925343	Malta	Vella and Vella 2016
MW439309	Malta	current study	KX925344	Malta	Vella and Vella 2016
			KX925345	Malta	Vella and Vella 2016
			KX925346	Canary Islands	Vella and Vella 2016
			KX925347	Canary Islands	Vella and Vella 2016
			KX925348	Canary Islands	Vella and Vella 2016
			KX925349	Canary Islands	Vella and Vella 2016
<i>S. papilionaceus</i>			<i>S. hepatus</i>	BOLD:AAC6488	
MW439283	Canary Islands	current study	JQ774733	Portugal	Costa et al. 2012
MW439284	Canary Islands	current study	JQ774734	Portugal	Costa et al. 2012
MW439285	Canary Islands	current study	JQ774735	Portugal	Costa et al. 2012
MW439286	Canary Islands	current study	JQ774736	Portugal	Costa et al. 2012
MW439287	Canary Islands	current study	JQ774737	Portugal	Costa et al. 2012
MW439288	Canary Islands	current study	JQ774916	Portugal	Costa et al. 2012
MW439289	Canary Islands	current study	JQ774917	Portugal	Costa et al. 2012
MW439290	Canary Islands	current study	KJ709631	Sicily, Italy	Landi et al. 2014
MW439291	Canary Islands	current study	KJ709909	Malta	Landi et al. 2014
MW439292	Canary Islands	current study	KJ709910	Malta	Landi et al. 2014
MW439293	Canary Islands	current study	KJ709911	Malta	Landi et al. 2014
MW439294	Canary Islands	current study	KJ709912	Malta	Landi et al. 2014
			KJ709913	Malta	Landi et al. 2014
<i>S. atricauda</i>	BOLD:ACB3209		KX925350	Malta	Vella and Vella 2016
KX925333	Canary Islands	Vella and Vella 2016	KX925351	Malta	Vella and Vella 2016
KX925334	Canary Islands	Vella and Vella 2016	KX925352	Malta	Vella and Vella 2016
KX925335	Canary Islands	Vella and Vella 2016	KX925353	Malta	Vella and Vella 2016
KX925336	Canary Islands	Vella and Vella 2016			
KX925337	Canary Islands	Vella and Vella 2016			
<i>S. cabrilla</i>	BOLD:AAD1027				
KC501453	Turkey	Keskin and Atar 2013			
KC501454	Turkey	Keskin and Atar 2013			
KC501455	Turkey	Keskin and Atar 2013			

