

Table S1. Mixed-model ANOVA and Tukey’s HSD results for the diversity of co-occurring ant species in plots. Sites were locations within 5 different forest stands within the Apalachicola National Forest where we placed one replicate set of all of the (9) possible treatment plots (Table 1). “Ground” and “ant” are the different treatments we assigned for disturbance and ant additions.

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	35	14.08487450	0.40242499	3.67	<.0001
Error	99	10.84196463	0.10951479		
Corrected Total	134	24.92683913			

Source	DF	Type III SS	Mean Square	F Value	Pr > F
year	1	4.84407768	4.84407768	44.23	<.0001
site	1	0.00940012	0.00940012	0.09	0.7702
year*site	1	0.57967420	0.57967420	5.29	0.0235
ground	2	3.29115236	1.64557618	15.03	<.0001
year*ground	2	0.03239988	0.01619994	0.15	0.8627
site*ground	2	0.59478961	0.29739480	2.72	0.0711
year*site*ground	2	0.24448127	0.12224063	1.12	0.3316
ant	2	1.73367532	0.86683766	7.92	0.0006
year*ant	2	0.40854646	0.20427323	1.87	0.1603
site*ant	2	0.14824799	0.07412400	0.68	0.5106
year*site*ant	2	0.10795925	0.05397962	0.49	0.6123
ground*ant	4	0.56450669	0.14112667	1.29	0.2797
year*ground*ant	4	0.28563268	0.07140817	0.65	0.6268
site*ground*ant	4	1.15451371	0.28862843	2.64	0.0385
year*site*ground*ant	4	0.08581728	0.02145432	0.20	0.9400

Tukey's Studentized Range (HSD) Tests for Number of species. Means with the same letter are not significantly different.

Tukey Grouping	Mean	N	ground
A	5.26144	45	2 (mow)
A	5.11912	45	1 (control)
B	4.88285	45	3 (plow)

Tukey Grouping	Mean	N	ant
A	5.18198	45	2 (soil)
A	5.15301	45	1 (nothing)
B	4.92841	45	3 (fire ants)

Tukey Grouping	Mean	N	year
A	5.39416	45	2004
B	4.93909	45	2005
B	4.93016	45	2006

Table S2. Mixed-model ANOVA and Tukey’s HSD results for the abundance of co-occurring ant species in plots. Sites were locations within 5 different forest stands within the Apalachicola National Forest where we placed one replicate set of all of the (9) possible treatment plots (Table 1). “Ground” and “ant” are the different treatments we assigned for disturbance and ant additions.

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	35	9258.70908	264.53455	6.87	<.0001
Error	99	3810.69127	38.49183		
Corrected Total	134	13069.40035			

Source	DF	Type III SS	Mean Square	F Value	Pr > F
year	1	2673.685887	2673.685887	69.46	<.0001
site	1	70.690334	70.690334	1.84	0.1784
year*site	1	4.672683	4.672683	0.12	0.7283
ground	2	1955.671821	977.835911	25.40	<.0001
year*ground	2	361.116111	180.558055	4.69	0.0113
site*ground	2	126.519530	63.259765	1.64	0.1985
year*site*ground	2	91.802973	45.901487	1.19	0.3078
ant	2	2731.377983	1365.688991	35.48	<.0001
year*ant	2	81.899721	40.949860	1.06	0.3490
site*ant	2	165.493623	82.746812	2.15	0.1219
year*site*ant	2	8.999121	4.499561	0.12	0.8898
ground*ant	4	200.907364	50.226841	1.30	0.2735
year*ground*ant	4	239.046526	59.761631	1.55	0.1930
site*ground*ant	4	220.167483	55.041871	1.43	0.2297
year*site*ground*ant	4	326.657920	81.664480	2.12	0.0837

Tukey's Studentized Range (HSD) Test for Abundance of non-fire ant species. Means with the same letter are not significantly different.

Tukey Grouping	Mean	N	ground
A	36.328	45	2 (mow)
A	35.070	45	1 (control)
B	27.699	45	3 (plow)
Tukey Grouping	Mean	N	ant
A	37.914	45	2 (soil)
B	34.123	45	1 (nothing)
C	27.059	45	3 (fire ants)
Tukey Grouping	Mean	N	year
A	39.509	45	2004
B	30.981	45	2005
B	28.608	45	2006

Table S3. Ant species listed alphabetically by subfamily and their total abundance in pitfall traps over 3 years. These data were generated from annual summer pitfall trapping of 36 pitfall traps in 45 40 × 40 m plots. The 4,860 samples contained 187,179 ants of 71 species. Exotic species are in boldface.

