

Table S1. Mosquito collections used for the development of the standard-universal chromosome map and illustration of the inversion variant composition. Species were identified by the PCR-RFLP approach using the *RsaI* endonuclease.

Chromosomal variant	Species	Populations
X00	<i>An. daciae</i>	Dzerzhinskoye, 08/14/2018
X01	<i>An. daciae</i>	Kansk 07/11/2019
X11	<i>An. daciae</i> , <i>An. messeae</i>	Barnaul, 06/09/2019, Krivosheino, 07/18/2018
X12	<i>An. messeae</i>	Barnaul, 06/09/2019
X22	<i>An. messeae</i>	Semipalatinsk, 08/22/2017
2R00	<i>An. daciae</i>	Kolarovo, 07/03/18
2R01	<i>An. messeae</i>	Barnaul, 06/09/2019
2R11	<i>An. messeae</i>	Krivosheino, 07/18/2018 Teguldet, 08/22/18
3R00	<i>An. daciae</i>	Barnaul, 06/09/2019, Kolarovo, 07/03/2018,
3R01	<i>An. daciae</i> , <i>An. messeae</i>	Dzerzhinskoye, 08/14/2018, Krivosheino, 07/18/2018
3R11	<i>An. messeae</i>	Barnaul, 06/09/2018, Zelenogorsk, 07/17/2018, Kansk 07/11/2019, Krivosheino, 07/18/2018
3L00	<i>An. daciae</i>	Dzerzhinskoye, 08/14/2018, Kolarovo, 07/03/2018
3L01	<i>An. messeae</i>	Barnaul, 06/09/2019
3L11	<i>An. messeae</i>	Dzerzhinskoye, 08/14/2018, Kargasok, 07/18/2019, Noyabrsk, 07/27/2019

Table S2. Genotyping results for specimens based on ITS2 sequences. Letters in sample numbers indicate their locations: IR—Irkutsk; KZ—Kazakhstan, Semey; LR—Latvia, Riga; NB or NB(V)—Novosibirsk, Berdsk (collection “V”); T(B) or T(D)—Teguldet, pond B or D. The presence of double picks in ITS2 sequences (SNP) are indicated by the IUPAC nucleotide ambiguity code as letters M(A+C), R(A+G), S(C+G), W(A+T), and Y (C+T).

Sample number	Accession number	Species	SNP					
			150	211	215	217	412	432
IR3	MZ578242	<i>An. messeae</i>	M	T	T	C	G	G
IR4	MZ578243	<i>An. messeae</i>	M	T	T	C	G	G
KZ18	MZ578244	Hybrid	M	T	T	C	R	S
KZ3	MZ578245	<i>An. messeae</i>	M	T	T	C	G	G
KZ4	MZ578246	<i>An. messeae</i>	M	T	T	C	G	G
KZ6	MZ578247	Hybrid	M	T	T	C	R	S

LR11	MZ578248	<i>An. daciae</i>	C	A	W	Y	A	C
LR12	MZ578249	<i>An. messeae</i>	M	T	T	C	G	G
LR17	MZ578250	<i>An. daciae</i>	C	W	W	Y	A	C
LR2	MZ578251	<i>An. daciae</i>	C	W	W	Y	A	C
LR8	MZ578252	<i>An. daciae</i>	C	W	W	Y	A	C
LR9	MZ578253	<i>An. messeae</i>	M	T	T	C	G	G
NB(V)17	MZ578254	Hybrid	C	T	T	Y	R	S
NB15	MZ578255	<i>An. messeae</i>	M	T	T	C	G	G
NB16	MZ578256	<i>An. messeae</i>	M	T	T	C	G	G
NB19	MZ578257	<i>An. messeae</i>	M	T	T	C	G	G
NB20	MZ578258	<i>An. messeae</i>	M	T	T	C	G	G
NB5	MZ578259	<i>An. messeae</i>	M	T	T	C	G	G
T(B)12	MZ578260	<i>An. daciae</i>	C	W	W	Y	A	C
T(B)2	MZ578261	<i>An. daciae</i>	C	W	W	Y	A	C
T(B)27	MZ578262	<i>An. daciae</i>	C	W	W	Y	A	C
T(D)17	MZ578263	Hybrid	C	W	W	Y	R	S
T(D)31	MZ578264	Hybrid	C	W	W	Y	R	S

Table S3. Karyotyping of the specimens based on RFLP analysis of ITS2 sequence.

