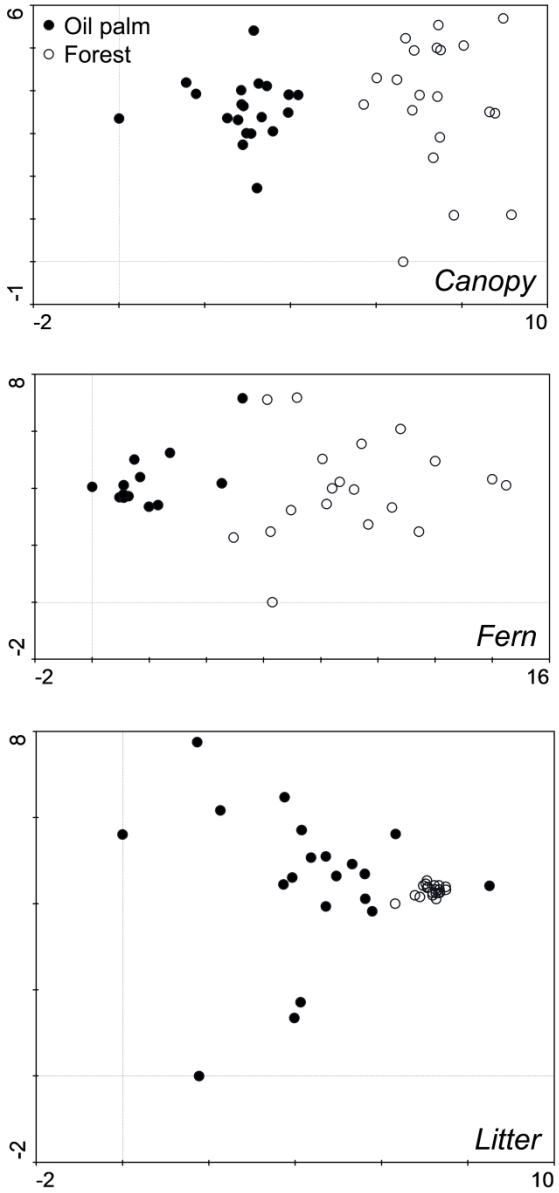
Appendix A: Figure 1. Ordinations (Detrended Correspondence Analyses) showing the change in species composition in the three different microhabitats resulting from conversion of forest into oil palm plantation.



Appendix A: Table 1 The number of occurrences of each species across the three microhabitats in forest and oil palm plantation.

Subfamily	Genus	Species (*non-native)	Morphospecies	Occurrences in Forest (max=20)			Occurrences in Oil Palm (max=20)		
				Canopy	Fern	Litter	Canopy	Fern	Litter
Aenictinae	*Aenictus*	*peguensis*	T220	0	0	1	0	0	0
Amblyoponinae	*Prionopelta*	*kraepelini*	DD	0	0	2	0	3	4
Cerapachynae	*Cerapachys*	*dohertyi*	T232	0	0	1	0	0	0
Cerapachynae	*Cerapachys*		W1	0	0	2	0	0	0
Dolichoderinae	*Dolichoderus*	*coniger*	T161	1	0	0	0	0	0
Dolichoderinae	*Dolichoderus*	*indrapurensis*	U1	3	0	0	0	0	0
Dolichoderinae	*Dolichoderus*	*maschwitzi*	T268	0	0	1	0	0	0
Dolichoderinae	*Dolichoderus*	*pastorulus*	T36	1	0	0	0	0	0
Dolichoderinae	*Dolichoderus*	*thoracicus**	B18	2	0	0	0	0	0
Dolichoderinae	*Dolichoderus*	near *cuspidatus*	W	0	2	0	0	0	0
Dolichoderinae	*Dolichoderus*		B100	0	0	0	2	0	0
Dolichoderinae	*Dolichoderus*		DH3	2	0	0	0	0	0
Dolichoderinae	*Dolichoderus*		RF43	1	0	0	0	0	0
Dolichoderinae	*Dolichoderus*		Y	0	1	0	0	0	0
Dolichoderinae	*Ochetellus*		T191	0	0	0	0	0	1
Dolichoderinae	*Tapinoma*		B1	0	0	1	3	2	1
Dolichoderinae	*Tapinoma*		T123	0	0	0	4	0	4
Dolichoderinae	*Tapinoma*		T139	0	0	0	1	0	2
Dolichoderinae	*Tapinoma*		T162	2	0	0	0	0	0
Dolichoderinae	*Tapinoma*		T89	0	0	0	6	1	2
Dolichoderinae	*Technomyrmex*		B23	2	0	0	0	0	0
Dolichoderinae	*Technomyrmex*		J2	0	0	2	0	0	0
Dolichoderinae	*Technomyrmex*		T104	4	0	0	0	0	0
Dolichoderinae	*Technomyrmex*		T116	4	2	1	0	0	0
Dolichoderinae	*Technomyrmex*		T121	2	0	1	3	0	0

