Table S1. Culicidae females collected in a coastal and in an inland village in Senegal by CDC-light and BG-sentinel traps (*n*= 20 trap-night for both traps) located indoors and outdoors from September to November 2018.

Species	Coastal												Inland											
	September				October				Late-November				September				Early November				Mid-November			
	Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor	
	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG
Culex quinquefasciatus	243	21	147	20	91	169	92	177	36	163	44	290	54	11	18	54	30	118	47	315	27	135	32	565
Culex nebulosus	65	5	61	2	7	0	12	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Culex poicilipes	3	0	3	0	7	0	3	0	0	2	6	8	0	0	0	0	1	0	0	2	0	0	0	0
Culex tritaeniorhynchus	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	2	0	1	7
Culex tigripes	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	2	0	0	0	9
Culex ethiopicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0
Mansonia africana	5	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Mansonia uniformis	29	0	10	0	32	0	13	0	5	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0
Aedes aegypti	4	0	10	0	4	0	0	0	0	0	0	0	6	0	6	5	0	0	0	0	0	0	1	1
Aedes ochraceus	0	0	0	0	1	0	0	0	2	0	3	0	2	1	2	7	0	0	0	1	0	0	0	0
Aedes vexans	0	0	0	0	32	6	57	26	0	0	0	0	13	5	22	64	0	0	0	0	0	0	0	0
Total of Culicinae	**349**	**26**	**232**	**22**	**176**	**175**	**177**	**203**	**43**	**169**	**68**	**301**	**77**	**17**	**48**	**133**	**34**	**121**	**49**	**323**	**29**	**135**	**34**	**582**
Anopheles gambiae s.l.	73	1	40	1	10	0	12	1	2	1	7	2	45	3	6	1	5	4	6	6	3	0	0	3
Anopheles funestus	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles ziemanni	0	0	7	0	4	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles rufipes	0	0	3	0	1	0	2	1	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0
Anopheles domicola	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles nili	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Anopheline	**74**	**1**	**51**	**1**	**20**	**0**	**19**	**3**	**2**	**1**	**8**	**5**	**46**	**3**	**6**	**1**	**6**	**4**	**6**	**6**	**3**	**0**	**0**	**3**

Table S2. Culicidae males collected in a coastal and in an inland village in Senegal by CDC-light and BG-sentinel traps (*n*= 20 trap-night for both traps) located indoors and outdoors from September to November 2018.

Species	Coastal												Inland											
	September				October				Late-November				September				Early November				Mid-November			
	Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor		Indoor		Outdoor	
	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG
Culex quinquefasciatus	161	14	100	12	13	0	17	11	4	0	6	2	0	1	0	1	0	1	0	0	0	0	0	0
Culex nebulosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Culex poicilipes	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	3
Culex tritaeniorhynchus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Culex tigripes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Culex ethiopicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mansonia africana	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mansonia uniformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aedes aegypti	0	1	0	0	1	0	0	0	0	0	2	0	1	0	0	0	0	1	1	0	1	1	0	0
Aedes ochraceus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aedes vexans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total of Culicinae	**161**	**15**	**101**	**12**	**14**	**0**	**17**	**11**	**4**	**0**	**10**	**2**	**1**	**1**	**0**	**1**	**0**	**2**	**2**	**0**	**1**	**1**	**0**	**3**
Anopheles gambiae s.l.	8	0	11	3	0	3	2	0	0	1	0	4	3	0	2	2	0	0	1	1	0	0	0	0
Anopheles funestus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles ziemanni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles rufipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles domicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anopheles nili	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Anopheline	**8**	**0**	**11**	**3**	**0**	**3**	**2**	**0**	**0**	**1**	**0**	**4**	**3**	**0**	**2**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**

Table S3. Females of *Anopheles gambiae* s.l. species collected indoors and outdoors in a coastal and an inland village in Senegal by CDC-light and BG-sentinel traps from September to November 2018.

