

## Supplementary Material:

### Species identification of Swedish mosquitoes through DNA metabarcoding

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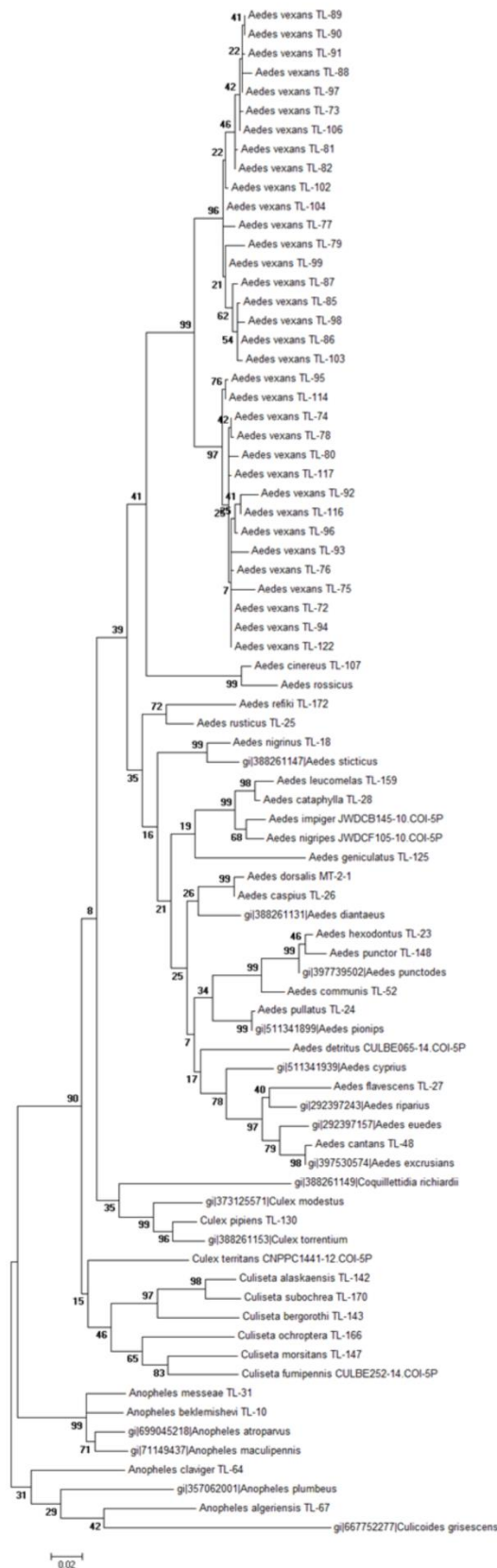
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**Figure 1 (Supplementary Material): Supplementary Material, Figure 1: Molecular phylogenetic analysis by maximum likelihood method. The evolutionary history was inferred by using the maximum likelihood method based on the Tamura-Nei model. The tree with the highest log likelihood (-11361.0261) is shown. The percentage of trees in which the associated taxa clustered together is shown next to the branches. Initial tree(s) for the heuristic search were obtained by applying the neighbor-joining method to a matrix of pairwise distances estimated using the maximum composite likelihood (MCL) approach. The tree is drawn to scale, with branch lengths measured in the number of substitutions per site. The analysis involved 80 nucleotide sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 1,539 positions in the final dataset. Evolutionary analyses were conducted in MEGA6.**

Species/Abbrv	Group Name															*	*	*	*
1. Anopheles algeriensis		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
2. Anopheles claviger		C	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
3. Aedes cinereus		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
4. Aedes rusticus		G	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
5. Aedes geniculatus		P	C	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
6. Aedes hexodontus		C	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
7. Aedes leucomelas		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
8. Aedes nigrinus		P	C	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
9. Aedes pullatus		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
10. Culiseta annulata		C	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
11. Culiseta bergrothi		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
12. Aedes atropalpus		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
13. Aedes aegypti		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
14. gi 401879655 Lucilia sericata		T	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
15. gi 374093166 Bombyx mori		P	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T
16. Primer LCO1490		G	T	C	P	P	P	T	T	T	T	T	T	T	G	T	T	T	T

