

Additional File 1

month	year	county	Sub county	Site name	latitude	longitude	Stage collected	Collection method	Location	<i>An. stephensi</i>	<i>An. arabiensis</i>	Other anophelids	culicines present
Dec	2022	Marsabit	Saku	Karare	2.2270911	37.9380761	Inmatures (larvae or pupae)	Dipping method		7	6	7	no
Dec	2022	Marsabit	Saku	Nagayo	2.3376659	37.9900449	Inmatures (larvae or pupae)	Dipping method		3	0	0	no
Dec	2022	Marsabit	Laisamis	Laisamis	1.5876757	37.8081901	Inmatures (larvae or pupae)	Dipping method		9	0	4	no
Dec	2022	Turkana	Lodwar	Lodwar town	3.1217101	35.6277232	Inmatures (larvae or pupae)	Dipping method		5	NA	NA	NA
Feb	2023	Marsabit	Moyale	Kinisa	3.4781614	39.1266442	Adults	UVLT	Indoors	1	1		yes
Feb	2023	Marsabit	Moyale	Kinisa	3.4778131	39.1270866	Inmatures (larvae or pupae)	Dipping method		2	47	0	yes
Feb	2023	Marsabit	Laisamis	Sambamba	1.5876541	37.8083263	Inmatures (larvae or pupae)	Dipping method		4	23		yes
Feb	2023	Marsabit	Saku	Saku Central	2.3222611	37.9829043	Inmatures (larvae or pupae)	Dipping method		8	0	0	yes
Feb	2023	Marsabit	Laisamis	Sedaimur	1.5992355	37.8147148	Adults	UVLT	Indoors	1	8	2	yes

Feb	2023	Marsabit	Saku	Saku Central	2.3291914	37.9885602	Adults	UVLT	Outdoors	6	0	0	yes
May	2023	Marsabit	Laisamis	Kargi	2.5186342	37.588699	Inmatures (larvae or pupae)	Dipping method		6	NA	NA	no
Jun	2023	Elgeyo Marakwet	Marakwet West	Aror	0.9525	35.616003	Inmatures (larvae or pupae)	Dipping method		2	NA	NA	NA
Aug	2023	Mandera	Mandera East	Bulla Nguvu	3.9362739	41.8588979	Inmatures (larvae or pupae)	Dipping method		2	NA	NA	yes
Aug	2023	Mandera	Mandera East	Bulla Nguvu	3.9362739	41.8588979	Adults	CDC-LT	Indoors	4	NA	NA	NA
Aug	2023	Mandera	Mandera East	Taifa	3.9362668	41.8588776	Adults	CDC-LT	Indoors	7	NA	NA	yes
Aug	2023	Mandera	Mandera East	Taifa	3.9362615	41.8589	Adults	UVLT	Outdoors	3	NA	NA	yes
Aug	2023	Mandera	Mandera East	Taifa	3.9362881	41.85887	Adults	Aspiration	Indoors	3	NA	NA	NA
Aug	2023	Mandera	Mandera East	Neboi	3.9362488	41.8589963	Inmatures (larvae or pupae)	Dipping method		3	NA	NA	no

Aug	2023	Samburu	Samburu East	Archers	0.6269341	37.6471042	Inmatures (larvae or pupae)	Dipping method			1	NA	NA	yes
Aug	2023	Samburu	Samburu East	Lkumi	0.6288283	37.6390992	Adults	Aspiration	Indoors		6	NA	NA	NA
Aug	2023	Samburu	Samburu East	Lkumi	0.6288283	37.6390992	Inmatures (larvae or pupae)	Dipping method			2	NA	NA	NA
Oct	2023	Marsabit	Moyale	Dadache Lakole	3.4643891	38.9082907	Adults	UVLT	Outdoors		0	1	0	no
Oct	2023	Marsabit	Moyale	Kinisa	3.4787491	39.1226609	Adults	HLC	Outdoors		0	14	0	no
Oct	2023	Marsabit	Moyale	Kinisa	3.479595	39.1208058	Inmatures (larvae or pupae)	Dipping method			0	108	10	yes
Oct	2023	Marsabit	Laisamis	Laisamis Old Town	1.5875054	37.8072657	Inmatures (larvae or pupae)	Dipping method			0	3	77	yes
Feb	2024	Marsabit	Saku	Shauri Yako	2.3291289	37.9958905	Inmatures (larvae or pupae)	Dipping method			7	0	0	no