Dolichoderinae	*Technomyrmex*		T134	1	0	0	1	0	0
Dolichoderinae	*Technomyrmex*		T240	0	0	1	0	0	0
Ectatomminae	*Gnamtogenys*	*binghamii*	T242	0	0	3	0	0	0
Ectatomminae	*Gnamtogenys*	*costata*	T133	0	0	0	1	0	0
Ectatomminae	*Gnamtogenys*	*menadensis*	T163	1	0	0	0	0	0
Ectatomminae	*Gnamtogenys*	near *menadensis*	N2	1	0	0	1	0	0
Ectatomminae	*Gnamtogenys*	near *treta*	B132	3	2	0	0	0	0
Ectatomminae	*Gnamtogenys*		B109	0	0	4	0	0	0
Ectatomminae	*Gnamtogenys*		T247	0	0	2	0	0	0
Formicinae	*Acropyga*		T259	0	0	3	0	0	0
Formicinae	*Anoplolepis*	*gracilipes**	B98	0	0	0	3	1	2
Formicinae	*Camponotus*	*gigas*	QQ	1	0	0	0	0	0
Formicinae	*Camponotus*	*reticulatus*	YY	0	0	0	3	0	1
Formicinae	*Camponotus*	near *misturus*	T156	1	0	0	0	0	0
Formicinae	*Camponotus*		C	6	0	0	0	0	0
Formicinae	*Camponotus*		H1	1	0	0	4	0	0
Formicinae	*Camponotus*		HH	4	0	0	0	0	0
Formicinae	*Camponotus*		RF66	1	0	0	0	0	0
Formicinae	*Camponotus*		T1	1	1	1	2	0	0
Formicinae	*Camponotus*		T138	0	0	0	1	0	0
Formicinae	*Camponotus*		T141	0	0	0	1	0	0
Formicinae	*Camponotus*		T148	1	0	0	0	0	0
Formicinae	*Camponotus*		T154	1	0	0	0	0	0
Formicinae	*Camponotus*		T235	0	0	2	0	0	0
Formicinae	*Camponotus*		U2	2	0	1	0	0	0
Formicinae	*Camponotus*		XZ5	0	0	1	0	0	0
Formicinae	*Euprenolepis*	*variegata*	T228	0	0	1	0	0	0
Formicinae	*Myrmoteras*	*donisthorpei*	T213	0	0	4	0	0	0
Formicinae	*Myrmoteras*	near *donisthorpei*	R1	0	0	7	0	0	0
Formicinae	*Oecophylla*	*smaragdina*	XX	0	0	0	7	0	0

Formicinae	*Paratrechina*	*longicornis**	D1	0	0	0	0	2	0
Formicinae	*Paratrechina*		N	0	0	16	0	0	0
Formicinae	*Paratrechina*		RF39	0	1	6	0	0	0
Formicinae	*Paratrechina*		RF44	2	3	1	0	0	0
Formicinae	*Paratrechina*		T108	2	1	0	1	0	0
Formicinae	*Paratrechina*		T125	0	0	0	1	0	0
Formicinae	*Paratrechina*		T128	3	0	0	2	0	0
Formicinae	*Paratrechina*		T129	0	0	0	1	0	0
Formicinae	*Paratrechina*		T130	0	0	0	2	0	0
Formicinae	*Paratrechina*		T140	1	0	0	1	0	0
Formicinae	*Paratrechina*		T147	3	0	2	0	0	0
Formicinae	*Paratrechina*		T31	4	2	2	0	0	1
Formicinae	*Plagiolepis*		B124	0	0	0	2	0	0
Formicinae	*Plagiolepis*		T152	3	0	0	0	0	0
Formicinae	*Plagiolepis*		Y1	2	0	0	5	6	1
Formicinae	*Polyrhachis*	*abdominalis*	RF64	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*armata*	D2	1	0	1	0	0	0
Formicinae	*Polyrhachis*	*bellicosa*	RF39a	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*bicolor*	B120	1	0	0	1	0	0
Formicinae	*Polyrhachis*	*boltoni*	T165	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*danum*	RF6	5	1	2	0	0	0
Formicinae	*Polyrhachis*	*furcata*	T149	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*hector*	T42	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*lepida*	B101	1	0	0	1	0	0
Formicinae	*Polyrhachis*	*muelleri*	AA	2	0	0	0	0	0
Formicinae	*Polyrhachis*	*proxima*	T120	0	1	0	0	0	0
Formicinae	*Polyrhachis*	*striata*	T168	1	0	0	0	0	0
Formicinae	*Polyrhachis*	*wheeleri*	RF38	4	0	0	0	0	0
Formicinae	*Polyrhachis*	*ypsilon*	I	1	0	1	0	0	0
Formicinae	*Polyrhachis*	near *armata*	RF40	9	0	1	0	0	0

