

Supplementary S3. Sibling species of the Maculatus group determined by PCR and sequencing methods compared to the field morphological identification.

Field identification	PCR and sequencing identification						
Maculatus group	<i>An. maculatus s.s.</i>	<i>An. rampae</i>	<i>An. sawadwongporni</i>	<i>An. pseudowillmori</i>	<i>An. dravidicus</i>	Other species	Negative
2	1	0	0	0	0	1	0
390	1	377	20	0	0	17	6
5	0	0	4	1	0	1	0
24	12	2	8	0	0	3	0
7	2	2	3	0	0	3	0
169	9	1	120	5	22	11	12
582	421	0	13	85	2	29	54
179	5	71	17	0	81	1	7
11	3	0	5	0	0	3	1
18	0	5	8	0	0	5	1
1387	454	458	198	91	105	74	83

Note: Negative = extraction or sequencing failed; Field misidentification of mosquitoes in different *Anopheles* groups resulted in the numbers of field-identified mosquitoes being different to the numbers of mosquitoes identified by PCR/sequencing.

Sibling species of the Funestus group determined by PCR and sequencing methods compared to the field morphological identification.

Provinces	Field identification	PCR and sequencing identification					
	Funestus group	<i>An. minimus s.s.</i>	<i>An. aconitus</i>	<i>An. pampanai</i>	<i>An. harrisoni</i>	Other species	Negative
Vientiane	1750	373	1354	0	0	19	5
Attapeu	218	2	5	147	0	61	7
Bokeo	76	60	3	0	0	12	1
Borlikhamxay	135	117	11	0	0	6	1
Khammouane	28	8	8	0	6	3	4
Luang Prabang	384	375	1	0	0	13	1
Phongsaly	183	7	149	0	24	26	1
Saravane	30	6	1	4	0	9	10
Savannakhet	20	11	7	0	0	0	2
Sekong	1	0	0	0	0	1	0
Total	2825	959	1539	151	30	150	32

Note: Negative = extraction or sequencing failed; Field misidentification of mosquitoes in different *Anopheles* groups resulted in the numbers of field-identified mosquitoes being different to the numbers of mosquitoes identified by PCR/sequencing.

Sibling species of the Leucosphyrus group determined by PCR and sequencing methods compared to the field morphological identification.

Provinces	Field identification	PCR and sequencing identification			
	Leucosphyrus group	<i>An. dirus s.s.</i>	<i>An. baimaii</i>	<i>An. nemophilous</i>	other species
Attapeu	5	9	0	0	0
Phongsaly	3	2	3	0	1
Luang Prabang	9	8	0	0	3
Khammouane	2	2	0	0	1
Sekong	9	12	1	1	1
Saravan	7	7	0	0	0
Total	35	40	4	1	6