Species/Abbrv	Group Name	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1. Aedes cinereus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
2. Aedes geniculatus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
3. Aedes hexodontus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
4. Aedes leucomelas		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
5. Aedes nigrinus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
6. Aedes pullatus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
7. Culiseta annulata		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
8. Culiseta bergrothi		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
9. Aedes atropalpus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
10. Aedes aegypti		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
11. Anopheles atroparvus		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
12. Aedes caspius		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
13. Aedes rossicus		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
14. Aedes vexans		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
15. Aedes annulipes		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
16. Aedes cantans		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
17. Aedes cataphylla		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
18. Aedes communis		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
19. Aedes diaantaeus		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
20. Aedes intrudens		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
21. Aedes punctor		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
22. Aedes sticticus		A	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
23. Coquillettidia richiardii		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
24. Culex pipiens		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
25. Culex torrentium		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
26. Culiseta morsitans		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
27. Culiseta ochroptera		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
28. Aedes albopictus		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C
29. Primer GB 1358 83F		P	C	T	C	P	P	G	G	P	P	G	G	G	T	G	P	P	C

Figure 2(A)(Supplementary material): LCO1490 (above) & GB\_1358\_83F (below). Sequence comparisons of the primer binding region from those mosquito species where this region has been independently sequenced.

Species/Abbrv	Group Name								*	*	*	*	*	*	*									
1. Anopheles algeriensis		T	T	C	G	G	A	G	C	T	T	G	G	C	G	G	G	A	A	T	A	G	T	
2. Anopheles claviger		T	T	T	G	G	G	C	A	T	G	G	C	A	G	G	G	A	A	T	A	G	T	
3. Aedes cinereus		T	T	T	G	G	A	G	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T	
4. Aedes rusticus		T	T	T	G	G	A	G	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T	
5. Aedes geniculatus		T	T	T	G	G	G	G	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T	
6. Aedes hexodontus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
7. Aedes leucomelas		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
8. Aedes nigrinus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
9. Aedes pullatus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
10. Culiseta annulata		T	T	T	G	G	A	G	C	T	T	G	A	G	C	T	G	G	A	A	T	A	G	T
11. Culiseta bergrothi		T	T	C	G	G	A	G	C	T	T	G	A	G	C	T	G	G	A	A	T	A	G	T
12. Aedes atropalpus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
13. Aedes aegypti		T	T	T	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
14. Anopheles messeae		T	T	C	G	G	A	G	C	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
15. Anopheles plumbeus		T	T	T	G	G	A	G	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
16. Anopheles beklemishevi		T	T	C	G	G	A	G	C	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
17. Aedes caspius		G	A	A	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
18. Aedes vexans		T	T	T	G	G	A	G	T	T	T	G	A	T	C	T	T	G	A	A	T	A	G	T
19. Aedes dorsalis		G	A	A	G	G	A	G	T	T	T	G	A	T	C	A	G	G	A	A	T	A	G	T
20. Aedes cataphylla		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
21. Aedes communis		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
22. Aedes diantaeus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
23. Aedes detritus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
24. Aedes excrucians		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
25. Aedes flavescens		T	T	C	G	G	A	G	T	T	T	G	A	T	C	A	G	G	A	A	T	A	G	T
26. Aedes impiger		T	T	T	G	G	A	G	T	T	T	G	A	T	C	A	G	G	A	A	T	A	G	T
27. Aedes nigripes		T	T	T	G	G	A	G	T	T	T	G	A	T	C	A	G	G	A	A	T	A	G	T
28. Aedes punctor		T	T	C	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
29. Aedes sticticus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
30. Culex territans		T	T	T	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
31. Culex pipiens		T	T	T	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
32. Culex torrentium		T	T	C	G	G	A	G	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
33. Culiseta subochrea		T	T	T	G	G	A	G	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
34. Culiseta ochroptera		T	T	T	G	G	A	G	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
35. Culiseta fumipennis		T	T	T	G	G	A	G	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
36. Aedes albopictus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
37. Aedes koreicus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
38. Aedes japonicus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
39. Aedes triseriatus		T	T	T	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
40. Culex modestus		T	T	C	G	G	A	G	T	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
41. Coquillettidia richiardii		A	T	T	T	T	G	A	C	T	T	G	A	T	C	T	G	G	A	A	T	A	G	T
42. gi 667752277 Culicoides grisescens		T	T	T	G	G	A	G	C	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
43. gi 401879655 Lucilia sericata		T	T	T	G	G	A	G	C	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T
44. gi 374093166 Bombyx mori		T	T	T	G	G	A	G	T	T	T	G	A	T	C	A	G	G	A	A	T	A	G	T
45. Primer GB1310 29F		G	A	A	G	G	A	G	T	T	T	G	A	T	C	C	G	G	A	A	T	A	G	T