Formicinae	*Polyrhachis*	near *bellicosa*	T172	1	0	1	0	0	0
Formicinae	*Polyrhachis*	near *inermis*	RF32	4	0	1	0	0	0
Formicinae	*Polyrhachis*	near *mitrata*	F	3	1	0	0	0	0
Formicinae	*Polyrhachis*	near *muelleri*	B55	1	0	0	0	0	0
Formicinae	*Polyrhachis*		B103	2	0	0	0	0	0
Formicinae	*Polyrhachis*		B105	2	0	0	0	0	0
Formicinae	*Polyrhachis*		B107	9	0	0	0	0	0
Formicinae	*Polyrhachis*		B133	1	0	0	0	0	0
Formicinae	*Polyrhachis*		B21	2	0	2	0	0	0
Formicinae	*Polyrhachis*		RF7	5	0	0	0	0	0
Formicinae	*Polyrhachis*		T145	1	0	0	0	0	0
Formicinae	*Polyrhachis*		T157	2	0	0	0	0	0
Formicinae	*Polyrhachis*		T170	1	0	0	0	0	0
Formicinae	*Polyrhachis*		T271	0	0	1	0	0	0
Formicinae	*Polyrhachis*		T37	1	0	0	0	0	0
Formicinae	*Polyrhachis*		T38	3	2	0	0	0	0
Formicinae	*Polyrhachis*		VV	0	0	0	1	0	0
Formicinae	*Prenolepis*		B8	1	0	0	0	0	0
Formicinae	*Prenolepis*		T264	0	0	1	0	0	0
Formicinae	*Pseudolasius*		RF28	1	0	8	0	0	0
Formicinae	*Pseudolasius*		T22	1	0	2	0	1	0
Myrmicinae	*Acanthomyrmex*	*ferox*	DD2	0	0	6	0	0	0
Myrmicinae	*Aphaenogaster*		T209	0	0	2	0	0	0
Myrmicinae	*Calyptomyrmex*		T280	0	0	1	0	0	0
Myrmicinae	*Cardiocondyla*	*wroughtonii**	T124	0	0	1	4	0	0
Myrmicinae	*Cardiocondyla*		B13	0	0	0	0	0	1
Myrmicinae	*Cardiocondyla*		T142a	0	0	0	1	0	0
Myrmicinae	*Carebara*		DH2	0	0	1	0	0	0
Myrmicinae	*Carebara*		DH7	1	0	3	0	1	0
Myrmicinae	*Carebara*		T218	0	0	4	0	0	0