Feb	2024	Marsabit	Saku	Shauri Yako	2.3313384	37.9979865	Inmatures (larvae or pupae)	Dipping method		1	NA	NA	yes
Feb	2024	Marsabit	Saku	Songa	2.2355433	38.003717	Inmatures (larvae or pupae)	Dipping method		1	0	0	yes
Feb	2024	Marsabit	Saku	Milimani	2.2417261	37.9966094	Inmatures (larvae or pupae)	Dipping method		1	0	0	yes
Feb	2024	Marsabit	Laisamis	Sakaldara	1.6340135	37.8138081	Inmatures (larvae or pupae)	Dipping method		1	18	0	yes
Feb	2024	Marsabit	Moyale	Sololo	3.5474508	38.6479898	Adults	CDC-LT	Outdoors	1	13	9	no
Feb	2024	Marsabit	Saku	Songa	2.2438008	38.0034277	Adults	BGS	Outdoors	1	3	3	yes
Jun	2024	Isiolo	Isiolo	Isiolo Town	0.3563364	37.5834123	Inmatures (larvae or pupae)	Dipping method		13	NA	222	yes
Jun	2024	Isiolo	Isiolo	Isiolo Town	0.3556743	37.5809335	Inmatures (larvae or pupae)	Dipping method		7	NA	670	yes

Apr	2024	Turkana	Turkana South	Achukule	2.3810033	35.6443984	Inmatures (larvae or pupae)	Dipping method	Buckets	2	NA	NA	NA
Apr	2024	Turkana	Turkana South	Morongor	2.378317	36.6392249	Inmatures (larvae or pupae)	Dipping method	Tire	1	NA	NA	NA
Apr	2024	Turkana	Turkana South	Narengelu p B	2.3791435	35.6540393	Inmatures (larvae or pupae)	Dipping method	Above ground cistern	1	NA	NA	NA
Apr	2024	Turkana	Turkana South	Narengelu p B	2.3877383	35.6511883	Inmatures (larvae or pupae)	Dipping method	Barrels and drums	1	NA	NA	NA
Apr	2024	Turkana	Turkana South	Narengelu p B	2.37959	35.652975	Inmatures (larvae or pupae)	Dipping method	Jerry cans	1	NA	NA	NA
Apr	2024	Turkana	Turkana South	Narengelu p C	2.3758581	35.6545078	Inmatures (larvae or pupae)	Dipping method	Above gound tank	6	NA	NA	NA
Apr	2024	Turkana	Turkana South	Narengelu p C	2.3758897	35.6543644	Inmatures (larvae or pupae)	Dipping method	Jerry cans	2	NA	NA	NA

Apr	2024	Turkana	Turkana South	Naulikalale	2.3754415	35.6565168	Inmatures (larvae or pupae)	Dipping method	Above ground tank	2	NA	NA	NA
Apr	2024	Turkana	Turkana South	Town Chini	2.3826496	35.6542157	Inmatures (larvae or pupae)	Dipping method	Drain	1	NA	NA	NA
Mar	2024	Turkana	Turkana South	Achukule	2.38098	35.6447783	Inmatures (larvae or pupae)	Dipping method	Barrels and drums	1	NA	NA	NA
Mar	2024	Turkana	Turkana South	Achukule	2.3715267	35.6831367	Inmatures (larvae or pupae)	Dipping method	Buckets	1	NA	NA	NA
Mar	2024	Turkana	Turkana South	Narengulup B	2.3877383	35.6511883	Inmatures (larvae or pupae)	Dipping method	Barrels and drums	1	NA	NA	NA
Mar	2024	Turkana	Turkana South	Narengulup B	2.3798264	35.6531073	Inmatures (larvae or pupae)	Dipping method	Jerry cans	2	NA	NA	NA
Mar	2024	Turkana	Turkana South	Narengulup C	2.3812863	35.6548309	Inmatures (larvae or pupae)	Dipping method	Above ground tank	5	NA	NA	NA