Species	**Coastal village**												**Total coastal village**
	September (1–5)				October (10–14)				Nov (29–30)–Dec (1–3)				
	Indoors		Outdoors		Indoors		Outdoors		Indoors		Outdoors		
	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	
Anopheles arabiensis	36	6	7	6	6	1	4	2	1	1	3	1	74
Anopheles coluzzii	7	3	10	2	0	0	1	0	0	0	1	1	25
Anopheles gambiae	11	3	6	4	1	0	1	0	0	0	1	0	27
Anopheles gambaie/coluzzii hybrid	2	0	1	0	0	0	1	0	0	0	0	0	4
Anopheles melas	0	0	1	0	0	0	1	0	0	0	2	0	4
Total	**56**	**12**	**25**	**12**	**7**	**1**	**8**	**2**	**1**	**1**	**7**	**2**	**134**
	Inland village												**Total inland village**
	September (27–30)–Oct (1)				November (4–8)				November (17–21)				
	Indoors		Outdoors		Indoors		Outdoors		Indoors		Outdoors		
	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	CDC	BG	
Anopheles arabiensis	18	0	1	1	4	2	6	4	3	0	0	3	42
Anopheles coluzzii	3	0	0	0	0	0	0	0	0	0	0	0	3
Anopheles gambiae	24	3	4	0	1	0	0	2	0	0	0	0	34
Anopheles gambaie/coluzzii hybrid	0	0	0	0	0	1	0	0	0	0	0	0	1
Anopheles melas	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**45**	**3**	**5**	**1**	**5**	**3**	**6**	**6**	**3**	**0**	**0**	**3**	**80**

Table S4. Result of best parsimonious of GLMM-1 of *Culex quinquefasciatus* female abundance in a coastal village in Senegal. September and BG-sentinel trap taken as reference levels. For the coastal village, number of observations (trap/house/night) = 215. Standard deviation of random effects = 0.36.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	0.009	0.294	0.035	0.972
October	2.316	0.34	6.792	<0.0001
Nov-Dec	2.607	0.341	7.619	<0.0001
CDC traps	2.152	0.323	6.639	<0.0001
October *CDC traps	-2.933	0.431	-6.772	<0.0001
Nov-Dec*CDC traps	-4.148	0.443	-9.335	<0.0001

Table S5. Result of the best parsimonious of GLMM-1 of *Culex quinquefasciatus* female abundance in an inland village in Senegal. September, BG-sentinel trap, and indoor trapping location taken as reference levels. Number of observations (trap/house/night) = 240. Standard deviation of random effects = 0.35.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	-0.525	0.257	-2.038	0.041
Early-November	2.063	0.244	8.463	<0.0001
Mid- November	2.513	0.243	10.349	<0.0001
CDC traps	1.055	0.299	3.523	<0.0001
Outdoor	1.329	0.18	7.380	<0.0001
Early-November *CDC traps	-1.941	0.349	-5.553	<0.0001
Mid-November *CDC traps	-2.677	0.354	-7.750	<0.0001
CDC traps*Outdoor	-1.432	0.276	-5.197	<0.0001

Table S6. Summary of the mean of *Culex quinquefasciatus* in the coastal and inland village predicted by GLMM-1. N= Number of traps/day in 9 and 10 houses in the coastal and inland village (4 night of sampling for three months). 95 % CI= 95 % of confidence interval.

Village	Months	Location	Traps (N)	Mean of *Culex quinquefasciatus*/p/n
Coastal	September	Not statistically significant in the GLMM-1	BG (9)	1,01 (95% CI 0,56/1,79)
			CDC (10)	8,70 (95 %CI 5,58/13,54)
	October	Not statistically significant in the GLMM-1	BG (9)	10,25 (95% CI 6,36/16,51)
			CDC (10)	4,96 (95% CI 2,98/7,39)
	Nov-Dec	Not statistically significant in the GLMM-1	BG (9)	13,71 (95% CI 8,55/22,00)
			CDC (10)	1,86 (95 % CI 1,15/3,02)
Inland	September	outdoor	BG (5)	2,23 (95 % CI 1,42/3,51)
			CDC (5)	1,53 (95% CI 0,94/2,49)
		indoor	BG (5)	0,59 (95 % CI 0,35/0,98)
			CDC (5)	1,69 (95% CI 1,09/2,63)
	Early-November	outdoor	BG (5)	17,58 (95% CI 11,81/26,17)
			CDC (5)	1,73 (95% CI 1,10/2,69)
		indoor	BG (5)	4,64 (95% CI 3,12/6,91)
			CDC (5)	1,91 (95% CI 1,19/3,06)
	Mid-November	outdoor	BG (5)	27,61 (95 %CI 18,85/ 40,45)
			CDC (5)	1,30 (95% CI 0,81-2,07)
		indoor	BG (5)	7,30 (95% CI 4,88/10,91)
			CDC (5)	1,43 (95% CI 0,89/2,32)