Myrmicinae	*Carebara*		T227	0	0	4	0	0	0
Myrmicinae	*Carebara*		T230	0	0	4	0	0	0
Myrmicinae	*Carebara*		T233	1	1	12	0	0	0
Myrmicinae	*Carebara*		T273	0	0	1	0	0	0
Myrmicinae	*Carebara*		T278	0	0	1	0	0	0
Myrmicinae	*Carebara*		T32	0	2	2	0	4	0
Myrmicinae	*Carebara*		T41	1	0	1	0	0	0
Myrmicinae	*Carebara*		T97	2	1	0	0	0	0
Myrmicinae	*Cataulacus*	*horridus*	XY3	0	0	1	0	0	0
Myrmicinae	*Cataulacus*	*praetextus*	T288	1	0	0	0	0	0
Myrmicinae	*Crematogaster*	*inflata*	RF62	1	0	0	0	0	0
Myrmicinae	*Crematogaster*	near *daisyi*	B71	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		B108	1	1	10	0	0	0
Myrmicinae	*Crematogaster*		B112	0	0	0	1	0	0
Myrmicinae	*Crematogaster*		B121	0	0	0	1	0	4
Myrmicinae	*Crematogaster*		DD1	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		RF37	5	0	0	0	0	0
Myrmicinae	*Crematogaster*		T109	4	2	1	0	0	0
Myrmicinae	*Crematogaster*		T110	2	3	0	0	0	0
Myrmicinae	*Crematogaster*		T122	0	0	0	1	0	0
Myrmicinae	*Crematogaster*		T164	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		T166	2	0	0	0	0	0
Myrmicinae	*Crematogaster*		T167	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		T173	2	0	0	0	0	0
Myrmicinae	*Crematogaster*		T174	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		T176	1	0	0	0	0	0
Myrmicinae	*Crematogaster*		T203	0	0	2	0	0	0
Myrmicinae	*Crematogaster*		T7	0	0	2	0	0	0
Myrmicinae	*Crematogaster*		T95	1	0	3	2	2	6
Myrmicinae	*Crematogaster*		Theta 3	1	0	0	0	0	0

Myrmicinae	*Dacetinops*	*cirrosus*	T263	0	0	1	0	0	0
Myrmicinae	*Dacetinops*	*concinnus*	RF31	0	0	2	1	0	0
Myrmicinae	*Dilobocondyla*		T151	1	0	0	0	0	0
Myrmicinae	*Eurhopalothrix*	*dubia*	RF11	0	0	2	0	0	0
Myrmicinae	*Eurhopalothrix*	*omnivaga*	XY10	0	0	10	0	0	0
Myrmicinae	*Lophomyrmex*	*bedoti*	T219	0	0	5	0	0	0
Myrmicinae	*Lophomyrmex*	*longicornis*	T155	1	0	1	0	0	0
Myrmicinae	*Lophomyrmex*	near *bedoti*	B14	1	0	10	5	1	8
Myrmicinae	*Lordomyrma*	*reticulata*	DH6	0	0	4	0	0	0
Myrmicinae	*Lordomyrma*	near *reticulata*	T182	0	0	0	0	0	1
Myrmicinae	*Lordomyrma*		RF24	0	0	6	0	0	1
Myrmicinae	*Lordomyrma*		T274	0	0	2	0	0	0
Myrmicinae	*Lordomyrma*		T283	0	0	1	0	0	0
Myrmicinae	*Mayriella*		T251	0	0	1	0	0	0
Myrmicinae	*Mayriella*		Z1	0	0	3	1	0	5
Myrmicinae	*Monomorium*	*australicum*	T262m	0	0	4	0	0	0
Myrmicinae	*Monomorium*	*floricola**	J	0	0	1	9	6	6
Myrmicinae	*Monomorium*		B44	0	0	0	1	2	0
Myrmicinae	*Monomorium*		C1	0	0	0	0	1	0
Myrmicinae	*Monomorium*		RF22	0	0	4	0	3	0
Myrmicinae	*Monomorium*		T136	0	0	1	1	0	0
Myrmicinae	*Monomorium*		T177	1	0	0	0	0	1
Myrmicinae	*Monomorium*		T178	0	0	1	0	0	1
Myrmicinae	*Monomorium*		T179	0	0	0	0	0	1
Myrmicinae	*Monomorium*		T90a	1	0	0	1	1	0
Myrmicinae	*Monomorium*		T98	2	3	4	1	0	1
Myrmicinae	*Myopias*		T284	0	0	1	0	0	0
Myrmicinae	*Myrmecina*		B74	0	0	0	0	0	3
Myrmicinae	*Myrmecina*		S	0	0	0	0	0	1
Myrmicinae	*Myrmecina*		T249	0	0	2	0	0	0

