

A new perspective on the molecular dating of the brown trout complex with an extended phylogeographic information on the species in Serbia

Tijana Veličković | ORCID: 0000-0001-9152-056X

Department of Biology and Ecology, Faculty of Science, University of Kragujevac,
Radoja Domanovića 12, 34000 Kragujevac, Serbia

Aleš Snoj | ORCID: 0000-0003-4708-0370

Department of Animal Science, Biotechnical Faculty, University of Ljubljana,
Jamnikarjeva 101, 1000 Ljubljana, Slovenia

Vladica Simić | ORCID: 0000-0001-6787-9783

Department of Biology and Ecology, Faculty of Science, University of Kragujevac,
Radoja Domanovića 12, 34000 Kragujevac, Serbia

Radek Šanda | ORCID: 0000-0001-8514-3948

Department of Zoology, National Museum of the Czech Republic, Václavské náměstí 68,
115 79 Prague, Czech Republic

Jasna Vukić | ORCID: 0000-0003-2243-0303

Department of Ecology, Faculty of Science, Charles University, Viničná 7, 12844 Prague
2, Czech Republic

Dovilė Barcytė | ORCID: 0000-0002-3542-1177

Department of Zoology, National Museum of the Czech Republic, Václavské náměstí 68,
115 79 Prague, Czech Republic

David Stanković | ORCID: 0000-0002-3312-382X

Department of Organisms and Ecosystems Research, National Institute of Biology, 1000
Ljubljana, Slovenia

david.stankovic@nib.si

Saša Marić | ORCID: 0000-0002-8132-3738

Institute of Zoology, Faculty of Biology, University of Belgrade, Studentski trg 16,
11001 Belgrade, Serbia

Supplementary material

TABLE S1 The list of haplotypes and the attendant mitochondrial lineages, GenBank Accession numbers of the sequences used in the present study and the corresponding references. Haplotypes identified in the present study are bolded, previously undescribed haplotypes are marked with an asterisk, and other haplotypes were mined from the GenBank

Haplotype	Lineage	Accession number	Reference
ADcs1	AD	AY836330	Cortey et al., 2004
ADcs2	AD	AY836331	Cortey et al., 2004
ADcs3	AD	AY836332	Cortey et al., 2004
ADcs4	AD	AY836333	Cortey et al., 2004
ADcs5	AD	AY836334	Cortey et al., 2004
ADcs6	AD	AY836335	Cortey et al., 2004
ADcs7	AD	AY836336	Cortey et al., 2004
ADcs8	AD	AY836337	Cortey et al., 2004
ADcs9	AD	AY836338	Cortey et al., 2004
ADcs10	AD	AY836339	Cortey et al., 2004
ADcs11	AD	AY836340	Cortey et al., 2004
ADcs12	AD	AY836341	Cortey et al., 2004
ADcs13	AD	AY836342	Cortey et al., 2004
ADcs15	AD	AY836344	Cortey et al., 2004
ADcs16	AD	AY836345	Cortey et al., 2004
ADcs17	AD	AY836346	Cortey et al., 2004
ADcs18	AD	AY836347	Cortey et al., 2004
ADcs19	AD	AY836348	Cortey et al., 2004
ADcs20	AD	AY836349	Cortey et al., 2004
ADcs21	AD	JQ030884	Lucarda et al., 2012a
ADcs22*	AD	OP690630	present study
AD-Tyrrh1	AD	KX450257	Berrebi et al., 2019
AD-Tyrrh2	AD	KX450258	Berrebi et al., 2019
AD-Tyrrh3	AD	KX450259	Berrebi et al., 2019
AD-Tyrrh5	AD	KX450261	Berrebi et al., 2019
AD-Tyrrh6	AD	KX450262	Berrebi et al., 2019
ADTR1	AD	JN543965	Özen, 2013
ADTR2	AD	JN543966	Özen, 2013
ADTR3	AD	JN543967	Özen, 2013
ADTR4	AD	JN543968	Özen, 2013
ADTR5	AD	JN543969	Özen, 2013
ADTR6	AD	JN543970	Özen, 2013
ADTR7	AD	JN543971	Özen, 2013
ADTR8	AD	JN543972	Özen, 2013
AdAE1	AD	GQ357908	Kohout et al., 2013
AdAE2	AD	GQ357909	Kohout et al., 2013
AdAE3	AD	GQ357910	Kohout et al., 2013
AdZA1	AD	GQ357911	Kohout et al., 2013
KOS6	AD	MT505420	Grapci-Kotori et al., 2020
KOS19	AD	MT505421	Grapci-Kotori et al., 2020
KOS34	AD	MT505422	Grapci-Kotori et al., 2020
KOS73	AD	MT505423	Grapci-Kotori et al., 2020
KOS85	AD	MT505424	Grapci-Kotori et al., 2020

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
KOS87	AD	MT505425	Grapci-Kotori et al., 2020
KOS90	AD	MT505426	Grapci-Kotori et al., 2020
KOS102	AD	MT505428	Grapci-Kotori et al., 2020
AdcsTi1	AD	KU667314	Marić et al., 2017
R3C	AD	KU667313	Marić et al., 2017
AdPrz	AD	KU667310	Marić et al., 2017
AD-C1	AD	DQ381567	Sušnik et al., 2007
AD-M1	AD	DQ381566	Sušnik et al., 2007
ADcr2	AD	MK184916	Delling et al., 2020
ADcr3	AD	MK184930	Delling et al., 2020
ADcr4	AD	MK184926	Delling et al., 2020
ADcr5	AD	MK184935	Delling et al., 2020
ADcr6	AD	MK184943	Delling et al., 2020
AUA5	AD	AF253551	Suárez et al., 2001
macros1	AD	JN807337	Querci et al., 2013
<i>S. letnica</i> Haplo 12	AD	AY926570	Sušnik et al., 2006
<i>S. letnica</i> Haplo 13	AD	AY926573	Sušnik et al., 2006
<i>S. letnica</i> Haplo 14	AD	AY926571	Sušnik et al., 2006
<i>S. letnica</i> Haplo 15	AD	AY926572	Sušnik et al., 2006
<i>S. letnica</i> Haplo 16	AD	DQ381568	Sušnik et al., 2007
<i>S. letnica</i> Haplo 17	AD	DQ381569	Sušnik et al., 2007
<i>S. letnica</i> Haplo 18	AD	DQ381570	Sušnik et al., 2007
MEcs1	ME	AY836350	Cortey et al., 2004
MEcs2	ME	AY836351	Cortey et al., 2004
MEcs3	ME	AY836352	Cortey et al., 2004
MEcs4	ME	AY836353	Cortey et al., 2004
MEcs5	ME	AY836354	Cortey et al., 2004
MEcs6	ME	AY836355	Cortey et al., 2004
MEcs7	ME	AY836356	Cortey et al., 2004
MEcs8	ME	AY836357	Cortey et al., 2004
MEcs9	ME	AY836358	Cortey et al., 2004
MEcs10	ME	AY836359	Cortey et al., 2004
MEcs11	ME	AY836360	Cortey et al., 2004
MEcs13	ME	AY836362	Cortey et al., 2004
MEcs14	ME	AY836363	Cortey et al., 2004
MEcs15	ME	AY836364	Cortey et al., 2004
MEcs23	ME	MG970273	Vera et al., 2019
MEcs25	ME	MG970274	Vera et al., 2019
MEcs26	ME	MG970275	Vera et al., 2019
MEcs27	ME	MG970276	Vera et al., 2019
MEcr1	ME	MK184945	Delling et al., 2020
MAcs1	MA	AY836365	Cortey et al., 2004
Ma1a	MA	DQ841191	Meraner et al., 2007
Ma2a	MA	DQ841189	Meraner et al., 2007
Ma2b	MA	DQ841190	Meraner et al., 2007
Ma2c	MA	JQ582461	Meraner et al., 2013
MAcs4	MA	JN208022	Pujolar et al., 2011