Table S7. Result of best parsimonious of GLM-1 model of *Anopheles gambiae* s.l. female abundance in the coastal village. September and BG traps as a reference level. Number of observations (trap/house/night) = 216 of sampling for three months by 5 CDC indoor/5 CDC outdoor and 4 BG indoor/4 BG outdoor (number of houses =9). Dispersion parameter (ϑ) =0.35

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	-0.247	0.306	-0.806	0.42
October	-1.855	0.388	-4.783	<0.0001
Nov-Dec	-2.275	0.423	-5.366	<0.0001
CDC traps	1.095	0.345	3.169	0.001

Table S8. Result of the best parsimonious of GLM-1 of *Anopheles gambiae* s.l. female abundance in an inland village in Senegal. September, BG-sentinel trap, indoor location taken as a reference levels. Number of observations (trap/house/night) = 240. Dispersion parameter (ϑ) = 0.41.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	-2.479	0.646	-3.840	0.0001
Outdoor	0.368	0.582	0.633	0.526
CDC traps	3.088	0.734	4.209	<0.0001
Early-November	0.891	0.683	1.305	0.192
Mid-November	-0.333	0.841	-0.398	0.691
CDC traps* Outdoor	-1.627	0.742	-2.194	0.027
CDC traps*Early-November	-2.107	0.835	-2.525	0.011
CDC traps*Mid-November	-2.459	1.104	-2.226	0.025

Table S9. Summary of the mean of *Anopheles gambiae* s.l. in a coastal and inland village in Senegal predicted by GLM-1. N= Number traps/day in 9 and 10 houses in the coastal and inland village (4 night of sampling for three months). 95 % CI= 95 % of confidence interval.

Village	Months of collection	Trapping Location (indoor/outdoor)	Traps (N)	Mean of *An. gambiae (95% CI)*
Coastal	September	Not statistical significant in the GLMM-1	BG (9)	0,78(95 % CI 0,42/1,42)
			CDC (10)	2,33 (95%/ 1,40/3,89)
	October	Not statistical significant in the GLMM-1	BG (9)	0,12 (95 % 0,05/0,26)
			CDC (10)	0,36 (95% CI 0,19/0,69)
	Nov-Dec	Not statistical significant in the GLMM-1	BG (9)	0,08 (95 % CI 0,03/0,18)
			CDC (10)	0,23 (95 % CI 0,11/0,49)
Inland	September	outdoor	BG (5)	0,12 (95 %CI 0,03/0,39)
			CDC (5)	0,52 (95 % CI 0,23/1,14)
		indoor	BG (5)	0,08 (95% CI 0,02/0,29)
			CDC (5)	1,83 (95% CI 0,92/3,63)
	Early-November	outdoor	BG (5)	0,29 (95 %CI 0,11/0,75)
			CDC (5)	0,15 (95% CI 0,05/0,40)
		indoor	BG (5)	0,20 (95% CI 0,07/0,56)
			CDC (5)	0,54 (95 % CI 0,24/1,20)
	Mid-November	outdoor	BG (5)	0,08 (95% CI 0,02/0,32)
			CDC (5)	0,03 (95% CI 0,007/0,0,13)
		indoor	BG (5)	0,05 (95% CI 0,01/0,24)
			CDC (5)	0,11 (95% CI 0,03/0,11)

Table S10. Result of the best parsimonious of GLM-3 of *Anopheles arabiensis*, *An. gambiae* and *An. coluzzii* probability in a coastal village in Senegal. September taken reference level. Number of observations (trap/house/night) = 216.

Species	Variable	Coeff.	SE	z-value	Pr(>|z|)
An. arabiensis	**(Intercept)**	-0.955	0.262	-3.632	0.0002
	October	-1.556	0.404	-1.379	0.16
	Nov-Dec	-1.640	0.533	-3.076	0.02
An. gambiae ss	**(Intercept)**	-1.713	0.328	-5.229	<0.0001
	October	-1.842	0.787	-2.337	0.018
	Nov-Dec	-2.549	1.059	-2.408	0.015
An. coluzzii	**(Intercept)**	-1.421	0.298	-4.733	<0.0001
	October	-2.841	1.049	-2.706	0.006
	Nov-Dec	-2.134	0.776	-2.748	0.006

Table S11. Result of the best parsimonious of GLM-3 of *Anopheles arabiensis* and *An. gambiae* probability in a inland village in Senegal. BG taken reference level. Number of observations (trap/house/night) = 240.