<b>Sample ID</b>	<b>Species</b>	<b>XL</b>	<b>2R</b>	<b>3R</b>	<b>3L</b>
Teg_20	<i>An. messeae</i>	1	11	11	00
Teg_21	<i>An. messeae</i>	12	11	01	00
Teg_22	<i>An. messeae</i>	11	01	01	00
Teg_23	<i>An. messeae</i>	11	11	01	00
Teg_24	<i>An. daciae</i>	11	00	00	00
Teg_25	<i>An. messeae</i>	1	11	01	00
Teg_26	<i>An. messeae</i>	12	11	00	00
Teg_27	<i>An. daciae</i>	1	00	00	00
Teg_28	<i>An. messeae</i>	11	00	01	00
Teg_29	<i>An. daciae</i>	11	00	00	00
Teg_30	<i>An. messeae</i>	11	11	11	00
Teg_31	<i>An. messeae</i>	11	01	01	00
Teg_32	<i>An. messeae</i>	12	11	01	00
Teg_33	<i>An. messeae</i>	11	11	01	01
Teg_34	<i>An. messeae</i>	11	11	01	11
Teg_35	<i>An. messeae</i>	11	11	01	00
Teg_37	<i>An. daciae</i>	11	00	00	00
Teg_38	<i>An. daciae</i>	11	00	00	00
Teg_39	<i>An. messeae</i>	1	11	01	00
Teg_40	<i>An. messeae</i>	11	11	01	00

Teg_41	<i>An. messeae</i>	11	11	11	00
Teg_42	<i>An. messeae</i>	11	01	01	00
Teg_43	<i>An. daciae</i>	00	00	01	00
Teg_44	<i>An. messeae</i>	2	11	01	00
Teg_45	<i>An. messeae</i>	1	11	00	00
Teg_47	<i>An. messeae</i>	1	11	01	00
Teg_48	<i>An. messeae</i>	11	11	11	00
Teg_49	<i>An. daciae</i>	11	00	00	00
Teg_50	<i>An. messeae</i>	12	11	00	01
Teg_52	<i>An. messeae</i>	1	11	01	01
Teg_53	<i>An. messeae</i>	1	11	01	00
Teg_54	<i>An. messeae</i>	12	11	00	00
Teg_55	<i>An. messeae</i>	11	11	01	00
Teg_57	<i>An. messeae</i>	11	11	00	00
Teg_58	<i>An. messeae</i>	2	11	01	01
Teg_59	<i>An. messeae</i>	12	11	00	00
Teg_60	<i>An. messeae</i>	11	11	01	00
Teg_61	<i>An. messeae</i>	12	11	11	00
Teg_62	<i>An. daciae</i>	01	00	00	00
Teg_63	<i>An. messeae</i>	22	11	01	00
Teg_64	<i>An. daciae</i>	1	00	00	00
Teg_66	<i>An. messeae</i>	11	11	00	00
Teg_67	<i>An. messeae</i>	12	11	11	00
Teg_68	<i>An. messeae</i>	1	11	00	00
Teg_69	<i>An. messeae</i>	1	11	00	00
Teg_70	<i>An. messeae</i>	11	11	00	00
Teg_73	<i>An. messeae</i>	12	11	00	00
Teg_77	<i>An. messeae</i>	11	11	01	00
Teg_78	<i>An. messeae</i>	11	11	11	00
Teg_79	<i>An. messeae</i>	11	11	00	00
Teg_80	<i>An. messeae</i>	1	11	11	00
Teg_81	<i>An. messeae</i>	1	11	01	00
Teg_82	<i>An. messeae</i>	1	11	11	00
Teg_83	<i>An. daciae</i>	01	00	00	00
Teg_84	<i>An. messeae</i>	12	11	01	00
Teg_85	<i>An. messeae</i>	12	11	11	00
Teg_86	<i>An. messeae</i>	1	11	00	00
Teg_87	<i>An. messeae</i>	11	11	00	00