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
MAcs5	MA	JQ041696	Lucarda et al., 2012b
MaK1	MA	JX846931	Jadan et al., 2015
MAcr1	MA	MK184938	Delling et al., 2020
MAcr2	MA	MK184936	Delling et al., 2020
MATR1	MA	JN543996	Özen, 2013
AD-Z1	MA	DQ381565	Sušnik et al., 2007
ATcs1	AT	AF273086	Cortey & García-Marín, 2002
ATcs2	AT	AF273087	Cortey & García-Marín, 2002
ATcs3	AT	AF274574	Cortey & García-Marín, 2002
ATcs4	AT	AF274575	Cortey & García-Marín, 2002
ATcs5	AT	AF274576	Cortey & García-Marín, 2002
ATcs6	AT	AF274577	Cortey & García-Marín, 2002
ATcs11	AT	AY836327	Cortey et al., 2004
ATcs12	AT	AY836328	Cortey et al., 2004
ATcs13	AT	AY836329	Cortey et al., 2004
ATcs14	AT	EF530476	Cortey et al., 2009
ATcs15	AT	EF530477	Cortey et al., 2009
ATcs16	AT	EF530478	Cortey et al., 2009
ATcs17	AT	EF530479	Cortey et al., 2009
ATcs18	AT	EF530480	Cortey et al., 2009
ATcs19	AT	EF530481	Cortey et al., 2009
ATcs20	AT	EF530482	Cortey et al., 2009
ATcs21	AT	EF530483	Cortey et al., 2009
ATcs22	AT	EF530484	Cortey et al., 2009
ATcs23	AT	EF530485	Cortey et al., 2009
ATcs24	AT	EF530486	Cortey et al., 2009
ATcs25	AT	EF530487	Cortey et al., 2009
ATcs26	AT	EF530488	Cortey et al., 2009
ATcs27	AT	EF530489	Cortey et al., 2009
ATcs28	AT	EF530490	Cortey et al., 2009
ATcs29	AT	EF530491	Cortey et al., 2009
ATcs30	AT	EF530492	Cortey et al., 2009
ATcs31	AT	EF530493	Cortey et al., 2009
ATcs32	AT	EF530494	Cortey et al., 2009
ATcs33	AT	EF530495	Cortey et al., 2009
ATcs34	AT	EF530496	Cortey et al., 2009
ATcs35	AT	EF530497	Cortey et al., 2009
ATcs36	AT	EF530498	Cortey et al., 2009
ATcs37	AT	EF530499	Cortey et al., 2009
ATcs38	AT	EF530500	Cortey et al., 2009
ATcs39	AT	EF530501	Cortey et al., 2009
ATcs41	AT	EF530502	Cortey et al., 2009
ATcs42	AT	EF530503	Cortey et al., 2009
ATcs43	AT	EF530504	Cortey et al., 2009

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
ATcs45	AT	EF530505	Cortey et al., 2009
ATcs46	AT	EF530506	Cortey et al., 2009
ATcs47	AT	EF530507	Cortey et al., 2009
ATcs48	AT	EF530508	Cortey et al., 2009
ATcs49	AT	EF530509	Cortey et al., 2009
ATcs50	AT	EF530510	Cortey et al., 2009
ATcs51	AT	EF530511	Cortey et al., 2009
ATcs52	AT	EF530512	Cortey et al., 2009
ATcs53	AT	MK330940	Berrebi et al., 2020
ATcs54*	AT	OP690631	present study
A5	AT	HQ848357	Kohout et al., 2012
A7	AT	HQ848358	Kohout et al., 2012
A8	AT	HQ848359	Kohout et al., 2012
A9	AT	HQ848360	Kohout et al., 2012
A10	AT	HQ848361	Kohout et al., 2012
A11	AT	HQ848362	Kohout et al., 2012
A12	AT	HQ848363	Kohout et al., 2012
A13	AT	HQ848364	Kohout et al., 2012
A14	AT	HQ848365	Kohout et al., 2012
A15	AT	HQ848366	Kohout et al., 2012
A16	AT	HQ848367	Kohout et al., 2012
A17	AT	HQ848368	Kohout et al., 2012
A18	AT	HQ848369	Kohout et al., 2012
A19	AT	HQ848370	Kohout et al., 2012
At1e	AT	DQ841192	Meraner et al., 2007
At11a	AT	AY185578	Duftner et al., 2003
At11b	AT	AY185579	Duftner et al., 2003
ATSic	AT	JF297974	Snoj et al., 2011
AT-Tyrrh1	AT	KX450263	Berrebi et al., 2019
ATM2	AT	JF297979	Snoj et al., 2011
ATM3	AT	JF297980	Snoj et al., 2011
ATM4	AT	JF297975	Snoj et al., 2011
ATM5	AT	JF297977	Snoj et al., 2011
ATM7	AT	JF297982	Snoj et al., 2011
ATM12	AT	KT279147	Doadrio et al., 2015
ATM13	AT	KT279141	Doadrio et al., 2015
ATM16	AT	KT279144	Doadrio et al., 2015
NA1	AT	AF253541	Suárez et al., 2001
NA2	AT	AF253542	Suárez et al., 2001
NA3	AT	AF253543	Suárez et al., 2001
NA4	AT	AF253556	Suárez et al., 2001

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
NA6	AT	AF253559	Suárez et al., 2001
JE1	AT	AF253557	Suárez et al., 2001
SA1	AT	AF253553	Suárez et al., 2001
SA2	AT	AF253554	Suárez et al., 2001
SA3	AT	AF253555	Suárez et al., 2001
ATM1	AT-M	JF297978	Snoj et al., 2011
ATM6	AT-M	JF297976	Snoj et al., 2011
ATM9	AT-M	KT279157	Doadrio et al., 2015
ATM10	AT-M	KT279143	Doadrio et al., 2015
ATM11	AT-M	KT279146	Doadrio et al., 2015
ATM14	AT-M	KT279142	Doadrio et al., 2015
ATM15	AT-M	KT279152	Doadrio et al., 2015
NAcr1	NA	LT617612	Tougard et al., 2018
NAcr2	NA	LT617613	Tougard et al., 2018
NAcr5	NA	LT617632	Tougard et al., 2018
ATA1	NA	LT617630	Tougard et al., 2018
ATA2	NA	LT617631	Tougard et al., 2018
DUcs1	DU	EF530513	Cortey et al., 2009
DUcs2	DU	EF530514	Cortey et al., 2009
DUcs3	DU	EF530515	Cortey et al., 2009
DUcs4	DU	EF530516	Cortey et al., 2009
DUcs5	DU	EF530517	Cortey et al., 2009
DUcs6	DU	EF530518	Cortey et al., 2009
DUcs7	DU	EF530519	Cortey et al., 2009
DUcs8	DU	EF530520	Cortey et al., 2009
DUcs9	DU	EF530521	Cortey et al., 2009
DUcs10	DU	EF530522	Cortey et al., 2009
DUcs11	DU	EF530523	Cortey et al., 2009
DUcs12	DU	EF530524	Cortey et al., 2009
DUcs13	DU	EF530525	Cortey et al., 2009
DUcs14	DU	EF530526	Cortey et al., 2009
DUcs15	DU	EF530527	Cortey et al., 2009
DUcs16	DU	EF530528	Cortey et al., 2009
DUcs17	DU	EF530529	Cortey et al., 2009
DUcs18	DU	EF530530	Cortey et al., 2009
DUcs19	DU	EF530531	Cortey et al., 2009
DUcs20	DU	EF530532	Cortey et al., 2009
DUcs21	DU	EF530533	Cortey et al., 2009
DUcs22	DU	EF530534	Cortey et al., 2009
DUcs23	DU	EF530535	Cortey et al., 2009
DUcs24	DU	KM210671	Vera et al., 2015
DUcs25	DU	KM210672	Vera et al., 2015
DUcs26	DU	KM210673	Vera et al., 2015
DUcs27	DU	KM210674	Vera et al., 2015
DUcs28	DU	KM210675	Vera et al., 2015
DUcs29	DU	KM210676	Vera et al., 2015
DUcs30	DU	KM210677	Vera et al., 2015

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
DUcs31	DU	KM210678	Vera et al., 2015
DUcs32	DU	KM210679	Vera et al., 2015
DUcs33	DU	KM210680	Vera et al., 2015
DUcs34	DU	KM210681	Vera et al., 2015
DU1	DU	AF253544	Suárez et al., 2001
DU2	DU	AF253545	Suárez et al., 2001
DUhaplotype 7	DU	AF274578	Cortey & García-Marín, 2002
Dades	Dades	JF297981	Snoj et al., 2011
Da1a	DA-ES	AY185568	Duftner et al., 2003
Da1b	DA-ES	AY185569	Duftner et al., 2003
Da1c	DA-ES	GQ284832	Baric et al., 2010
Da1d	DA-ES	GQ284833	Baric et al., 2010
Da1f	DA-ES	MK675073	Kanjuh et al., 2020
Da1g	DA-ES	MK675074	Kanjuh et al., 2020
Da2a	DA-ES	GQ284834	Baric et al., 2010
Da2b	DA-ES	GQ284835	Baric et al., 2010
Da2c	DA-ES	GQ284836	Baric et al., 2010
Da3	DA-ES	AY185571	Duftner et al., 2003
Da9	DA-ES	AY185572	Duftner et al., 2003
Da9a	DA-ES	GQ222380	Jadan et al., 2009
Da22	DA-ES	AY185573	Duftner et al., 2003
Da23a	DA-ES	AY185574	Duftner et al., 2003
Da23b	DA-ES	AY185575	Duftner et al., 2003
Da26	DA-ES	DQ841194	Meraner et al., 2007
Da27	DA-ES	MW618102	Marić et al., 2022
Da28	DA-ES	MW618103	Marić et al., 2022
Da29*	DA-ES	OP690621	present study
Da30*	DA-ES	OP690622	present study
Da31*	DA-ES	OP690623	present study
Da32*	DA-ES	OP690624	present study
Da33*	DA-ES	OP690625	present study
Da34*	DA-ES	OP690626	present study
Da35*	DA-ES	OP690627	present study
Da36*	DA-ES	OP690628	present study
Da37*	DA-ES	OP690629	present study
D3	DA-ES	HQ848371	Kohout et al., 2012
D4	DA-ES	HQ848372	Kohout et al., 2012
D5	DA-ES	HQ848373	Kohout et al., 2012
D7	DA-ES	HQ848374	Kohout et al., 2012
D8	DA-ES	HQ848375	Kohout et al., 2012
DaDA1	DA-ES	GQ357906	Kohout et al., 2013
DaDA2	DA-ES	GQ357907	Kohout et al., 2013
Iran1	DA-ES	HM237337	Vera et al., 2011
Iran2	DA-ES	HM237338	Vera et al., 2011