Figure 2(B)(Supplementary material): GB1310\_29F. Sequence comparisons of the primer binding region from those mosquito species where this region has been independently sequenced.

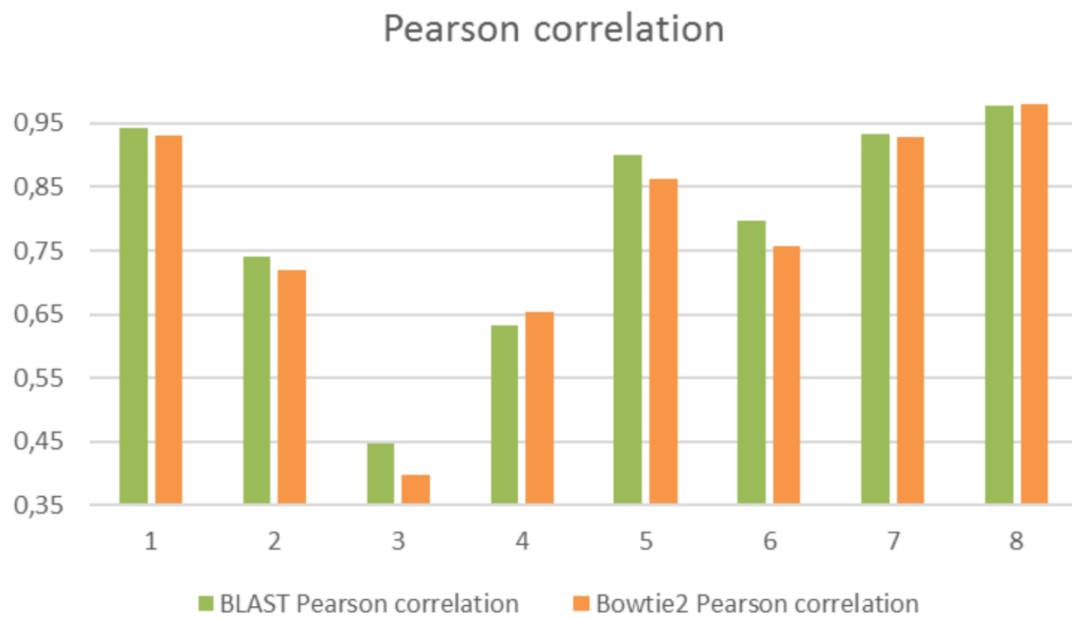
Species/Abbrv	Group Name	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1. Anopheles algeriensis		T	T	T	T	T	G	P	C	C	C	G	G	G	G	G	G	G	G	G	
2. Anopheles claviger		T	T	T	T	T	G	P	T	C	C	T	G	C	G	G	P	G	G	G	
3. Aedes cinereus		T	T	C	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
4. Aedes rusticus		T	T	C	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
5. Aedes geniculatus		T	T	T	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
6. Aedes hexodontus		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
7. Aedes leucomelas		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
8. Aedes nigrinus		T	T	C	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
9. Aedes pullatus		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
10. Culiseta annulata		T	T	T	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
11. Culiseta bergrothi		T	T	T	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
12. Aedes atropalpus		T	T	T	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
13. Aedes aegypti		T	T	C	T	T	G	P	T	C	C	P	P	T	T	G	G	P	G	G	
14. Anopheles maculipennis		T	T	T	T	T	G	P	T	C	C	P	G	C	G	G	P	G	G	G	
15. Anopheles messeae		T	T	T	T	T	G	P	T	C	C	P	G	C	G	G	P	G	G	G	
16. Anopheles atroparvus		T	T	T	T	T	G	P	C	C	C	P	G	C	G	G	P	G	G	G	
17. Anopheles plumbeus		T	T	T	T	T	G	P	C	C	C	T	G	C	G	G	P	G	G	T	
18. Anopheles beklemishevi		T	T	T	T	T	G	P	C	C	C	P	G	C	G	G	P	G	G	G	
19. Aedes caspius		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
20. Aedes rossicus		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
21. Aedes vexans		T	T	C	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
22. Aedes annulipes		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
23. Aedes dorsalis		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
24. Aedes cantans		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
25. Aedes cataphylla		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
26. Aedes communis		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
