

Supporting information

Table S1: Pairwise Dunn's test results for the comparison of the effect of habitat type on diversity indices.

(a) Species richness (S), (b) Shannon index (H), and (c) Simpson index.

a) Species richness		
Pair comparisons	Z	p
Primary forest–Secondary forest	1.14	0.255
Primary forest–Fallow land	-3.49	0.001**
Secondary forest–Fallow land	-2.36	0.037*
*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001		
b) Shannon index		
Pair comparisons	Z	p
Primary forest–Secondary forest	1.19	0.234
Primary forest–Fallow land	-3.51	0.001**
Secondary forest–Fallow land	-2.33	0.040*
*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001		
c) Simpson index		
Pair comparisons	Z	p
Primary forest–Secondary forest	1.08	0.279
Primary forest–Fallow land	-3.46	0.002**
Secondary forest–Fallow land	-2.38	0.035*
*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001		

Table S2: Permanova pairwise test results for the comparison of the effect of habitat type on the community composition of ants.

Pair comparisons	d.f.	F	p
Primary forest vs Fallow land	1	8.98	0.003**
Secondary forest vs Fallow land	1	8.17	0.008**
Primary forest vs Secondary forest	1	0.86	0.652

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table S3: Pairwise comparisons of dispersion (beta diversity) from centroid among habitat types based on the betadisper() analysis and Tukey's HSD test.

Pair comparisons	difference	lower	upper	p
Primary forest vs Fallow land	-0.057	-0.121	0.007	0.087
Secondary forest vs Fallow land	-0.062	-0.126	0.002	0.059
Primary forest vs Secondary forest	-0.005	-0.069	0.059	0.975

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table S4: Pairwise Dunn's test results for the comparison of the effect of habitat type on the normalized log-ratio constant (lrc) from the rarefaction asymptotic curves.

Pair comparisons	Z	p
Primary forest–Secondary forest	5.49	< 0.001***
Primary forest–Fallow land	-14.58	< 0.001***
Secondary forest–Fallow land	-9.11	< 0.001***

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table S5: Pairwise Dunn's test results for the comparison of the effect of sampling method and habitat type on diversity indices. (a) Species richness (S), (b) Shannon index (H), and (c) Simpson index.

a) Species richness

Pair comparisons	Z	p
Fallow land_Pitfall–Fallow land_Winkler	-0.36	0.832
Fallow land_Pitfall–Primary forest_Pitfall	-1.00	0.528
Fallow land_Winkler–Primary forest_Pitfall	-0.64	0.708
Fallow land_Pitfall–Primary forest_Winkler	-3.58	0.005**
Fallow land_Winkler–Primary forest_Winkler	-3.22	0.006**
Primary forest_Pitfall–Primary forest_Winkler	-2.58	0.021*
Fallow land_Pitfall–Secondary forest_Pitfall	-0.12	0.902
Fallow land_Winkler–Secondary forest_Pitfall	0.23	0.874
Primary forest_Pitfall–Secondary forest_Pitfall	0.88	0.570
Primary forest_Winkler–Secondary forest_Pitfall	3.46	0.004**
Fallow land_Pitfall–Secondary forest_Winkler	-3.09	0.008**
Fallow land_Winkler–Secondary forest_Winkler	-2.73	0.016*
Primary forest_Pitfall–Secondary forest_Winkler	-2.09	0.069
Primary forest_Winkler–Secondary forest_Winkler	0.49	0.777
Secondary forest_Pitfall–Secondary forest_Winkler	-2.96	0.009**

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

b) Shannon index

Pair comparisons	Z	p
Fallow land_Pitfall–Fallow land_Winkler	-0.33	0.857
Fallow land_Pitfall–Primary forest_Pitfall	-1.01	0.518
Fallow land_Winkler–Primary forest_Pitfall	-0.68	0.673
Fallow land_Pitfall–Primary forest_Winkler	-3.59	0.005**
Fallow land_Winkler–Primary forest_Winkler	-3.26	0.006**
Primary forest_Pitfall–Primary forest_Winkler	-2.58	0.021*

Fallow land_Pitfall–Secondary forest_Pitfall	-0.19	0.908
Fallow land_Winkler–Secondary forest_Pitfall	0.14	0.891
Primary forest_Pitfall–Secondary forest_Pitfall	0.82	0.617
Primary forest_Winkler–Secondary forest_Pitfall	3.40	0.005**
Fallow land_Pitfall–Secondary forest_Winkler	-3.10	0.007**
Fallow land_Winkler–Secondary forest_Winkler	-2.77	0.014*
Primary forest_Pitfall–Secondary forest_Winkler	-2.08	0.070
Primary forest_Winkler–Secondary forest_Winkler	0.49	0.777
Secondary forest_Pitfall–Secondary forest_Winkler	-2.90	0.011*