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
Iran4	DA-ES	HM237340	Vera et al., 2011
Iran5	DA-ES	HM237341	Vera et al., 2011
Iran7	DA-ES	JF276031	Hashemzadeh Segherloo et al., 2012
Iran8	DA-ES	JF276032	Hashemzadeh Segherloo et al., 2012
SiLi_s4	DA-ES	MG551589	Levin et al., 2018
Si_30	DA-ES	MG551591	Levin et al., 2018
IsDa21	DA-ES	JF795537	Osinov, 2009
OxAFA2	DA-ES	EU329720	Griffiths et al., 2009
OxAFE2	DA-ES	EU329721	Griffiths et al., 2009
KK1002	DA-ES	KF985435	Schenekar et al., 2014
KK2022	DA-ES	KF985474	Schenekar et al., 2014
Orumieh2	DA-ES	JF276033	Hashemzadeh Segherloo et al., 2012
DATR20	DA-ES	JN543992	Özen, 2013
DATR21	DA-ES	JN543993	Özen, 2013
DATR22	DA-ES	JN543994	Özen, 2013
DATR23	DA-ES	JN543995	Özen, 2013
Da24	DA-BS	AY185576	Duftner et al., 2003
DaBS1	DA-BS	GQ357897	Kohout et al., 2013
DaBS2	DA-BS	GQ357898	Kohout et al., 2013
DaBS3	DA-BS	GQ357899	Kohout et al., 2013
DaBS4	DA-BS	GQ357900	Kohout et al., 2013
DaBS5	DA-BS	GQ357901	Kohout et al., 2013
DaBS6	DA-BS	GQ357902	Kohout et al., 2013
DaBS7	DA-BS	GQ357903	Kohout et al., 2013
DaBS8	DA-BS	GQ357904	Kohout et al., 2013
DaBS11	DA-BS	MW618105	Marić et al., 2022
DATR2	DA-BS	JN543974	Özen, 2013
DATR3	DA-BS	JN543975	Özen, 2013
DATR4	DA-BS	JN543976	Özen, 2013
DATR6	DA-BS	JN543978	Özen, 2013
DATR7	DA-BS	JN543979	Özen, 2013
DATR8	DA-BS	JN543980	Özen, 2013
DATR10	DA-BS	JN543982	Özen, 2013
DATR11	DA-BS	JN543983	Özen, 2013
DATR12	DA-BS	JN543984	Özen, 2013
DATR13	DA-BS	JN543985	Özen, 2013
DATR14	DA-BS	JN543986	Özen, 2013
DATR16	DA-BS	JN543988	Özen, 2013
DATR17	DA-BS	JN543989	Özen, 2013
DATR18	DA-BS	JN543990	Özen, 2013
Kintrishi14	DA-BS	MG214772	Ninua et al., 2018
Da25	DA-INT	GQ284837	Baric et al., 2010
DaBS9	DA-INT	GQ357905	Kohout et al., 2013
DaBS10	DA-INT	MW618104	Marić et al., 2022
DATR19	DA-INT	JN543991	Özen, 2013
Tigris (TITR1)	TI	JN543997	Özen, 2013

TABLE S1 Continued

Haplotype	Lineage	Accession number	Reference
<i>S. obtusirostris</i> 1		AF488535	Snoj et al., 2002
<i>S. obtusirostris</i> 2		LT617633	Tougard et al., 2018
<i>S. obtusirostris</i> 3		EF469832	Snoj et al., 2008
<i>S. obtusirostris</i> 4		EF469833	Snoj et al., 2008
<i>S. obtusirostris</i> 5		NC_037939	Tougard et al., 2018
<i>S. ohridanus</i> 1		AY926564	Sušnik et al., 2006
<i>S. ohridanus</i> 2		AY926560	Sušnik et al., 2006
<i>S. ohridanus</i> 3		AY926568	Sušnik et al., 2006
<i>S. ohridanus</i> 4		AY926561	Sušnik et al., 2006
<i>S. ohridanus</i> 5		AY926569	Sušnik et al., 2006
<i>S. ohridanus</i> 6		AY926559	Sušnik et al., 2006
<i>S. ohridanus</i> 7		AY926563	Sušnik et al., 2006
<i>S. ohridanus</i> 8		AY926567	Sušnik et al., 2006
<i>S. ohridanus</i> 9		AY926565	Sušnik et al., 2006
<i>S. ohridanus</i> 10		AY926562	Sušnik et al., 2006
<i>S. ohridanus</i> 11		AY926566	Sušnik et al., 2006
<i>S. salar</i>		AF133701	Arnason et al., 2016

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TABLE S2 The locations where haplotypes characteristic of DA-ES, DA-BS and DA-INT haplogroups were found. The location numbers correspond to the numbers on the map (fig. 4), presenting the distribution of the DA haplogroups

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
1.	Vermuntbach River (Inn → Danube → Black Sea) Austria	Da1a (21)	Duftner et al., 2003
2.	Hornbach (Inn → Danube → Black Sea) Austria	Da2a (7)	Weiss et al., 2001
3.	Fagge River (Inn → Danube → Black Sea) Austria	Da1a (20)	Duftner et al., 2003
4.	Roszbach (Inn → Danube → Black Sea) Austria	Da2c (7)	Baric et al., 2010
5.	Rappenbach (Inn → Danube → Black Sea) Austria	Da2a (14), Da2c (5)	Baric et al., 2010
6.	Gossenköllesee Lake (Inn → Danube → Black Sea) Austria	Da1b (20)	Duftner et al., 2003
7.	Eulmbach River (Danube → Black Sea) Germany	Da2a (2)	Bernatchez et al., 1992
8.	Sendersbach (Inn → Danube → Black Sea) Austria	Da1a (3), Da2b (27), Da2c (1)	Baric et al., 2010
9.	Trins-Padast (Inn → Danube → Black Sea) Austria	Da2b (20)	Baric et al., 2010
10.	Zeischbach (Inn → Danube → Black Sea) Austria	Da1a (1), Da2a (13), Da22 (1)	Baric et al., 2010
11.	Schlandraunbach (Adige → Adriatic Sea) Italy	Da1a (2)	Meraner et al., 2007
12.	Adige (Adriatic Sea) Italy	Da1a (1), Da26 (1)	Meraner et al., 2007
13.	Talfer (Eisack → Adige → Adriatic Sea) Italy	Da2a (1)	Meraner et al., 2007
14.	Eisack (Adige → Adriatic Sea) Italy	Da1a (2), Da26 (3)	Meraner et al., 2007
15.	Grünbach (Eisack → Adige → Adriatic Sea) Italy	Da1a (20)	Meraner et al., 2007
16.	Kampillbach (Eisack → Adige → Adriatic Sea) Italy	Da1a (10), Da2a (2), Da22 (1)	Meraner et al., 2007
17.	Gader (Eisack → Adige → Adriatic Sea) Italy	Da1a (1)	Meraner et al., 2007
18.	Reinbach (Eisack → Adige → Adriatic Sea) Italy	Da1a (4)	Meraner et al., 2007
19.	Ahr (Eisack → Adige → Adriatic Sea) Italy	Da1a (3)	Meraner et al., 2007
20.	Antholzer Bach (Eisack → Adige → Adriatic Sea) Italy	Da1a (19), Da26 (3)	Meraner et al., 2007
21.	Kreuzbach (Inn → Danube → Black Sea) Austria	Da1d (16)	Baric et al., 2010