Mar	2024	Turkana	Turkana South	Narengulup C	2.3745291	35.6563255	Inmatures (larvae or pupae)	Dipping method	Jerry cans	1	NA	NA	NA
Mar	2024	Turkana	Turkana South	Town Chini	2.382686	35.6544527	Inmatures (larvae or pupae)	Dipping method	Drain	1	NA	NA	NA

Additional File 2

Collection Site	Sample ID	Collection Method	Collection Date	Species	COI Haplotype
Marsabit	2023KEN0074	Adult	Dec-22	<i>An. stephensi</i>	Hap 2
	2023KEN0083	Adult	Dec-22	<i>An. stephensi</i>	Hap 2
	2023KEN0097	Larvae	May-23	<i>An. stephensi</i>	Hap 2
	2023KEN0098	Larvae	May-23	<i>An. stephensi</i>	Hap 2
	2023KEN0101	Larvae	May-23	<i>An. stephensi</i>	Hap 2
	2023KEN0103	Larvae	May-23	<i>An. stephensi</i>	Hap 2
	2023KEN0109	Larvae	May-23	<i>An. stephensi</i>	Hap 3
	2023KEN0111	Larvae	May-23	<i>An. stephensi</i>	Hap 2
	OR607949		Dec-22	<i>An. stephensi</i>	Hap 3
	OR607950		Dec-22	<i>An. stephensi</i>	Hap 2
Mandera	2023KEN0007	Light Trap Indoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0011	Light Trap Indoors	06-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0020	Light Trap Indoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0021	Prokopack	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0022	Light Trap Indoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0032	Adult	01-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0037	Light Trap Outdoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0044	Light Trap Indoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0047	Light Trap Indoors	06-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0050	Prokopack	04-Aug-23	<i>An. stephensi</i>	Hap 2

	2023KEN0052	Light Trap Indoors	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0057	Light Trap Indoors	06-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0062	Light Trap Indoors	06-Aug-23	<i>An. stephensi</i>	Hap 2
Samburu	2023KEN0016	Adult	04-Aug-23	<i>An. stephensi</i>	Hap 3
	2023KEN0023	Prokopack	03-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0026	Larvae	02-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0029	Prokopack	03-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0031	Prokopack	04-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0041	Prokopack	03-Aug-23	<i>An. stephensi</i>	Hap 2
	2023KEN0045	Prokopack	03-Aug-23	<i>An. stephensi</i>	Hap 2
Turkana	2024KEN0002	Larvae	May-24	<i>An. stephensi</i>	Hap 2
	Barcode32	NA	2024	<i>An. stephensi</i>	Hap 1
	Barcode48	NA	2024	<i>An. stephensi</i>	Hap 1
	KE9N6B	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9N6D	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9N6F	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9N6M	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9N6U	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9N9C	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9NAW	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9NB6	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9NB7	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2
	KE9NBV	Larvae	Apr-24	<i>An. stephensi</i>	Hap 2

KE9NBX	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NBZ	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NC7	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NDD	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NDE	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NDJ	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9NDM	Larvae	Apr-24	An. <i>stephensi</i>	Hap 2
KE9N6J	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9N6K	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NBR	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NBT	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NDQ	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NDR	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NDS	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9NDW	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9O88	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9O9H	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9O9I	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2
KE9O9N	Larvae	Mar-24	An. <i>stephensi</i>	Hap 2

Additional File 3