Myrmicinae	*Myrmecina*		T252	0	0	1	0	0	0
Myrmicinae	*Myrmecina*		T285	0	0	1	0	0	0
Myrmicinae	*Myrmicaria*	*melanogaster*	RF8	2	0	0	0	0	0
Myrmicinae	*Myrmicaria*		L2	1	0	0	0	0	0
Myrmicinae	*Myrmicaria*		RF1	1	0	1	0	0	0
Myrmicinae	*Pheidole*	*angullicollis*	T56	0	0	3	0	0	0
Myrmicinae	*Pheidole*	*annexus*	T5	0	0	1	1	0	0
Myrmicinae	*Pheidole*	*aristotelis*	RF49	0	0	2	0	0	1
Myrmicinae	*Pheidole*	*cariniceps*	T206	0	0	5	0	0	0
Myrmicinae	*Pheidole*	*deltea*	T223p	0	0	1	0	0	0
Myrmicinae	*Pheidole*	*gombakensis*	T261	0	0	2	0	0	0
Myrmicinae	*Pheidole*	*quadrensis*	T169	1	0	1	0	0	0
Myrmicinae	*Pheidole*	*quadricuspis*	B67	0	0	1	0	0	0
Myrmicinae	*Pheidole*	*tjibodana*	T197	0	0	6	0	0	0
Myrmicinae	*Pheidole*	near *poringensis*	T75	0	0	8	0	0	2
Myrmicinae	*Pheidole*	near *sauberi*	H	0	0	2	0	0	0
Myrmicinae	*Pheidole*		B30	0	0	1	0	0	0
Myrmicinae	*Pheidole*		B42	0	0	17	0	0	1
Myrmicinae	*Pheidole*		B6	5	0	1	0	0	0
Myrmicinae	*Pheidole*		B63	0	0	8	0	0	0
Myrmicinae	*Pheidole*		B85	0	0	1	0	0	0
Myrmicinae	*Pheidole*		B99	0	0	0	8	1	2
Myrmicinae	*Pheidole*		RF19	1	3	4	0	0	0
Myrmicinae	*Pheidole*		RF50	4	0	1	0	0	0
Myrmicinae	*Pheidole*		T107	1	0	0	0	0	0
Myrmicinae	*Pheidole*		T160	3	0	0	0	0	0
Myrmicinae	*Pheidole*		T207	0	0	3	0	0	0
Myrmicinae	*Pheidole*		T224	0	0	1	0	0	0
Myrmicinae	*Pheidole*		T226	0	0	1	0	0	0
Myrmicinae	*Pheidole*		T231	0	0	9	0	0	0

Myrmicinae	*Pheidole*		T267	0	0	1	0	0	0
Myrmicinae	*Pheidole*		T275	0	0	2	0	0	0
Myrmicinae	*Pheidole*		T281	0	0	1	0	0	0
Myrmicinae	*Pheidole*		T64	0	0	4	0	0	0
Myrmicinae	*Pheidole*		T76	0	0	2	0	0	0
Myrmicinae	*Pheidole*		T77	0	0	9	0	0	0
Myrmicinae	*Pheidole*		T80	0	0	0	0	2	0
Myrmicinae	*Pheidole*		T83	0	0	1	1	1	0
Myrmicinae	*Pheidole*		XY4	0	0	4	0	0	0
Myrmicinae	*Pheidole*		XZ7	0	0	6	0	0	1
Myrmicinae	*Pheidologeton*	*pygmaeus*	T142	4	0	2	1	0	0
Myrmicinae	*Pheidologeton*		T214	0	0	3	0	0	0
Myrmicinae	*Pheidologeton*		T85	0	0	1	0	1	2
Myrmicinae	*Pristomyrmex*	*brevispinosus*	T117	0	1	1	0	0	0
Myrmicinae	*Pristomyrmex*	*rigidus*	B3	0	0	3	0	0	0
Myrmicinae	*Proatta*	*butteli*	Q2	0	0	3	0	0	0
Myrmicinae	*Pyramica*	*mitis*	T146	1	0	1	0	0	0
Myrmicinae	*Pyramica*	near *mitis*	XZ4	0	0	3	0	0	0
Myrmicinae	*Pyramica*		T184	0	0	0	0	0	1
Myrmicinae	*Pyramica*		T258	0	0	1	0	0	0
Myrmicinae	*Pyramica*		T260	0	0	2	0	0	0
Myrmicinae	*Pyramica*		T270	0	0	1	0	0	0
Myrmicinae	*Pyramica*		T99	0	1	0	0	0	0
Myrmicinae	*Recurvidris*	*browni*	T212	0	0	3	0	0	0
Myrmicinae	*Recurvidris*	near *browni*	B48	0	0	1	0	0	0
Myrmicinae	*Solenopsis*		B43	0	1	7	2	3	5
Myrmicinae	*Strumigenys*	*aechme*	T215	0	0	2	0	0	0
Myrmicinae	*Strumigenys*	*ignota*	T238	0	0	2	0	0	0
Myrmicinae	*Strumigenys*	*kraepelini*	T18	0	0	6	0	0	0
Myrmicinae	*Strumigenys*	*lebratyx*	T222	0	0	2	0	0	0