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
22.	Weisenbach (Lech → Danube → Black Sea) Austria	Da22 (10)	Weiss et al., 2001
23.	Blühnbach (Inn → Danube → Black Sea) Austria	Da2a (15), Da22 (4)	Weiss et al., 2001
24.	Haslingbach (Inn → Danube → Black Sea) Austria	Da22 (11)	Weiss et al., 2001
25.	Windbach (Salzach → Danube → Black Sea) Austria	Da1a (15)	Baric et al., 2010
26.	Krimmler Ache (Salzach → Danube → Black Sea) Austria	Da2c (17)	Baric et al., 2010
27.	Grubingbach (Salzach → Danube → Black Sea) Austria	Da1a (8)	Baric et al., 2010
28.	Rettenbach (Salzach → Danube → Black Sea) Austria	Da1a (10)	Baric et al., 2010
29.	Kollerschlägerbach (Danube → Black Sea) Austria	Da2a (1)	Weiss et al., 2001
30.	Sandtalgraben (Inn → Danube → Black Sea) Austria	Da1a (15)	Baric et al., 2010
31.	Katzbach (Inn → Danube → Black Sea) Austria	Da1a (17)	Baric et al., 2010
32.	Sauedterbach (Danube → Black Sea) Austria	Da2a (2)	Weiss et al., 2001
33.	Kapellenbach (Inn → Danube → Black Sea) Austria	Da1a (2), Da22 (1)	Baric et al., 2010
34.	Kamp (Rosenburg) (Krems → Danube → Black Sea) Austria	Da3 (3)	Weiss et al., 2001
35.	Kamp (Schönbach) (Krems → Danube → Black Sea) Austria	Da3 (3), Da9 (2)	Weiss et al., 2001
36.	Anrasersee Lake (Drave → Danube → Black Sea) Austria	Da1a (20)	Duftner et al., 2003
37.	Faisternitzbach (Drave → Danube → Black Sea) Austria	Da2a (15), Da9 (1)	Weiss et al., 2001
38.	Drave (Danube → Black Sea) Austria	Da22 (1)	Weiss et al., 2001
39.	Kristeinbach (Drave → Danube → Black Sea) Austria	Da9 (8)	Weiss et al., 2001
40.	Schwarzenberg (Danube → Black Sea) Austria	Da2a (5)	Weiss et al., 2001
41.	Piesting (Zellenbach) (Danube → Black Sea) Austria	Da2a (2)	Weiss et al., 2001
42.	Lunzerseebach (Danube → Black Sea) Austria	Da2a (2)	Weiss et al., 2001
43.	Woisgenbach (Drave → Danube → Black Sea) Austria	Da1c (17)	Baric et al., 2010

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
44.	Anlaufbach (Salzach → Danube → Black Sea) Austria	Da1a (52)	Baric et al., 2010
45.	Dösenbach (Drave → Danube → Black Sea) Austria	Da1c (23)	Baric et al., 2010
46.	Maisbach (Drave → Danube → Black Sea) Austria	Da2a (26)	Baric et al., 2010
47.	Daglesbach River = Viehbach (Weiss, 2011) (Danube → Black Sea) Austria	Da1a (1), Da22 (2)	Weiss et al., 2001 Duftner et al., 2003
48.	Lohnbach River (Danube → Black Sea) Austria	Da1a (5), Da23b (1), Da22 (2), Da3 (1)	Weiss et al., 2001 Duftner et al., 2003
49.	Kleiner Kamp River (Krems → Danube → Black Sea) Austria	Da3 (1), Da9 (1), Da23a (1), KK1002 (35), KK2022 (4)	Duftner et al., 2003 Schenekar et al., 2014
50.	Freßnitzbach River (Drave → Danube → Black Sea) Austria	Da2a (1)	Duftner et al., 2003
51.	Celní stream (Naab → Danube → Black Sea) Czech Republic	Da1a (7)	Kohout et al., 2012
52.	Medvědí stream (Regen → Danube → Black Sea) Czech Republic	Da1a (2), Da3 (1)	Kohout et al., 2012
53.	Liščí stream (Regen → Danube → Black Sea) Czech Republic	Da1a (1), Da3 (1)	Kohout et al., 2012
54.	Mlýnský Stream (Große Mühl → Danube → Black Sea) Czech Republic	Da1a (14), D3 (4)	Kohout et al., 2012
55.	Dyje (Morava → Danube → Black Sea) Czech Republic	Da1a (1), D5 (2)	Kohout et al., 2012
56.	Desná (Morava → Danube → Black Sea) Czech Republic	Da1a (1), D8 (1)	Kohout et al., 2012
57.	Váh (Danube → Black Sea) Slovakia	Da1a (1), Da22 (3), D4 (1)	Kohout et al., 2012
58.	Muráň (Tisza → Danube → Black Sea) Slovakia	Da1a (1), Da22 (1), D7 (1)	Kohout et al., 2012
59.	Topľ'a (Tisza → Danube → Black Sea) Slovakia	Da1a (1), Da22 (1), D5 (1)	Kohout et al., 2012
60.	Poprad (Vistula → Baltic Sea) Slovakia	Da1a (5), Da22 (1), D4 (1)	Kohout et al., 2012
61.	Kežmarská Biela voda (Vistula → Baltic Sea) Slovakia	Da1a (3), Da22 (2), D5 (1)	Kohout et al., 2012
62.	Bohinj Lake (Sava → Danube → Black Sea) Slovenia	Da2a (1)	Bernatchez et al., 1992
63.	Sava Dolinka (Sava → Danube → Black Sea) Slovenia	Da1a (7)	Simonović et al., 2017
64.	Ribnica (Sava → Danube → Black Sea) Slovenia	Da1a (17)	Simonović et al., 2017
65.	Iška (Sava → Danube → Black Sea) Slovenia	Da1a (3), Da2a (1), Da3 (2)	Simonović et al., 2017

TABLE S2`Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
66.	Mahnečica (Sava → Danube → Black Sea) Slovenia	Da1a (11)	Simonović et al., 2017
67.	Obrh (Ljubljana → Sava → Danube → Black Sea) Slovenia	Da1a (1), Da2a (4)	Simonović et al., 2017
68.	Krka (Sava → Danube → Black Sea) Slovenia	Da1a (12), Da2a (5), Da22 (24)	Simonović et al., 2017
69.	Velka (Drave → Danube → Black Sea) Slovenia	Da1a (3), Da2a (1)	Simonović et al., 2017
70.	Mislinja (Drave → Danube → Black Sea) Slovenia	Da1a (12), Da2a (10)	Simonović et al., 2017
71.	Kremžarjev (Drave → Danube → Black Sea) Slovenia	Da1a (2)	Simonović et al., 2017
72.	Kozji jarek (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (6)	Simonović et al., 2017
73.	Čabranka (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (9), Da2a (2)	Kanjuh et al., 2020
74.	Bresni potok (Kupa → Sava → Danube → Black Sea) Croatia	Da2a (2)	Kanjuh et al., 2020
75.	Mala Lešnica (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (9)	Kanjuh et al., 2020
76.	Curak (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (14)	Simonović et al., 2017 Kanjuh et al., 2020
77.	Jasenak (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (4)	Kanjuh et al., 2020
78.	Lička Jesenica (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (1), Da2a (8)	Kanjuh et al., 2020
79.	Lička (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (9)	Simonović et al., 2017
80.	Gacka (Adriatic Sea) Croatia	Da2a (14)	Simonović et al., 2017
81.	Slapnica (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (8), Da2a (2)	Kanjuh et al., 2020
82.	Kupčina (Kupa → Sava → Danube → Black Sea) Croatia	Da1a (13)	Kanjuh et al., 2020
83.	Plitvica River (Drave → Danube → Black Sea) Croatia	Da9a (1)	Jadan et al., 2009
84.	Orljava (Sava → Danube → Black Sea) Croatia	Da22 (5)	Kanjuh et al., 2020
85.	Toplica (Drave → Danube → Black Sea) Croatia	Da1a (5), Da1g (5), Da22 (2)	Kanjuh et al., 2020
86.	Brzaja (Sava → Danube → Black Sea) Croatia	Da2a (1), Da22 (7)	Kanjuh et al., 2020
87.	Jankovački potok (Drave → Danube → Black Sea) Croatia	Da1a (2), Da1f (3)	Kanjuh et al., 2020