Species	Variable	Coeff.	SE	z-value	Pr(>|z|)
An. arabiensis	**(Intercept)**	-2.639	0.366	-7.211	<0.0001
	CDC traps	0.968	0.442	2.185	0.029
An. gambiae ss	**(Intercept)**	-3.663	0.584	-6.266	<0.0001
	CDC traps	1.632	0.649	2.521	0.017

Table S12. Result of GLM-2 of the mean of *Culex quinquefasciatus*/trap/night in a coastal village in Senegal. September collections taken as reference level. Number of observations (trap/house/night) = 215 Dispersion parameter (ϑ) = 0.47.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	2.300	0.121	18.949	<0.0001
CDC Traps	-1.750	0.182	-9.572	<0.0001

Table S13. Result of GLM-2 of the mean of *Culex quinquefasciatus*/trap/night in an inland village in Senegal. September collection is taken as a reference level. Number of observations (trap/house/night) = 240. Dispersion parameter (ϑ) = 0.71.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	2.300	0.121	18.949	<0.0001
CDC Traps	-1.750	0.182	-9.572	<0.0001

Table S14. Result of GLM-2 of mean *Anopheles gambiae* s.l. females/trap/night in a coastal village in Senegal. BG-Sentinel taken as reference level. Number of observations (trap/house/night) = 216. Dispersion parameter (ϑ) =0.19.

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	-1.099	0.289	-3.801	<0.0001
CDC Traps	1.065	0.366	2.909	0.003

Table S15. Result of GLM-2 of mean *Anopheles gambiae* s.l. females/trap/night in an inland village in Senegal. September taken as reference level. Number of observations (trap/house/night) = 240. Dispersion parameter (ϑ) =0.18

Variable	Coeff.	SE	z-value	Pr(>|z|)
(Intercept)	-1.954	0.323	-6.036	<0.0001
CDC Traps	1.371	0.407	3.369	<0.0001