<u>Dolichoderinae</u>	<u>Abundance</u>
<i>Dolichoderus mariae</i> Forel	8,335
<i>Dolichoderus pustulatus</i> Mayr	1
<i>Dorymyrmex bossutus</i> (Trager)	1,490
<i>Dorymyrmex bureni</i> (Trager)	1,032
<i>Forelius pruinus</i> (Roger)	4,950
 <u>Ecitoninae</u>	
<i>Neivamyrmex carolinensis</i> (Emery)	11
<i>Neivamyrmex opacithorax</i> (Emery)	1,001
<i>Neivamyrmex texanus</i> Watkins	1,504
 <u>Formicinae</u>	
<i>Brachymyrmex depilis</i> Emery	838
<i>Brachymyrmex obscurior</i> Forel	23
<i>Camponotus castaneus</i> (Latreille)	312
<i>Camponotus floridanus</i> (Buckley)	4,964
<i>Camponotus socius</i> Roger	1,381
<i>Formica archboldi</i> M.R. Smith	730
<i>Formica dolosa</i> Trager, MacGown & Trager	3,145
<i>Formica pallidefulva</i> Latreille	2,188
<i>Lasius neoniger</i> Emery	5
<i>Paratrechina arenivaga</i> (Wheeler)	3,768
<i>Paratrechina concinna</i> Trager	365
<i>Paratrechina faisonensis</i> (Forel)	251
<i>Paratrechina parvula</i> (Mayr)	10,876
<i>Paratrechina wojciki</i> Trager	437
<i>Polyergus lucidus</i> Mayr	193
 <u>Myrmicinae</u>	
<i>Aphaenogaster ashmeadi</i> (Emery)	20
<i>Aphaenogaster flemingi</i> M.R. Smith	24
<i>Aphaenogaster floridana</i> M.R. Smith	360
<i>Aphaenogaster treatae</i> Forel	3,687
<i>Aphaenogaster umphreyi</i> Deyrup & Davis	1
<i>Cardiocondyla nuda</i> (Mayr)	39
<i>Cardiocondyla wroughtonii</i> (Forel)	290
<i>Crematogaster atkinsoni</i> Wheeler	91
<i>Crematogaster cerasi</i> (Fitch)	3,668
<i>Crematogaster minutissima</i> Mayr	1,045
<i>Crematogaster missuriensis</i> Emery	41
<i>Crematogaster pilosa</i> Emery	52

Cyphomyrmex rimosus (Spinola)	2,952
<i>Monomorium viride</i> Brown	486
<i>Pheidole adrianoi</i> Naves	1,233
<i>Pheidole dentata</i> Mayr	10,965
<i>Pheidole dentigula</i> M.R. Smith	264
<i>Pheidole diversipilosa</i> Wheeler	78
<i>Pheidole floridana</i> Emery	14
<i>Pheidole metallescens</i> Emery	37
Pheidole moerens Wheeler	40
<i>Pheidole morrissi</i> Forel	40,535
Pheidole obscurithorax Naves	59
<i>Pogonomyrmex badius</i> (Latrielle)	450
<i>Pyramica apalachicolensis</i> Deyrup & Lubertazzi	7
<i>Pyramica creightoni</i> (M.R. Smith)	39
<i>Pyramica deyrupei</i> Bolton	8
<i>Pyramica dietrichi</i> (M.R. Smith)	7
Pyramica margaritae (Forel)	82
Pyramica membranifera (Emery)	8
<i>Pyramica ornata</i> (May)	1
<i>Pyramica talpa</i> (Weber)	5
<i>Solenopsis abdita</i> Thompson	22
<i>Solenopsis carolinensis</i> Forel	30,574
Solenopsis invicta Buren	28,166
<i>Solenopsis nickersoni</i> Thompson	7,132
<i>Solenopsis pergandei</i> Forel	1,003
<i>Solenopsis tennesseensis</i> M.R. Smith	32
<i>Solenopsis tonsa</i> Thompson	2
<i>Strumigenys louisianae</i> Roger	28
<i>Temnothorax palustris</i> (Deyrup & Cover)	445
<i>Temnothorax pergandei</i> (Emery)	3,263
<i>Temnothorax texanus</i> (Wheeler)	259
<i>Trachymyrmex septentrionalis</i> (McCook)	733
 <u>Ponerinae</u>	
<i>Hypoponera opaciceps</i> (May)	169
<i>Hypoponera inexorata</i> (Forel)	3
<i>Hypoponera opacior</i> (Forel)	3
<i>Odontomachus brunneus</i> (Patton)	957