Myrmicinae	*Strumigenys*	*rotogenys*	B114	0	0	4	0	0	1
Myrmicinae	*Strumigenys*	near *doryiae*	T190	0	0	2	0	0	1
Myrmicinae	*Strumigenys*	near *koningsbergeri, strygax*	T243	0	0	1	0	0	0
Myrmicinae	*Strumigenys*		Q	0	0	1	0	0	0
Myrmicinae	*Strumigenys*		RF17	0	0	16	0	0	0
Myrmicinae	*Strumigenys*		RF34	0	0	7	0	0	0
Myrmicinae	*Strumigenys*		T143	2	0	0	0	0	0
Myrmicinae	*Strumigenys*		T159	1	0	1	0	0	0
Myrmicinae	*Strumigenys*		T17	0	0	15	0	0	1
Myrmicinae	*Strumigenys*		T185	0	0	3	0	0	2
Myrmicinae	*Strumigenys*		T199	0	0	2	0	0	0
Myrmicinae	*Strumigenys*		T221	0	0	1	0	0	0
Myrmicinae	*Strumigenys*		T236	0	0	1	0	0	0
Myrmicinae	*Strumigenys*		T26	1	0	14	0	0	2
Myrmicinae	*Strumigenys*		T63	0	0	2	0	0	0
Myrmicinae	*Strumigenys*		T78	0	0	4	2	4	0
Myrmicinae	*Strumigenys*		T86	0	0	0	0	1	0
Myrmicinae	*Strumigenys*		T93	0	0	0	0	1	0
Myrmicinae	*Tetramorium*	*bicarinatum**	T186	0	0	0	0	0	2
Myrmicinae	*Tetramorium*	*eleates*	B93	0	0	0	1	1	3
Myrmicinae	*Tetramorium*	*noratum*	A3	1	0	4	0	0	0
Myrmicinae	*Tetramorium*	*pacificum**	T94	0	0	0	1	1	0
Myrmicinae	*Tetramorium*	*simillimum**	B115	0	0	0	3	0	3
Myrmicinae	*Tetramorium*	*tonganum**	T79	0	0	0	2	2	0
Myrmicinae	*Tetramorium*	near *carinatum, aspersum*	T87	0	0	0	0	1	0
Myrmicinae	*Tetramorium*		B45	0	0	11	0	0	0
Myrmicinae	*Tetramorium*		T111	0	1	0	0	0	0
Myrmicinae	*Tetramorium*		T118	2	1	7	0	0	0
Myrmicinae	*Tetramorium*		T137	1	0	0	1	0	0
Myrmicinae	*Tetramorium*		T181	0	0	2	0	0	2

Myrmicinae	*Tetramorium*		T189	0	0	0	0	0	2
Myrmicinae	*Tetramorium*		T202	0	0	1	0	0	0
Myrmicinae	*Tetramorium*		T234	0	0	3	0	0	0
Myrmicinae	*Tetramorium*		T237	0	0	3	0	0	0
Myrmicinae	*Tetramorium*		T256	0	0	3	0	0	0
Myrmicinae	*Tetramorium*		T4	0	0	10	0	0	1
Myrmicinae	*Tetramorium*		T58	1	0	1	0	0	0
Myrmicinae	*Tetramorium*		T60	0	0	5	0	0	0
Myrmicinae	*Tetramorium*		T73	0	0	5	0	0	0
Myrmicinae	*Tetramorium*		T81	0	0	2	1	4	0
Myrmicinae	*Vollenhovia*		RF23	0	0	2	0	0	0
Myrmicinae	*Vollenhovia*		T113	1	1	0	0	0	0
Myrmicinae	*Vollenhovia*		T131	0	0	0	1	0	0
Myrmicinae	*Vollenhovia*		T153	1	0	0	0	0	1
Myrmicinae	*Vollenhovia*		T253	0	0	2	0	0	0
Myrmicinae	*Vollenhovia*		T279	0	0	1	0	0	0
Myrmicinae	*Vollenhovia*		Theta 4	2	0	0	0	0	0
Myrmicinae	*Vollenhovia*		U	0	0	3	0	0	0
Myrmicinae	*Vollenhovia*		WW	0	0	1	2	2	1
Myrmicinae	*Vombisidris*		T158	1	0	0	0	0	0
Ponerinae	*Anochetus*		B131	0	0	0	2	0	0
Ponerinae	*Anochetus*		B87	0	0	1	0	0	0
Ponerinae	*Anochetus*		JT1	0	0	5	0	0	0
Ponerinae	*Anochetus*		T246	0	0	1	0	0	0
Ponerinae	*Cryptopone*		T211	0	0	6	0	1	0
Ponerinae	*Cryptopone*		T255	0	0	1	0	0	0
Ponerinae	*Diacamma*	*intricatum*	XY6	0	0	2	0	0	0
Ponerinae	*Diacamma*	*rugosum*	B78	0	0	0	2	2	0
Ponerinae	*Diacamma*		RF36	4	8	0	0	0	1
Ponerinae	*Diacamma*		T114	0	2	0	0	0	0