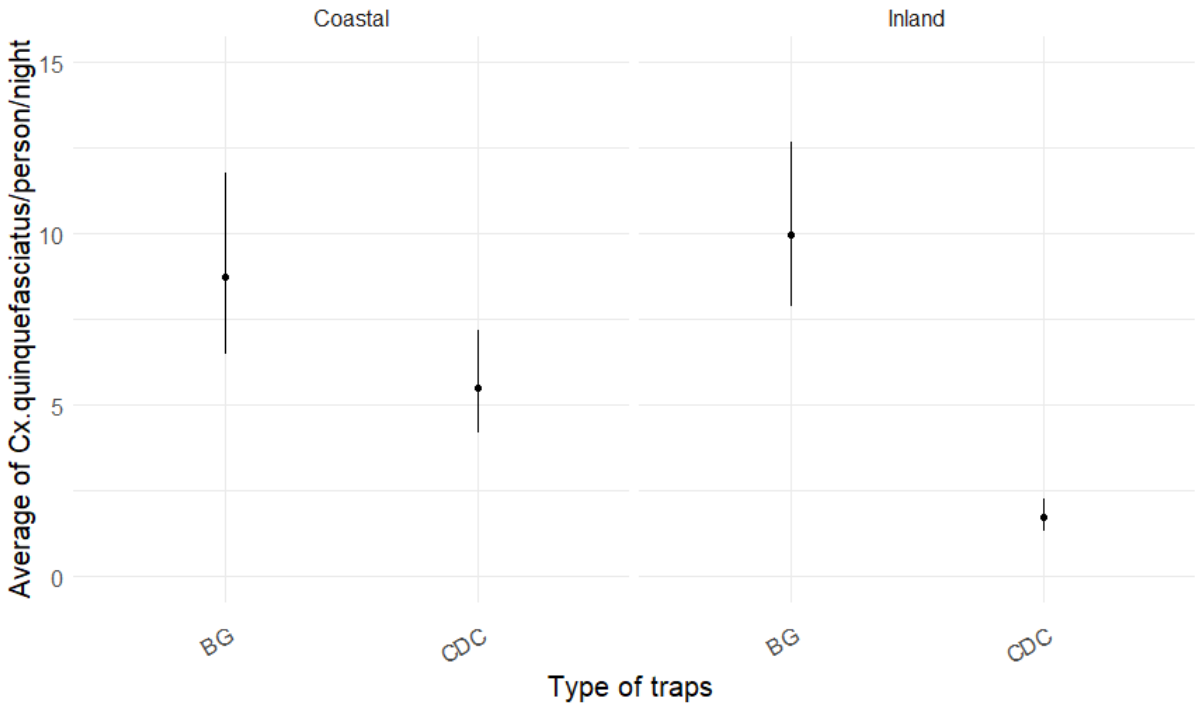


Figure S1. Average number of *Culex quinquefasciatus* host-seeking females/trap/night collected by BG-sentinel and CDC-light traps in a coastal (Left) and in an inland (Right) village in Senegal as estimated by GLM-2. Dots=average number mosquito females/person/night. Black vertical lines=95% confidence intervals.

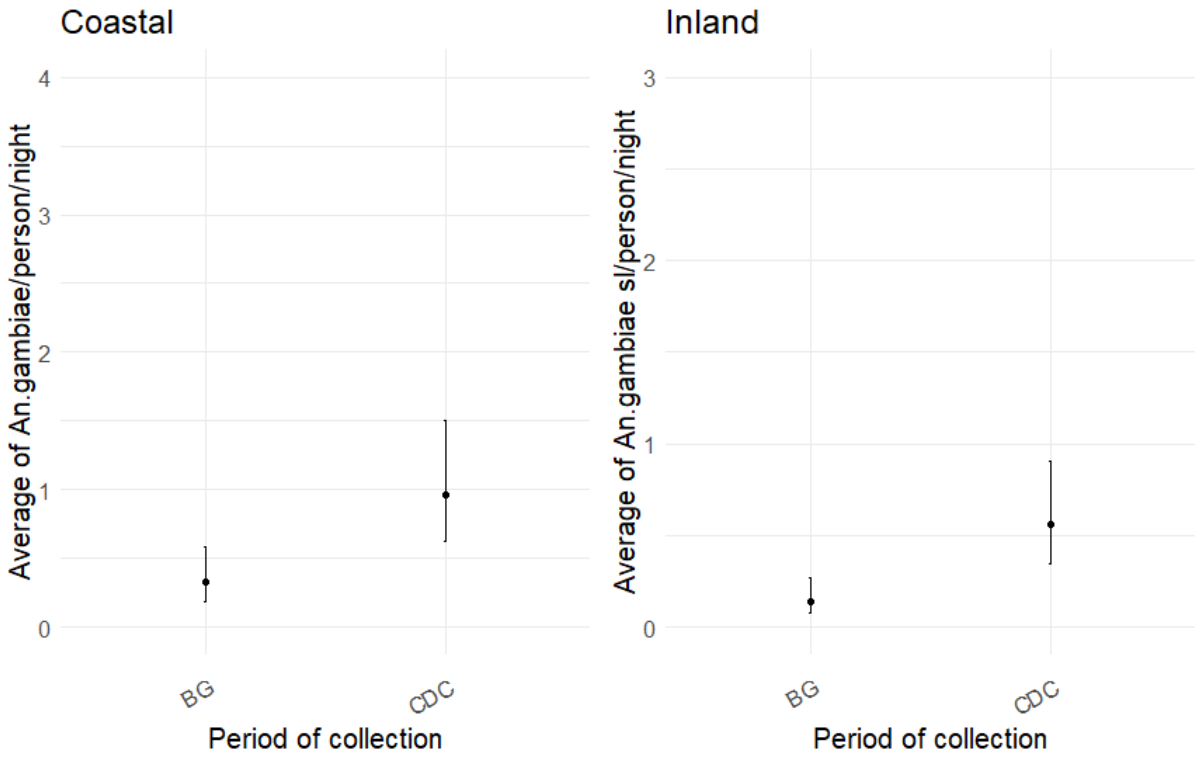


Figure S2. Average number of *Anopheles gambiae* s.l. host-seeking females/trap/night collected by BG-sentinel and CDC-light traps in a coastal (Left) and in an inland (Right) village in Senegal, as estimated by GLM-1. Dots=average number mosquito females/trap/night. Vertical lines=95% confidence intervals.