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

c) Simpson index

Pair comparisons	Z	p
Fallow land_Pitfall–Fallow land_Winkler	-0.33	0.857
Fallow land_Pitfall–Primary forest_Pitfall	-1.01	0.518
Fallow land_Winkler–Primary forest_Pitfall	-0.68	0.673
Fallow land_Pitfall–Primary forest_Winkler	-3.59	0.005**
Fallow land_Winkler–Primary forest_Winkler	-3.26	0.006**
Primary forest_Pitfall–Primary forest_Winkler	-2.58	0.021*
Fallow land_Pitfall–Secondary forest_Pitfall	-0.19	0.908
Fallow land_Winkler–Secondary forest_Pitfall	0.14	0.891
Primary forest_Pitfall–Secondary forest_Pitfall	0.82	0.617
Primary forest_Winkler–Secondary forest_Pitfall	3.40	0.005**
Fallow land_Pitfall–Secondary forest_Winkler	-3.10	0.007**
Fallow land_Winkler–Secondary forest_Winkler	-2.77	0.014*
Primary forest_Pitfall–Secondary forest_Winkler	-2.08	0.070
Primary forest_Winkler–Secondary forest_Winkler	0.49	0.777
Secondary forest_Pitfall–Secondary forest_Winkler	-2.90	0.011*

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table S6: Permanova pairwise test results for the comparison of the effect of sampling method and habitat type on the community composition of ants.

Pair comparisons	d.f.	F	p
Primary forest_Winkler vs Secondary forest_Winkler	1	0.89	0.595
Primary forest_Winkler vs Fallow land_Winkler	1	5.60	0.005**
Primary forest_Winkler vs Secondary forest_Pitfall	1	7.54	0.005**
Primary forest_Winkler vs Primary forest_Pitfall	1	5.98	0.005**
Primary forest_Winkler vs Fallow land_Pitfall	1	19.48	0.005**
Secondary forest_Winkler vs Fallow land_Winkler	1	4.93	0.005**
Secondary forest_Winkler vs Secondary forest_Pitfall	1	7.72	0.006**
Secondary forest_Winkler vs Primary forest_Pitfall	1	6.41	0.006**
Secondary forest_Winkler vs Fallow land_Pitfall	1	18.65	0.005**
Fallow land_Winkler vs Secondary forest_Pitfall	1	4.28	0.005**
Fallow land_Winkler vs Primary forest_Pitfall	1	3.93	0.005**
Fallow land_Winkler vs Fallow land_Pitfall	1	4.41	0.005**
Secondary forest_Pitfall vs Primary forest_Pitfall	1	0.88	0.595
Secondary forest_Pitfall vs Fallow land_Pitfall	1	5.89	0.005**
Primary forest_Pitfall vs Fallow land_Pitfall	1	6.86	0.008**

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table S7: Pairwise comparisons of dispersion (beta diversity) from centroid among sampling methods and habitat types based on the betadisper() analysis and Tukey's HSD test.

Pair comparisons	difference	lower	upper	p
Fallow land_Winkler–Fallow land_Pitfall	0.177	0.080	0.273	< 0.001***
Primary forest_Pitfall–Fallow land_Pitfall	0.162	0.066	0.259	< 0.001***
Primary forest_Winkler–Fallow land_Pitfall	-0.005	-0.101	0.092	1
Secondary forest_Pitfall–Fallow land_Pitfall	0.163	0.066	0.259	< 0.001***
Secondary forest_Winkler–Fallow land_Pitfall	-0.010	-0.107	0.087	1
Primary forest_Pitfall–Fallow land_Winkler	-0.014	-0.111	0.083	0.998
Primary forest_Winkler–Fallow land_Winkler	-0.181	-0.278	-0.085	< 0.001***
Secondary forest_Pitfall–Fallow land_Winkler	-0.014	-0.111	0.083	0.998
Secondary forest_Winkler–Fallow land_Winkler	-0.187	-0.283	-0.090	< 0.001***
Primary forest_Winkler–Primary forest_Pitfall	-0.167	-0.264	-0.071	< 0.001***
Secondary forest_Pitfall–Primary forest_Pitfall	0.000	-0.097	0.097	1
Secondary forest_Winkler–Primary forest_Pitfall	-0.173	-0.269	-0.076	< 0.001***
Secondary forest_Pitfall–Primary forest_Winkler	0.167	0.071	0.264	< 0.001***
Secondary forest_Winkler–Primary forest_Winkler	-0.005	-0.102	0.091	1
Secondary forest_Winkler–Secondary forest_Pitfall	-0.173	-0.269	-0.076	< 0.001***

*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001