Ponerinae	*Emeryopone*	*buttelreepeni*	T287	0	0	1	0	0	0
Ponerinae	*Hypoponera*		B111	0	0	5	0	0	0
Ponerinae	*Hypoponera*		B49	0	0	1	0	0	0
Ponerinae	*Hypoponera*		JJ	0	1	1	0	0	0
Ponerinae	*Hypoponera*		RF14	0	0	5	0	0	0
Ponerinae	*Hypoponera*		RF16	0	0	4	0	0	0
Ponerinae	*Hypoponera*		T112	0	2	2	0	0	0
Ponerinae	*Hypoponera*		T183	0	0	0	0	0	1
Ponerinae	*Hypoponera*		T192	0	1	12	0	0	1
Ponerinae	*Hypoponera*		T193	0	0	3	0	0	1
Ponerinae	*Hypoponera*		T217	0	0	1	0	0	0
Ponerinae	*Hypoponera*		T229	0	0	2	0	0	0
Ponerinae	*Hypoponera*		T245	0	0	2	0	0	0
Ponerinae	*Hypoponera*		T250	0	0	3	0	0	0
Ponerinae	*Hypoponera*		T257	0	0	4	0	0	0
Ponerinae	*Hypoponera*		T262h	0	0	1	0	0	0
Ponerinae	*Hypoponera*		T272	0	0	1	0	0	0
Ponerinae	*Hypoponera*		T84	0	0	0	0	1	0
Ponerinae	*Hypoponera*		XY8	0	0	2	0	0	0
Ponerinae	*Hypoponera*		XY9	0	0	7	0	0	0
Ponerinae	*Leptogenys*	*santschii*	T150	1	0	0	0	0	0
Ponerinae	*Leptogenys*	near *mutabilis*	T180	0	0	0	0	0	2
Ponerinae	*Leptogenys*		RF69	0	0	1	0	0	0
Ponerinae	*Leptogenys*		T115	0	1	0	0	0	0
Ponerinae	*Leptogenys*		T187	0	0	0	0	0	1
Ponerinae	*Leptogenys*		T188	0	0	0	0	0	1
Ponerinae	*Leptogenys*		T204	0	0	1	0	0	0
Ponerinae	*Leptogenys*		T208	0	0	2	0	0	0
Ponerinae	*Leptogenys*		T241	0	0	1	0	0	0
Ponerinae	*Leptogenys*		T248	0	0	1	0	0	0