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
88.	Jankovačko Lake (Drave → Danube → Black Sea) Croatia	Da1a (1), Da2a (7)	Kanjuh et al., 2020
89.	Veličanka (Sava → Danube → Black Sea) Croatia	Da1a (3), Da22 (1)	Kanjuh et al., 2020
90.	Svetinja (Una → Sava → Danube → Black Sea) Bosnia and Herzegovina	Da2a (1), Da22 (1)	Simonović et al., 2017
91.	Kruščica (Bosna → Danube → Black Sea) Bosnia and Herzegovina	Da22 (2)	Simonović et al., 2017
92.	Una (Sava → Danube → Black Sea) Bosnia and Herzegovina	Da22 (4)	Simonović et al., 2017
93.	Vrijeka (Neretva → Aegean Sea) Bosnia and Herzegovina	Da2a (3)	Simonović et al., 2017
94.	Drina (Sava → Danube → Black Sea) Bosnia and Herzegovina	Da1a (14)	Simonović et al., 2017
95.	Komarnica (Drina → Danube → Black Sea) Montenegro	Da1a (7), Da2a (5)	Simonović et al., 2017
96.	Tara (Drina → Danube → Black Sea) Montenegro	Da1a (5), Da2a (3)	Simonović et al., 2017
97.	Gornja Zeta (Morača → Lake Skadar) Montenegro	Da1a (14)	Simonović et al., 2017
98.	Gračanica (Zeta → Morača → Lake Skadar) Montenegro	Da1a (4)	Simonović et al., 2017
99.	Nožica (Morača → Lake Skadar) Montenegro	Da1a (11)	Simonović et al., 2017
100.	Boranjaska River (Drina → Danube → Black Sea) Serbia	Da2a (15)	present study
101.	Zmajevac (Drina → Danube → Black Sea) Serbia	Da1a (1), Da2a (2)	Marić et al., 2006
102.	Ljubovidja (Drina → Danube → Black Sea) Serbia	Da1a (12), Da2a (8)	present study
103.	Rača (Drina → Danube → Black Sea) Serbia	Da1a (20)	present study
104.	Crni Stream (Drina → Danube → Black Sea) Serbia	Da1a (2)	Marić et al., 2006
105.	Gračanica (Drina → Danube → Black Sea) Serbia	Da1a (3), Da2a (16), Da22 (1)	present study
106.	Vapa (Drina → Danube → Black Sea) Serbia	Da1a (6), Da28 (13)	present study
107.	Povlenska River (Kolubara → Danube → Black Sea) Serbia	Da2a (20)	present study
108.	Gradac (Kolubara → Danube → Black Sea) Serbia	Da1a (17), Da2a (2)	Marić et al., 2006 present study
109.	Djetinja (West Morava → Danube → Black Sea) Serbia	Da1a (20)	present study

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
110.	Godljevača (West Morava → Danube → Black Sea) Serbia	Da1a (2)	Marić et al., 2006
111.	Katušnica (West Morava → Danube → Black Sea) Serbia	Da1a (1), Da31(19)	present study
112.	Veliki Ržav (West Morava → Danube → Black Sea) Serbia	Da1a (2), Da1c (1), Da2a (2), Da31(8)	present study
113.	Trudovačka River (Lim → Drina → Danube → Black Sea) Serbia	Da1a (3)	Marić et al., 2006
114.	Panjica (West Morava → Danube → Black Sea) Serbia	Da1a (10), Da28 (10)	present study
115.	Tolišnica (West Morava → Danube → Black Sea) Serbia	Da1a (5), Da35 (12), Da36 (3)	present study
116.	Brvenica (West Morava → Danube → Black Sea) Serbia	Da1a (2), Da2a (2), Da28 (1), Da31 (3)	present study
117.	Maglička River (West Morava → Danube → Black Sea) Serbia	Da1a (1), Da22 (4)	present study
118.	Bresnička River (West Morava → Danube → Black Sea) Serbia	Da1a (10), Da22 (10), Da30 (2)	Marić et al., 2006 present study
119.	Jošanica (West Morava → Danube → Black Sea) Serbia	Da1a (3)	Marić et al., 2006
120.	Studenica (West Morava → Danube → Black Sea) Serbia	Da1a (16), Da2a (4)	present study
121.	Izubra (West Morava → Danube → Black Sea) Serbia	Da1a (20)	present study
122.	Brevina (West Morava → Danube → Black Sea) Serbia	Da1a (12), Da2a (9), Da28 (1), Da30 (1)	Marić et al., 2006 present study
123.	Gokčanica (West Morava → Danube → Black Sea) Serbia	Da2a (20)	present study
124.	Samokovka River (West Morava → Danube → Black Sea) Serbia	Da1a (16), Da28 (2)	present study
125.	Brzečka River (West Morava → Danube → Black Sea) Serbia	Da2a (9), Da28 (2)	present study
126.	Jastrebačka (West Morava → Danube → Black Sea) Serbia	Da1a (2)	Simonović et al., 2017
127.	Štavska (South Morava → Danube → Black Sea) Serbia	Da1a (6), Da2a (11), Da33 (2)	present study
128.	Prolomska River (South Morava → Danube → Black Sea) Serbia	Da1a (3)	Marić et al., 2006
129.	Sokobanjska Moravica (South Morava → Danube → Black Sea) Serbia	Da1a (6), Da2a (6), Da30 (5), Da33 (2)	present study
130.	Toplodolska River (South Morava → Danube → Black Sea) Serbia	Da1a (9), Da37 (9)	present study
131.	Studenačka River (South Morava → Danube → Black Sea) Serbia	Da1a (5), IsDa21 (3)	Marić et al., 2006 Kanjuh et al., 2021
132.	Visočica (South Morava → Danube → Black Sea) Serbia	Da2a (1), Da22 (19), Da28 (1)	Kanjuh et al., 2021 present study
133.	Temštica (South Morava → Danube → Black Sea) Serbia	Da1a (1)	Kanjuh et al., 2021

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens) <i>DA-ES haplogroup</i>	Reference
134.	Javorska (South Morava → Danube → Black Sea) Serbia	Da1a (12)	Kanjuh et al., 2021
135.	Dojkinačka River (South Morava → Danube → Black Sea) Serbia	Da1a (16), Da22 (16)	Marić et al., 2006 Kanjuh et al., 2021; present study
136.	Vodenička River (South Morava → Danube → Black Sea) Serbia	Da1a (2), Da22 (31), Da28 (6)	Kanjuh et al., 2021 present study
137.	Rosomačka River (South Morava → Danube → Black Sea) Serbia	Da1a (6), Da22 (4)	Marić et al., 2006 Kanjuh et al., 2021
138.	Dursunska River (South Morava → Danube → Black Sea) Serbia	DaDA1 (2), Da2a (9), Da9 (6), Da29 (3)	present study
139.	Bistrička River (South Morava → Danube → Black Sea) Serbia	DaDA1 (4), Da2a (16)	present study
140.	Vlasina (South Morava → Danube → Black Sea) Serbia	DaDA1 (21)	Marić et al., 2006 present study
141.	Polomska River (South Morava → Danube → Black Sea) Serbia	DaDA1 (5)	present study
142.	Jerma (South Morava → Danube → Black Sea) Serbia	Da1a (6), Da22 (3), Da26 (2)	Simonović et al., 2017 Kanjuh et al., 2021; present study
143.	Jelašnica River (South Morava → Danube → Black Sea) Serbia	Da1a (20)	Marić et al., 2006 present study
144.	Džepaska (South Morava → Danube → Black Sea) Serbia	Da2a (2), Da1a (2), DaDA1 (12)	Kohout et al., 2013
145.	Masurička River (South Morava → Danube → Black Sea) Serbia	Da1a (12), Da27 (1)	present study
146.	Šaovice (South Morava → Danube → Black Sea) Serbia	Da2a (1)	present study
147.	Resava (Great Morava → Danube → Black Sea) Serbia	Da1a (1), Da1d (12), Da2a (8), Da30 (1)	Marić et al., 2006 present study
148.	Buk (Mlava → Danube → Black Sea) Serbia	Da1a (2)	Marić et al., 2006
149.	Mlava (Danube → Black Sea) Serbia	Da1a (9), Da32 (4)	present study
150.	Krupaja River (Danube → Black Sea) Serbia	Da1a (10), Da32 (4)	present study
151.	Kožica (Danube → Black Sea) Serbia	Da2a (1), Da34 (33)	Tošić et al., 2016; present study
152.	Mala Boljetinska (Danube → Black Sea) Serbia	Da34 (6)	Tošić et al., 2016
153.	Zlatica (Danube → Black Sea) Serbia	Da34 (12)	Tošić et al., 2016
154.	Rečka (Danube → Black Sea) Serbia	Da1a (13), Da23b (1)	Marić et al., 2006 Tošić et al., 2016
155.	Vratna (Danube → Black Sea) Serbia	Da1a (2), Da23b (2), Da34 (24)	Marić et al., 2006 Tošić et al., 2016; present study