27. Aedes detritus		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
28. Aedes diantaeus		T	T	C	T	T	G	P	T	C	C	P	P	T	T	G	G	P	G	G	
29. Aedes excrucians		T	T	C	T	T	G	P	C	C	C	P	P	T	T	G	G	P	G	G	
30. Aedes euedes		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
31. Aedes flavescens		T	T	T	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
32. Aedes intrudens		T	T	C	T	T	G	P	T	C	C	P	P	T	T	G	G	P	G	G	
33. Aedes impiger		T	T	C	T	T	G	P	T	C	C	T	P	T	T	G	G	P	G	G	
34. Aedes nigripes		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
35. Aedes punctor		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
36. Aedes riparius		T	T	T	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
37. Aedes sticticus		T	T	C	T	T	G	P	C	C	C	T	P	T	T	G	G	P	G	G	
38. Coquillettidia richiardii		T	T	C	T	T	G	A	C	C	A	A	C	A	G	G	A	G	G	A	
39. Culex territans		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	A	G	G	A	
40. Culex pipiens		T	T	C	T	T	G	A	T	C	C	A	A	T	G	G	A	G	G	A	
41. Culex torrentium		T	T	T	T	T	G	A	T	C	C	A	A	T	G	G	A	G	G	A	
42. Culiseta alaskaensis		T	T	G	T	T	G	A	C	C	C	A	A	T	G	G	A	G	G	A	
43. Culiseta subochrea		T	T	T	T	T	G	A	T	C	C	A	A	T	G	G	A	G	G	A	
44. Culiseta morsitans		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	A	G	G	A	
45. Culiseta ochroptera		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	A	G	G	A	
46. Culiseta fumipennis		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	T	G	A	G	
47. Aedes albopictus		T	T	T	T	T	G	A	T	C	C	A	A	T	G	G	A	G	G	A	
48. Aedes koreicus		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	A	G	G	A	
49. Aedes japonicus		T	T	C	T	T	G	A	C	C	C	A	A	T	G	G	A	G	G	A	
50. Aedes triseriatus		T	T	C	T	T	G	A	T	C	C	T	A	T	G	G	A	G	G	A	
51. Culex modestus		T	T	C	T	T	G	A	C	C	C	A	A	T	G	G	A	G	G	A	
52. gi 667752277 Culicoides grisescens		T	T	C	T	T	G	A	C	C	C	G	C	C	G	G	G	A	G	A	
53. gi 401879655 Lucilia sericata		T	T	C	T	T	G	A	C	C	C	T	G	C	A	G	A	G	A	A	
54. gi 374093166 Bombyx mori		T	T	T	T	T	G	A	T	C	T	G	C	T	G	G	A	G	A	A	
55. Primer GB 1960 1936R		T	T	C	T	T	G	A	C	C	C	T	A	T	G	G	A	G	A	A	

Figure 2(C)(Supplementary material): GB\_1960\_1936R. Sequence comparisons of the primer binding region from those mosquito species where this region has been independently sequenced.