Ponerinae	*Leptogenys*		T282	0	0	1	0	0	0
Ponerinae	*Leptogenys*		T33	1	0	0	0	0	0
Ponerinae	*Odontomachus*	*rixosus*	L	0	0	7	0	0	0
Ponerinae	*Odontomachus*		T195	0	0	2	0	0	0
Ponerinae	*Odontoponera*	*transversa*	T201	0	0	3	0	0	0
Ponerinae	*Odontoponera*		BB	0	0	3	0	0	1
Ponerinae	*Pachycondyla*	*insularis*	T244	0	0	2	0	0	0
Ponerinae	*Pachycondyla*	*leeuwenhoeki*	T277	0	0	1	0	0	0
Ponerinae	*Pachycondyla*	*pilidorsalis*	B40	0	0	12	0	1	0
Ponerinae	*Pachycondyla*	*rubra*	L1	0	0	5	0	0	1
Ponerinae	*Pachycondyla*	*tridentata*	SS	0	1	0	0	0	0
Ponerinae	*Pachycondyla*		T47	0	0	1	0	0	0
Ponerinae	*Pachycondyla*		XZ2	0	0	1	0	0	0
Ponerinae	*Platythyrea*	*parallela*	Theta 5	1	0	0	0	0	0
Ponerinae	*Platythyrea*		T126	0	0	0	1	0	0
Ponerinae	*Ponera*		DH1	0	0	6	0	0	0
Ponerinae	*Ponera*		RF21	0	0	12	0	0	1
Ponerinae	*Ponera*		T105	0	2	0	0	0	0
Ponerinae	*Ponera*		T119	0	1	0	0	0	0
Ponerinae	*Ponera*		T198	0	0	5	0	0	0
Ponerinae	*Ponera*		T286	0	0	1	0	0	0
Ponerinae	*Ponera*		T50	0	0	3	0	0	0
Ponerinae	*Ponera*		T51	0	0	11	0	0	0
Proceratiinae	*Discothyrea*		B64	0	0	1	0	0	0
Proceratiinae	*Discothyrea*		T196	0	0	5	0	0	0
Proceratiinae	*Discothyrea*		T91	0	0	0	0	1	0
Proceratiinae	*Probolomyrmex*		RF15	0	0	1	0	0	0
Proceratiinae	*Probolomyrmex*		T210	0	0	1	0	0	0
Proceratiinae	*Probolomyrmex*		T216	0	0	1	0	0	0
Proceratiinae	*Probolomyrmex*		T265	0	0	1	0	0	0

	Proceratiinae	*Probolomyrmex*		T276	0	0	1	0	0	0
	Proceratiinae	*Proceratium*		G1	0	0	0	0	0	1
	Pseudomyrmecinae	*Tetraponera*	*attenuata*	B19	1	0	0	0	0	0
	Pseudomyrmecinae	*Tetraponera*	*inversinodis*	T171	1	0	0	0	0	0
	Pseudomyrmecinae	*Tetraponera*		DH7t	2	0	0	0	0	0

1
2

Appendix A: Table 2 Numbers of ant genera and ant species found in previous surveys of oil palm plantations and forests. In some cases forest sites were not surveyed (-). In the study of Bruhl et al (2009) the oil palm species richness has been rarefied to give a comparable sampling effort to that in the forest (italics). Genus-level information and species/genus overlap figures are not available from this rarefaction. See also Fig. 5.

Study	Location	Collection technique	Forest		Oil palm		Overlap	
			Genera	Species	Genera	Species	Genera	Species
Taylor 1977	Nigeria	Visual identification *in situ*	8	24	7	19	5	10
Dejean et al. 1997	Cameroon	Inspection of cut fronds	-	-	6	6	-	-
Pfeiffer et al. 2008	Peninsular Malaysia	Inspection of cut fronds	-	-	20	39	-	-
Pfeiffer et al. 2008	Sabah, Malaysia	Inspection of cut fronds	-	-	21	36	-	-
Brühl et al. 2009	Sabah, Malaysia	Tuna baiting and hand collecting		26		*5.2*		
Room 1975	Papua New Guinea	Hand collecting - 1m^2 quadrats	25	50	15	29	10	10
This study	Sabah, Malaysia	Litter sampling - 1m^2 quadrats	52	216	28	56	23	29
This study	Sabah, Malaysia	Canopy fogging	28	120	25	58	17	18
This study	Sabah, Malaysia	Extraction from bird's nest ferns	20	36	21	35	2	11

Appendix A: Table 3 Microclimate in the three microhabitats in forest and oil palm plantation. Means are presented with standard errors in brackets.

	Forest			Oil palm		
	Canopy	Fern	Litter	Canopy	Fern	Litter
Temperature (°C)	26.6 (0.3)	27.4 (0.7)	26.6 (0.3)	30.7 (0.6)	31.1 (0.6)	30.9 (0.6)
Humidity (%)	83.3 (1.5)	76.6 (2.6)	84.9 (1.0)	68.9 (2.4)	67.9 (4.2)	72.1 (2.5)
Light (LUX)	90.5 (10.5)	59.3 (110.1)	43.5 (6.7)	808.5 (90.2)	186.4 (9.4)	733.4 (98.3)