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
156.	Zamna (Danube → Black Sea) Serbia	Da34 (6)	Tošić et al., 2016
157.	Bledarija (Danube → Black Sea) Serbia	Da1a (11)	Simonović et al., 2017
158.	Zlotska River (Timok → Danube → Black Sea) Serbia	Da2a (19), Da33 (1)	present study
159.	Lukovo (Timok → Danube → Black Sea) Serbia	Da34 (1)	Tošić et al., 2014
160.	Radovanjska River (Timok → Danube → Black Sea) Serbia	Da2a (10), Da23b (2), Da34 (8)	Marić et al., 2006 Tošić et al., 2014
161.	Mirovštica (Timok → Danube → Black Sea) Serbia	Da2a (11), Da33 (6), Da34 (5)	Tošić et al., 2014 present study
162.	Golema River (Timok → Danube → Black Sea) Serbia	Da1a (3)	Marić et al., 2006
163.	Janjska River (Timok → Danube → Black Sea) Serbia	Da1a (12), Da1c (4), Da28 (1)	present study
164.	Cerny Iskar River (Iskar → Danube → Black Sea) Bulgaria	Da1a (6), Da26 (5), Da2a (1)	Kohout et al., 2013
165.	Vidima River (Yantra → Danube → Black Sea) Bulgaria	Da26 (2)	Kohout et al., 2013
166.	Rizekent (Euphrates → Persian Gulf) Turkey	DATR22 (2)	Özen, 2013
167.	Toro (Kura → Caspian Sea) Turkey	DATR21 (2)	Özen, 2013
168.	Karaçingil (Kura → Caspian Sea) Turkey	DATR20 (8)	Özen, 2013
169.	Koyunlu (Kura → Caspian Sea) Turkey	DATR20 (9)	Özen, 2013
170.	Ortaköy (Aras → Caspian Sea) Turkey	DATR22 (2), DATR23 (1)	Özen, 2013
171.	Lake Sevan (Caspian Sea) Armenia	IsDa21 (1), Si_30 (1), SiLi_s4 (1)	Osinov, 2009 Levin et al., 2018
172.	Orumieh Lake Iran	Orumieh2 (1)	Hashemzadeh Segherloo et al., 2012
173.	Karganrud (Caspian Sea) Iran	Iran1 (1), Iran2 (7)	Vera et al., 2011
174.	Navrud (Caspian Sea) Iran	Iran2 (8)	Vera et al., 2011
175.	Tonekabon (Caspian Sea) Iran	Iran1 (10), Iran2 (38), Iran4 (2), Iran5 (2)	Vera et al., 2011
176.	Sardabrud (Caspian Sea) Iran	Iran1 (14), Iran2 (6)	Vera et al., 2011
177.	Haraz River (Caspian Sea) Iran	Iran7 (1), Iran8 (1)	Hashemzadeh Segherloo et al., 2012
178.	Amu Darya River (Aral Sea basin) Afghanistan	OxAFA2 (4), OxAFE2 (1)	Griffiths et al., 2009

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-ES haplogroup</i>			
179.	Baromytka (Usa → Volga → Caspian Sea) Russia	Iran1 (2)	Marić et al., 2016
180.	Kyslinka (Kama → Volga → Caspian Sea) Russia	Iran1 (8)	Marić et al., 2016
181.	Stepnuha (Kama → Volga → Caspian Sea) Russia	Iran1 (5)	Marić et al., 2016
182.	Shaytanka (Kama → Volga → Caspian Sea) Russia	Iran1 (9)	Marić et al., 2016
183.	Ajudy (Kama → Volga → Caspian Sea) Russia	Iran1 (7)	Marić et al., 2016
184.	Apshak (Kama → Volga → Caspian Sea) Russia	Iran1 (9)	Marić et al., 2016
185.	Barangulovka (Sakmara → Ural → Caspian Sea) Russia	Iran1 (7)	Marić et al., 2016
186.	Taymanishty (Bolshoy Kyzyl → Ural → Caspian Sea) Russia	Iran1 (9)	Marić et al., 2016
<i>DA-INT haplogroup</i>			
1.	Rappenbach (Inn → Danube → Black Sea) Austria	Da25 (1)	Baric et al., 2010
2.	Džepska River (South Morava → Danube → Black Sea) Serbia	DaBS9 (2)	Marić et al., 2006 Kohout et al., 2013
3.	Garvanica (South Morava → Danube → Black Sea) Serbia	DaBS9 (18), DaBS10 (1)	present study
4.	Ovit (Çoruh → Black Sea) Turkey	DATR19 (1)	Özen, 2013
<i>DA-BS haplogroup</i>			
1.	Waldaist (Aist → Danube → Black Sea) Austria	Da24 (7)	Weiss et al., 2001 Duftner et al., 2003
2.	Brvenica (West Morava → Danube → Black Sea) Serbia	DaBS1 (10)	present study
3.	Gokčanica (West Morava → Danube → Black Sea) Serbia	DaBS1 (1)	present study
4.	Vrla (South Morava → Danube → Black Sea) Serbia	DaBS11 (15)	Marić et al., 2006 present study
5.	Timiş River (Olt → Danube → Black Sea) Romania	DaBS2 (11), DaBS3 (2), DaBS4 (5), DaBS5 (3)	Kohout et al., 2013
6.	Beli Vit River (Vit → Danube → Black Sea) Bulgaria	DaBS1 (2), DaBS3 (3)	Kohout et al., 2013
7.	Rezovska River/ Rezve (Black Sea) Turkey	DaBS1 (14)	Kohout et al., 2013 Özen, 2013
8.	Ayderesi (Aegean Sea) Turkey	DaBS6 (3)	Özen, 2013
9.	Çatalaliç (Marmara Sea) Turkey	DaBS1 (8)	Özen, 2013

TABLE S2 Continued

No	Location (drainage) country	Recorded haplotypes (number of specimens)	Reference
<i>DA-BS haplogroup</i>			
10.	Akçay (Marmara Sea) Turkey	DaBS1 (10)	Özen, 2013
11.	Abant Lake (Black Sea) Turkey	DaBS6 (7), DATR4 (1), DaBS7 (10), DATR2 (1)	Özen, 2013 Kohout et al., 2013
12.	Karabey (Black Sea) Turkey	DaBS6 (7), DATR18 (1)	Özen, 2013
13.	Yedigöl (Black Sea) Turkey	DATR16 (4)	Özen, 2013
14.	Körkün (Seyhan → Mediterranean Sea) Turkey	DaBS1 (1)	Özen, 2013
15.	Tamdere (Black Sea) Turkey	DaBS6 (1), DATR6 (6)	Özen, 2013
16.	Gemin (Kelkit → Black Sea) Turkey	DaBS6 (7), DATR6 (1)	Özen, 2013
17.	Yağmurdere (Black Sea) Turkey	DaBS6 (10)	Özen, 2013
18.	Uzungöl (Black Sea) Turkey	DaBS1 (1)	Özen, 2013
19.	Ovit (Çoruh → Black Sea) Turkey	DaBS6 (8), DATR7 (1)	Özen, 2013
20.	Merekum (Çoruh → Black Sea) Turkey	DaBS7 (11), DATR17 (8)	Özen, 2013
21.	Kırık (Euphrates → Persian Gulf) Turkey	DATR10 (5), DATR13 (1), DATR11(1)	Özen, 2013
22.	İkizdere (Black Sea) Turkey	DaBS1 (2), DATR7 (7), DATR8 (1), DATR14 (1)	Özen, 2013
23.	Kengel (Black Sea) Turkey	DaBS1 (6)	Özen, 2013
24.	Dörtkilise (Çoruh → Black Sea) Turkey	DaBS8 (2), DATR3 (5)	Özen, 2013
25.	Çoruh River (Black Sea) Türkiye	DaBS8 (2)	Kohout et al., 2013

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TABLE S3 The total number of specimens and the number of locations (given in parentheses) were haplotypes from DA-ES, DA-INT and DA-BS haplogroups are detected

Haplotype	Total number of specimens (number of locations)
<i>DA-ES haplogroup</i>	
Da1a	856 (107)
Da1b	20 (1)
Da1c	45 (4)
Da1d	28 (2)
Da1f	3 (1)
Da1g	5 (1)
Da2a	384 (58)
Da2b	47 (2)
Da2c	30 (4)
Da3	12 (7)
Da9	18 (5)
Da9a	1 (1)
Da22	175 (30)
Da23a	1 (1)
Da23b	6 (4)
Da26	16 (6)
Da27	1 (1)
Da28	37 (9)
Da29	3 (1)
Da30	9 (4)
Da31	30 (3)
Da32	8 (2)
Da33	11 (4)
Da34	95 (8)
Da35	12 (1)
Da36	3 (1)
Da37	9 (1)
D3	4 (1)
D4	2 (2)
D5	4 (3)
D7	1 (1)
D8	1 (1)
DaDA1	44 (5)
Iran1	81 (11)
Iran2	59 (4)
Iran4	2 (1)
Iran5	2 (1)

TABLE S3 Continued

Haplotype	Total number of specimens (number of locations)
<i>DA-ES haplogroup</i>	
Iran7	1 (1)
Iran8	1 (1)
SiLi_s4	1 (1)
Si_30	1 (1)
IsDa21	4 (2)
OxAFA2	4 (1)
OxAFE2	1 (1)
KK1002	35 (1)
KK2022	4 (1)
Orumieh2	1 (1)
DATR20	17 (2)
DATR21	2 (1)
DATR22	4 (2)
DATR23	1 (1)
<i>DA-INT haplogroup</i>	
Da25	1 (1)
DaBS9	20 (2)
DaBS10	1 (1)
DATR19	1 (1)
<i>DA-BS haplogroup</i>	
Da24	7 (1)
DaBS1	55 (10)
DaBS2	11 (1)
DaBS3	5 (2)
DaBS4	5 (1)
DaBS5	3 (1)
DaBS6	43 (7)
DaBS7	21 (2)
DaBS8	4 (2)
DaBS11	15 (1)
DATR2	1 (1)
DATR3	5 (1)
DATR4	1 (1)
DATR6	7 (2)
DATR7	8 (2)
DATR8	1 (1)
DATR10	5 (1)
DATR11	1 (1)
DATR13	1 (1)
DATR14	1 (1)
DATR16	4 (1)
DATR17	8 (1)
DATR18	1 (1)