Species/Abbrev	Group Name	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*						
1. Anopheles algeriensis		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	C	T	G	A	A	G	T	T	A
2. Anopheles claviger		T	G	A	T	T	T	T	T	T	T	T	G	G	T	C	A	C	C	C	T	G	A	A	G	T	T	A
3. Aedes cinereus		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	C	T	G	A	A	G	T	T	A
4. Anopheles maculipennis		T	G	A	T	T	T	T	T	T	T	T	G	G	T	C	A	C	C	T	G	A	A	G	T	T	A	
5. Aedes leucomelas		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	T	T	A	G	A	A	G	T	T	A
6. Aedes pullatus		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
7. Culiseta bergrothi		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
8. Aedes atropalpus		T	G	A	T	T	T	T	T	T	T	T	G	G	G	C	T	C	C	T	G	A	A	G	T	T	A	
9. Aedes aegypti		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	C	T	G	A	A	G	T	T	A
10. Anopheles atroparvus		T	G	A	T	T	T	T	T	T	T	T	G	G	T	C	A	C	C	T	G	A	A	G	T	T	A	
11. Aedes caspius		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
12. Aedes rossicus		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
13. Aedes vexans		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
14. Aedes annulipes		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
15. Aedes cantans		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
16. Aedes communis		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
17. Aedes diaantaeus		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	C	T	G	A	A	G	T	T	A
18. Aedes intrudens		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
19. Aedes punctor		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
20. Aedes sticticus		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	T	G	A	A	G	T	T	A	
21. Coquillettidia richiardi		T	G	A	T	T	T	T	T	T	T	T	G	G	C	A	T	C	T	G	A	A	G	T	T	A	A	
22. Culex pipiens		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
23. Culex torrentium		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	T	C	T	G	A	A	G	T	T	A	
24. Culiseta morsitans		T	G	A	T	T	T	T	T	T	T	T	G	G	G	C	A	C	C	C	T	G	A	A	G	T	T	A
25. Culiseta ochroptera		T	G	A	T	T	T	T	T	T	T	T	G	G	A	C	A	C	C	C	T	G	A	A	G	T	T	A
26. Aedes albopictus		T	G	A	T	T	T	T	T	T	T	T	G	G	T	C	A	T	C	C	T	G	A	A	G	T	T	A
27. Primer HCO2198		T	G	A	T	T	T	T	T	T	T	T	G	G	T	C	A	C	C	T	G	A	A	G	T	T	A	

Species/Abbrev	Group Name	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
1. Aedes cinereus		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
2. Aedes geniculatus		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
3. Culiseta bergrothi		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
4. Aedes pullatus		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
5. Aedes atropalpus		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
6. Aedes hexodontus		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	T	T	G	G	A	A	G	G	-	
7. Aedes communis		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	A	T	G	A	A	T	T	A		
8. Anopheles claviger		C	T	A	T	A	T	G	C	A	A	T	T	A	T	A	T	A	T	A	T	G	T	G	T	C	T	A	T	G	
9. Aedes rusticus		C	A	A	A	T	T	G	G	A	A	A	A	T	T	A	T	T	G	G	C	C	T	T	T	G	A	A	A	G	A
10. Culiseta annulata		T	A	A	T	A	T	G	G	C	A	A	A	T	T	A	G	T	G	C	A	T	T	G	G	T	T	G	G	A	A
11. Primer TL2-N-3014R		T	A	A	T	A	T	G	G	C	A	G	A	T	T	A	G	T	G	C	A	T	T	G	G	A	-	-	-	-	

Figure 2(D)(Supplementary Material): HCO2198 (above) & TL2-N-3014R (below). Sequence comparisons of the primer binding region from those mosquito species where this region has been independently sequenced.



**Figure 3 (Supplementary Material):** Pearson correlation between input fraction for each mosquito species and resulting fractions using Blast- or Bowtie2-based identification. Mock communities 1-6 are composed of morphologically identified mosquitoes and mock communities 7 and 8 are composed of mosquitoes individually identified by COI barcoding.