Species	BOLD BIN ID	Reference	Species	BOLD BIN ID	Reference
GenBank ID / BOLD ID	Sampling location		GenBank ID / BOLD ID	Sampling location	
<i>S. tabacarius</i>	BOLD:AAC4779		<i>S. baldwini</i>	BOLD:AAA6921	
FJ584104	Cuba	Steinke et al. 2009	FJ584099	Cuba	Steinke et al. 2009
JQ839887	Berry Islands	Weigt et al. 2012	FJ584100	Cuba	Steinke et al. 2009
JQ841001	Belize	Weigt et al. 2012	FJ584101	Cuba	Steinke et al. 2009
<i>S. tortugarum</i>	BOLD:AAB3018		FJ584102	Cuba	Steinke et al. 2009
JQ841003	Belize	Weigt et al. 2012	JQ840694	Belize	Weigt et al. 2012
JQ841004	Belize	Weigt et al. 2012	JQ841380	Belize	Weigt et al. 2012
JQ841005	Belize	Weigt et al. 2012	JQ841381	Belize	Weigt et al. 2012
JQ841006	Belize	Weigt et al. 2012	JQ841382	Belize	Weigt et al. 2012
JQ841007	Belize	Weigt et al. 2012	JQ841383	Belize	Weigt et al. 2012
JQ841008	Belize	Weigt et al. 2012	JQ841384	Belize	Weigt et al. 2012
JQ841821	Belize	Weigt et al. 2012	JQ841385	Belize	Weigt et al. 2012
JQ841822	Belize	Weigt et al. 2012	JQ843053	Trinidad and Tobago	Weigt et al. 2012
<i>S. phoebe</i>	BOLD:AAU1502		JQ843054	Trinidad and Tobago	Weigt et al. 2012
KF461238	Alabama, USA	Handy et al. unpub	JQ843055	Trinidad and Tobago	Weigt et al. 2012
KT075298	North Carolina, USA	Trizna, unpub	JQ841387	Belize	Weigt et al. 2012
KT075320	North Carolina, USA	Trizna, unpub	JQ841819	Belize	Weigt et al. 2012
MH378558	USA	Redmond et al. unpub	JQ842315	Curacao	Weigt et al. 2012
MH378563	USA	Redmond et al. unpub	<i>S. chionaraia</i>	BOLD:AAC4820	
MH378573	USA	Redmond et al. unpub	LIDM897-07	Panama (Atlantic)	unpublished
<i>S. notospilus</i>	BOLD:AAH9574		MLIII396-08	Mexico (Atlantic)	unpublished
KF930433	Mid Atlantic bight, USA	Bentley and Wiley unpub	MLIII523-08	Belize	unpublished
<i>S. aequidens</i>	BOLD:AAZ5418		MLIII565-08	Belize	unpublished
MF957035	Costa Rica (Pacific)	Robertson et al. 2017	<i>S. tigrinus</i>	BOLD:AAB5163	
MF957036	Panama (Pacific)	Robertson et al. 2017	FJ584105	Cuba	Steinke et al. 2009
MF957037	Costa Rica (Pacific)	Robertson et al. 2017	FJ584106	Cuba	Steinke et al. 2009
MF957038	Costa Rica (Pacific)	Robertson et al. 2017	JQ839888	Berry Islands	Weigt et al. 2012
<i>S. atrobranchus</i>	BOLD:AAU2343		JQ839889	Berry Islands	Weigt et al. 2012
MH378526	USA	Redmond et al. unpub	JQ841002	Belize	Weigt et al. 2012
MH378556	USA	Redmond et al. unpub	JQ841389	Belize	Weigt et al. 2012
MH378602	USA	Redmond et al. unpub	JQ841820	Belize	Weigt et al. 2012
MH378606	USA	Redmond et al. unpub	JQ842316	Curacao	Weigt et al. 2012
MH378610	USA	Redmond et al. unpub	JQ842317	Curacao	Weigt et al. 2012
<i>S. subligarius</i>	BOLD:ACC6821		JQ843057	Curacao	Weigt et al. 2012
KF461239	Alabama, USA	Handy et al. unpub	Outgroup		
<i>S. flaviventris</i>	BOLD:AAE1690		JX135579	<i>Hyporthodus octofasciatus</i>	Zhuang et al. 2013
JQ840701	Belize	Weigt et al. 2012	KC593372	<i>Epinephelus trimaculatus</i>	Zhuang et al. 2013
JQ840999	Belize	Weigt et al. 2012	KC593376	<i>Aethaloperca rogaa</i>	Zhuang et al. 2013

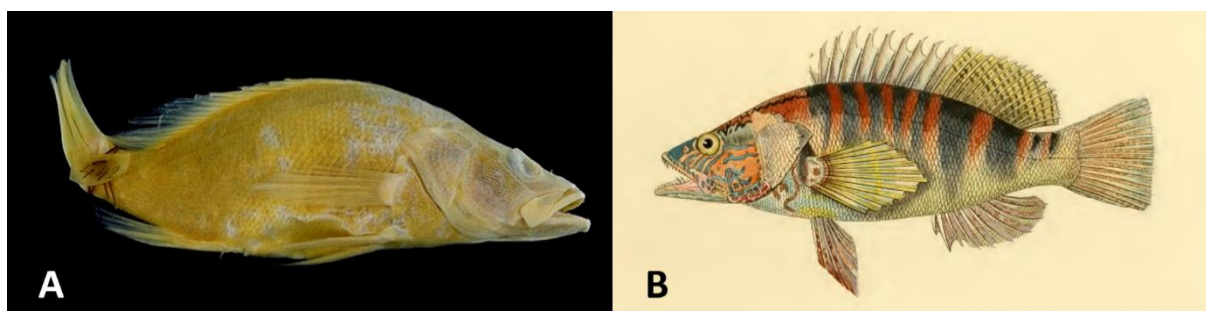


Figure S1. **A** NRM 442 is the oldest known type specimen for *Serranus scriba* [photo by Anders Silfvergrip, Swedish Museum of Natural History]. **B** An illustration representation of *Serranus scriba* (Plate 28) for the description of Cuvier and Valenciennes, 1828.



Figure S2. **A** MNHN-IC-0000-7279, two syntype specimens of *Serranus papilionaceus* from Gorée, Senegal (Atlantic Ocean) for the description of Valenciennes, 1832. **B** MNHN-IC-0000-7129, museum specimens of *Serranus scriba* from Algeria (Mediterranean Sea).
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