TABLE S4 Sample locations, sample sizes (*N*), and frequency distribution of brown trout CR mtDNA haplotypes in Serbia. Newly described haplotypes are marked with an asterisk

CR haplotype frequency																																									
River drainage/ location	N	DA-ES haplogroup																DA-INT haplogroup		DA-BS haplogroup		AD lineage				AT lineage															
		Da1a	Da1c	Da1d	DaDA1	Da2a	Da9	Da22	Da26	Da27	Da28	Da29*	Da30*	Da31*	Da32*	Da33*	Da34*	Da35*	Da36*	Da37*	DaBS9	DaBS10	DaBS1	DaBS11	AdAE1	AdPrz	ADcs1	ADcs22*	ATcs1	ATcs2	ATcs3	ATcs4	ATcs54*								
DANUBIAN																																									
Drina river system																																									
1. Boranjska River	15	15																																							
2. Ljubovidja	20	12		8																																					
3. Rača	20	20																																							
4. Gračanica	20	3		16				1																																	
5. Vapa	19	6														13																									
Kolubara river system																																									
6. Povlenska River	20	20																																							
7. Gradac	18	16		1																								1													
West Morava river system																																									
8. Djetinja	20	20																																							
9. Katušnica	20	1														19																									
10. Veliki Rzav	20	2		1		2																8								2				1		1		1		2	
11. Panjica	20	10														10																									
12. Tolišnica	20	5																																							
13. Brvenica	18	2		2								1				3						10																			
14. Maglička River	5	1														4																									
15. Bresnička River	19	7														10				2																					
16. Studenica	20	16		4																																					
17. Izubra	20	20																																							
18. Brevina	20	9		9								1				1																									
19. Gokčanica	20	12																																							
20. Samokovka River	20	16														2												2													
21. Brzečka River	13	9																2												1				1							

TABLE S4 Continued

CR haplotype frequency																																	
River drainage/ location	N	DA-ES haplogroup																DA-INT haplogroup		DA-BS haplogroup		AD lineage				AT lineage							
		Da1a	Da1c	Da1d	DaDA1	Da2a	Da9	Da22	Da26	Da27	Da28	Da29*	Da30*	Da31*	Da32*	Da33*	Da34*	Da35*	Da36*	Da37*	DaBS9	DaBS10	DaBS1	DaBS11	AdAE1	AdPrz	ADcs1	ADcs22*	ATcs1	ATcs2	ATcs3	ATcs4	ATcs54*
South Morava river system																																	
22. Štavska River	19	6				11										2																	
23. Sokobanjska Moravica	20	6				6							5			2														1			
24. Toplodolska River	18	9																	9														
25. Visočica	20					1		15		1																				2		1	
26. Dojkinačka River	20	9						11																									
27. Vodenička River	21							15		6																							
28. Dursunska River	20				2	9	6					3																					
29. Bistrička River	20				4	16																											
30. Vlasina	24				19																				5								
31. Polomska River	5				5																												
32. Vučja River	19																								19								
33. Upper Jerma	22																								18	4							
34. Lower Jerma	11	1						2	2																3	2			1				
35. Jelašnička River	17	17																															
36. Garvanica	19																			18	1												
37. Masurička River	19	12								1															4	2							
38. Vrla	19																						13		4	2							
39. Šaovice	20					1																			1					18			
Great Morava river system																																	
40. Resava	20			12		7							1																				
Danube direct tributaries																																	
41. Mlava	20	9												4												1			5				1
42. Krupaja River	20	10												4												3			2			1	
43. Kožica	20					1											18												1				
44. Vratna	20																17															3	

TABLE S4 Continued

CR haplotype frequency																																				
River drainage/ location	N	DA-ES haplogroup																	DA-INT haplogroup		DA-BS haplogroup		AD lineage				AT lineage									
		Da1a	Da1c	Da1d	DaDA1	Da2a	Da9	Da22	Da26	Da27	Da28	Da29*	Da30*	Da31*	Da32*	Da33*	Da34*	Da35*	Da36*	Da37*	DaBS9	DaBS10	DaBS1	DaBS11	AdAE1	AdPrz	ADcs1	ADcs22*	ATcs1	ATcs2	ATcs3	ATcs4	ATcs54*			
Timok river system																																				
45. Zlotska River	20	19																	1																	
46. Mirovštica	14	8																	6																	
47. Janjska River	17	12	4	1																																
AEGEAN																																				
Vardar river system																																				
48. Tripušnica River	20																						20													
Struma river system																																				
49. Lisinska River	22																						14 8													
50. Ljubatska River	19																						13 6													
51. Dragovištica	21																						14 7													
52. Brankovačka River	22																						12 10													
HATCHERIES																																				
53. Panjica hatchery	20	2	3																	2										2 3 7 1						
54. Sokobanjska Moravica hatchery	19	1	2																	2		1		1								1 1 10				
55. Jerma hatchery	9																												3 6							
Total	1023	260	5	12	30	182	6	58	2	1	39	3	11	30	8	12	35	12	4	9	18	1	11	13	114	20	43	4	16	5	32	26	1			
% of total		25.4	0.5	1.2	2.9	17.8	0.6	5.7	0.2	0.1	3.8	0.3	1.1	2.9	0.8	1.2	3.4	1.2	0.4	0.9	1.8	0.1	1.1	1.3	11.1	2	4.2	0.4	1.6	0.5	3.1	2.5	0.1			

TABLE S5 Selected T_{mrca} values for a time calibrated phylogeny of the *Salmo* genus

	three-point calibration scheme	two-point calibration scheme <i>S. immigaratus</i> + <i>S. ohridanus</i>	two-point calibration scheme <i>S. immigaratus</i> + <i>S. derzhavini</i>	two-point calibration scheme <i>S. ohridanus</i> + <i>S. derzhavini</i>
<i>S. immigratus</i>	11.39 [10.03, 13.38]	11.86 [10.09, 14.83]	11.60 [10.09, 14.06]	4.38 [2.20, 7.05]
<i>S. ohridanus</i>	1.42 [0.69, 2.28]	1.75 [0.82, 2.83]	1.78 [0.70, 3.08]	0.89 [0.51, 1.35]
<i>S. obtusirostris</i>	0.86 [0.22, 1.68]	1.10 [0.25, 2.17]	0.97 [0.24, 1.97]	0.49 [0.13, 0.94]
BT	3.97 [2.34, 5.88]	5.22 [2.86, 8.02]	4.43 [2.39, 6.78]	2.27 [1.82, 3.05]
ME + AD + MA	3.44 [1.86, 5.28]	4.45 [2.24, 7.12]	3.83 [1.89, 6.04]	1.93 [1.14, 2.82]
AD	2.46 [1.35, 3.87]	3.15 [1.56, 5.03]	3.30 [1.55, 5.42]	1.32 [0.76, 1.96]
MA	1.57 [0.61, 2.79]	1.98 [0.70, 3.53]	1.72 [0.62, 3.11]	0.88 [0.34, 1.50]
ME	2.15 [1.03, 3.49]	2.72 [1.18, 4.54]	2.38 [1.05, 3.97]	1.18 [0.59, 1.84]
AT + DU + Dades	3.23 [1.90, 4.77]	4.13 [2.22, 6.27]	3.59 [1.95, 5.51]	1.78 [1.16, 2.52]
AT	2.36 [1.31, 3.55]	3.01 [1.60, 4.69]	2.64 [1.37, 4.14]	1.31 [0.82, 1.89]
AT-M	2.17 [0.49, 4.10]	2.73 [0.67, 5.33]	2.27 [0.53, 4.53]	1.17 [0.31, 2.10]
AT-M + Dades	3.03 [1.57, 4.69]	3.82 [1.80, 6.05]	/	1.63 [0.76, 2.45]
DU	1.77 [0.90, 2.75]	2.23 [1.08, 3.57]	1.96 [0.96, 3.14]	0.97 [0.54, 1.46]
DA + Tigris	3.22 [1.90, 4.77]	4.06 [2.19, 6.25]	3.51 [1.88, 5.42]	1.78 [1.16, 2.52]
DA	2.06 [1.12, 3.15]	3.06 [1.59, 4.75]	2.66 [1.35, 4.14]	1.33 [0.81, 1.91]
DA-ES	1.42 [0.77, 2.22]	2.10 [1.07, 3.32]	1.85 [0.92, 2.91]	0.91 [0.54, 1.33]
DA-BS	1.69 [0.89, 2.77]	2.48 [1.11, 4.03]	2.16 [0.97, 3.57]	1.09 [0.58, 1.68]
DA-INT	1.11 [0.21, 1.82]	1.32 [0.28, 2.71]	1.15 [0.25, 2.43]	0.59 [0.15, 1.18]