**Table 1(Supplementary material): Description of the mock community samples used to test the metabarcoding method.**

Species	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5	Batch 6	Batch 7	Batch 8
<i>Anopheles algeriensis</i>	0	0	0	4	0	0	0	2
<i>Anopheles atroparvus</i>	0	0	0	0	0	0	0	0
<i>Anopheles beklemishevi</i>	0	0	0	0	0	0	0	0
<i>Anopheles claviger</i>	0	8	0	0	7	0	1	2
<i>Anopheles maculipennis</i>	0	0	0	0	0	15	0	0
<i>Anopheles messeae</i>	0	0	12	0	0	0	0	0
<i>Anopheles plumbeus</i>	0	0	0	0	0	0	0	0
<i>Aedes cinereus/geminus/rossicus</i>	40	0	1	17	0	20	0	3
<i>Aedes vexans</i>	5	0	0	0	12	0	0	34
<i>Aedes refiki</i>	0	0	0	0	0	0	0	1
<i>Aedes geniculatus</i>	0	10	0	0	0	0	0	3
<i>Aedes annulipes/cantans/excrucians</i>	0	20	6	17	0	0	22	0
<i>Aedes caspius</i>	0	0	0	0	0	0	0	0
<i>Aedes cataphylla</i>	0	20	0	15	10	0	1	0
<i>Aedes communis</i>	15	0	0	0	0	23	9	0
<i>Aedes cyprius</i>	0	0	0	0	0	0	0	0
<i>Aedes detritus</i>	0	0	0	0	0	0	0	0
<i>Aedes intrudens/diantaesus</i>	0	0	18	0	0	0	0	0
<i>Aedes dorsalis</i>	0	0	0	10	0	0	0	0
<i>Aedes euedes</i>	0	0	0	0	0	0	0	0
<i>Aedes flavescens</i>	0	0	0	3	0	0	0	0
<i>Aedes hexodontus/punctor/punctodes</i>	0	40	10	0	22	0	4	5
<i>Aedes impiger</i>	0	0	0	0	0	0	0	0
<i>Aedes leucomelas</i>	0	0	0	0	0	0	0	2
<i>Aedes nigripes</i>	0	0	0	0	0	0	0	0
<i>Aedes pionips</i>	0	0	0	0	0	0	0	0
<i>Aedes pullatus</i>	0	0	32	0	0	0	0	0
<i>Aedes riparius</i>	0	0	0	0	0	0	0	0
<i>Aedes sticticus/rusticus/nigrinus</i>	10	0	2	0	15	40	0	1
<i>Coquillettidia richiardii</i>	8	0	17	30	0	0	0	0
<i>Culex territans</i>	0	0	0	0	0	0	0	0
<i>Culex pipiens</i>	2	0	0	0	5	0	0	1
<i>Culex torrentium</i>	0	0	0	0	0	0	0	0
<i>Culiseta annulata</i>	0	1	0	0	0	2	0	0
<i>Culiseta alaskaensis</i>	0	1	0	0	0	0	0	1
<i>Culiseta bergrothi</i>	20	0	0	0	29	0	0	1
<i>Culiseta subochrea</i>	0	0	0	0	0	0	0	1
<i>Culiseta fumipennis</i>	0	0	0	0	0	0	0	0
<i>Culiseta morsitans</i>	0	0	2	0	0	0	0	2
<i>Culiseta ochroptera</i>	0	0	0	4	0	0	0	1
<i>Aedes albopictus</i>	0	0	0	0	0	0	0	0
<i>Aedes koreicus</i>	0	0	0	0	0	0	0	0
<i>Aedes japonicus</i>	0	0	0	0	0	0	0	0
<i>Aedes triseratus</i>	0	0	0	0	0	0	0	0
<i>Aedes atropalpus</i>	0	0	0	0	0	0	0	0
<i>Aedes aegypti</i>	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>37</b>	<b>60</b>