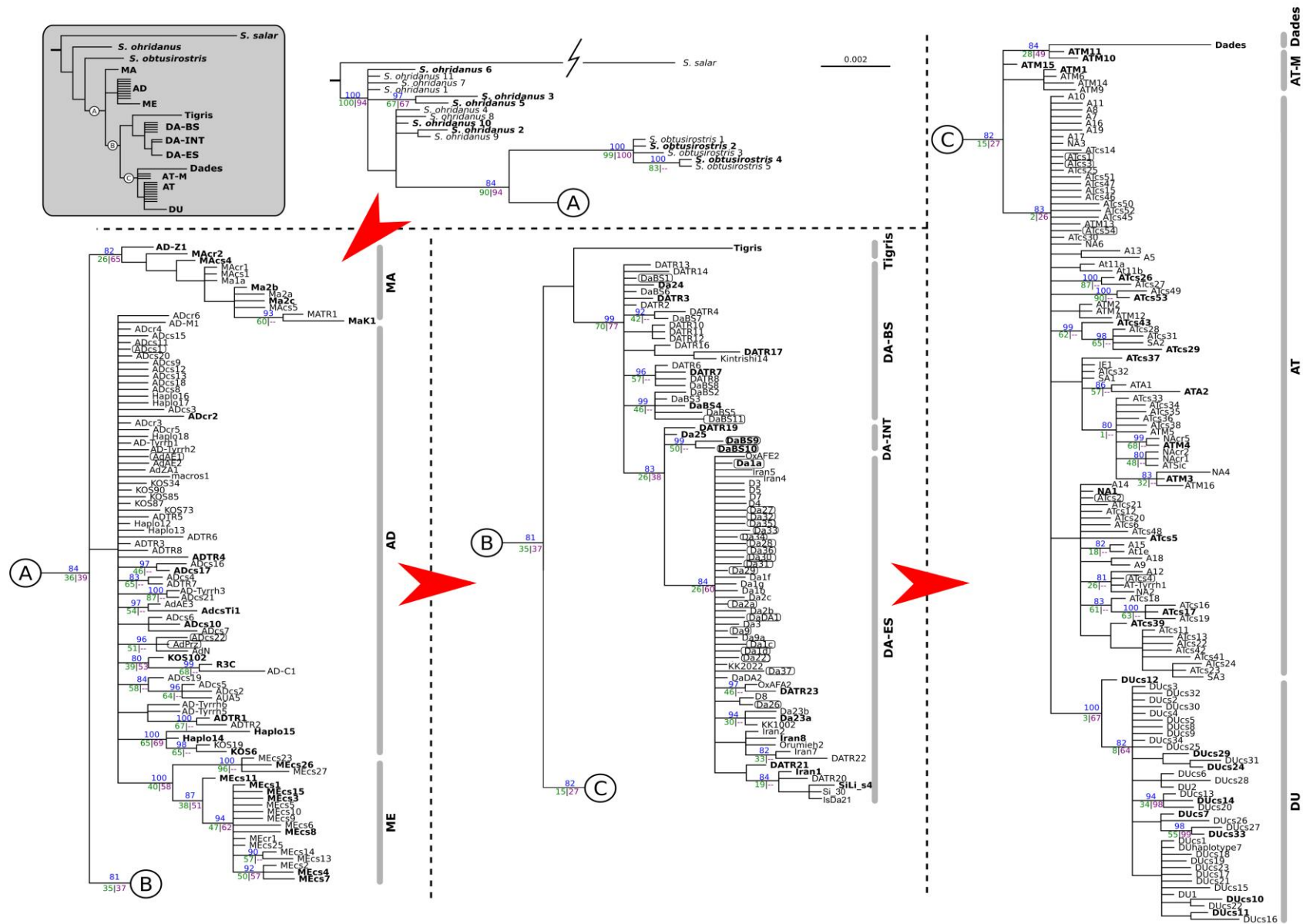


FIGURE S1 Phylogenetic tree inferred by Bayesian inference (BI). Branch lengths represent substitutions, and the scale bar indicates the number of substitutions per site. The numbers on the nodes correspond to BI posterior probabilities (in blue, above the branches), bootstrap support values for the nodes that were also observed by the maximum likelihood (ML) approach are also provided (in green, below the branches), while the bootstrap support values observed for the phylogenetic tree are constructed from a subset of data only (in purple, below the branches). Haplotypes used for the construction of a tree with only a subset of haplotypes representing each lineage are marked in bold. The haplotypes from the present study are framed.

										CM5'		
Tigris	??TTTTCGGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA	100	
DA-BS_consensus	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
DaBS9	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
DaBS10	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
DATR19	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
Da25	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
DA-ES_consensus	ACTTTTCAGC	TATGTACAAT	AACAATGTT	GTACCTTGCT	AACCCAATGT	TATACTACAT	CTATGTATAA	TATTACATAT	TATGTATTTA	CCCATATATA		
Tigris	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA	200	
DA-BS_consensus	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
DaBS9	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
DaBS10	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
DATR19	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
Da25	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
DA-ES_consensus	TAATATAGCA	TGTGAGTAGT	ACATCATATG	TATTATCAAC	ATTAGTGAAT	TTAACCCCTC	ATACATCAGC	ACTAACTCAA	GGTTTACATA	AAGCAAAACA		
Tigris	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT	300	
DA-BS_consensus	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
DaBS9	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
DaBS10	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
DATR19	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
Da25	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
DA-ES_consensus	CGTGATAATA	ACCAACTAAG	TTGTCTTAAC	CCGAGTAATT	GTTATATCAA	TAAACTCCA	GCTAACACGG	GCTCCGTCCT	TACCCACCAA	CTTTGAGCAT		
Central conserved region												
Tigris	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA	400	
DA-BS_consensus	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
DaBS9	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
DaBS10	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
DATR19	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
Da25	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
DA-ES_consensus	CAGTCCTGCT	TAATGTAGTA	AGAACCAGCC	AACGATATAT	CAGTAGGCAT	ACTCTTATTG	ATGGTCAGGG	ACAGATATCG	TATTAGTGGC	CATCTCGTGA		
Central conserved region												
Tigris	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT	500	
DA-BS_consensus	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
DaBS9	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
DaBS10	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
DATR19	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
Da25	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
DA-ES_consensus	ATTATTCCCTG	GCAITTTGGTT	CCTATATCAA	GGGCTATCCT	TAAGAAACCA	CCCCCTGAAA	GCCGAATGTA	AAGCATCTGG	TTAATGGTGT	CAATCTTATT		
PY												
Tigris	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT	600	
DA-BS_consensus	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
DaBS9	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
DaBS10	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
DATR19	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
Da25	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
DA-ES_consensus	GCCCCGTACC	CACCAAGCCG	GGCGTTCTCT	TATATGCATA	GGGTTCTCCT	T-TTTTTTTT	TTTCCITTCA	GCTTGCATAT	ACAAGTGCAA	GCAAAGAAGT		
CSB 1												
Tigris	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG	700	
DA-BS_consensus	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
DaBS9	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
DaBS10	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
DATR19	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
Da25	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
DA-ES_consensus	CTAACAAAGGT	GGAAGTAGAT	CTTGAATTCC	AGAGAAACCA	TGTATCATGG	TGAAATGATA	TTCCATAAAG	AATCACATAC	TTGGATATCA	AGTGCAATAG		
CSB 2												
Tigris	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA	800	
DA-BS_consensus	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
DaBS9	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
DaBS10	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
DATR19	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
Da25	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
DA-ES_consensus	GTTAATATTT	CACITTCATAT	ATCTCTAAGT	ATACCCCGGG	CTTCTGCGCG	GTAACCCCGC	CTACCCCGCT	ACGCTGAAGG	ATCCTTATAT	TCCGTGCAAA		
LSP												
Tigris	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT	900	
DA-BS_consensus	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
DaBS9	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
DaBS10	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
DATR19	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
Da25	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
DA-ES_consensus	CCCTCTAAACC	AGGAAGTCTC	AAATCAGCGC	CAATCTTTTT	ATATACATTA	ATGAACTTTT	TTGCCAAITTT	TATAGCATTT	GGCACCAGCT	ACACTATCAT		
HSP												
Tigris	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
DA-BS_consensus	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
DaBS9	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
DaBS10	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
DATR19	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
Da25	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			
DA-ES_consensus	TGGCACCACCT	TTTATAATTA	AAGTATACAT	TAATAAACCT	TTTCGCTAAA	TTTTATAACA	TTTAGCAGCG	ATTCACCTGT	CATTAAGCA			