

A CHECKLIST OF ANTS OF SHAW NATURE RESERVE

Ants are associated with one or more vegetation types. I describe the main vegetation structures at SNR below. Note that the structure of the first two vegetation types is strongly influenced by periodic fires, so they tend to have little or no buildup of dead vegetation residue and thus few litter-inhabiting ants. To a lesser extent, this is also true of the fire-managed savanna or woodland. Forests, on the other hand, have many species which typically inhabit leaf litter or rotting logs. The ant-vegetation associations are indicated in the species list below, with subfamilies and species in alphabetical order.

Glades (X) are dry, rocky, flowery grasslands on the upper portions of south-and west-facing slopes, dominated by little bluestem grass (*Schizachyrium scoparium*) and glade black-eyed Susan (*Rudbeckia missouriensis*). Glades have a rather poor sampling of ant species, and only a few are relatively abundant. It is a matter of concern that the exotic *Tetramorium tsushimae* is invading glades and displacing native arthropods in nearby Jefferson and St. Louis Counties.

Prairies (P) are deep-soil, mesic to wet grasslands in which big bluestem grass (*Andropogon gerardii*) is abundant. Prairies have abundant ants, and even the planted prairies at SNR have a fair representation of the common ant species found in prairie remnants. Characteristic prairie specialists are mostly lacking, save for a small introduced population of the prairie mound ant *Formica montana* (which may have died out as of 2012).

Woodlands (W) are dry-mesic to mesic wooded communities with a canopy of oaks and hickories, and a ground layer which does not tolerate deep shade. Woodlands with more widely spaced trees and prairie plants in the ground layer may be called savannas, but these and the more closed woodland are both distinguished from true forests by their poorly developed woody understory. Woodlands share some ant species with prairies and some with forests. In Missouri natural areas, a number of rare ants are typically found in oak woodlands, but these may not occur at SNR because of the severity of ecological disturbance here in the past.

Forests (F) are multilayered mesic to wet communities co-dominated by a variety of tree genera, with a diverse understory of smaller trees and shrubs, and a groundlayer of shade-tolerant, mainly spring-flowering herbs. The seeds of much of the spring flora are adapted for dispersal by ants. Leaf litter, rotting logs, and ants that inhabit them are abundant. However, most forest at SNR is second-growth forest, and has little accumulation of large rotting logs (“coarse woody debris”).

Old fields, picnic areas, lawns, trails and roadsides are human-influenced habitats (H) which have a poor representation of the ant species from the natural vegetation type of which they are the nearest analog; e.g., roadsides, lawns and old fields have some grassland species, tree-studded parks and woodland trails have some woodland or forest species. One non-native ant (*Tetramorium tsushimae*) occurs at SNR, found mostly around buildings in gravelly soil.

Habitats subject to flooding have few ants, mostly species with broad tolerance. *Pheidole bicarinata*, *Brachymyrmex depilis* and *Lasius neoniger* may be found nesting in river sandbars (and dirt heaps, as well as more stable habitats), but low areas in fields and lawns have no resident ants. *Aphaenogaster rudis*, *Lasius alienus* and *Camponotus pennsylvanicus* and *C. nearcticus* occur in floodplain forests along streams, where they nest in dead wood above ground. *Crematogaster cerasi* and *Tapinoma sessile* are found in virtually every habitat.

SUBFAMILY AND SPECIES	GLADE	PRAIRIE (old field)	WOODLAND	FOREST	HUMAN
DOLICHODERINAE					
<i>Forelius pruinus</i>	X	X			X
<i>Tapinoma sessile</i>	X	X	X	X	X
<i>Tapinoma</i> sp.		X			
ECITONINAE					
<i>Neivamyrmex nigrescens</i>	X	X	X		X
<i>Neivamyrmex opacithorax</i>		?	?		X
FORMICINAE					
<i>Brachymyrmex depilis</i>		X	X	X	X
<i>Camponotus americanus</i>			X	X	
<i>Camponotus chromaiodes</i>			X	X	X
<i>Camponotus decipiens</i>			?	?	X
<i>Camponotus nearcticus</i>			X	X	X
<i>Camponotus pennsylvanicus</i>			X	X	X
<i>Camponotus subbarbatus</i>				X	X
<i>Formica biophilica</i>		X			X
<i>Formica difficilis</i>		X			
<i>Formica dolosa</i>	X		X (dry)		
<i>Formica incerta</i>		X			X
<i>Formica montana</i>		X			
<i>Formica obscuriventris</i>		X (edge)	X		
<i>Formica pallidefulva</i>	X	X	X	X	X
<i>Formica querquetulana</i>			X		
<i>Formica rubicunda</i>			X	X	
<i>Formica subintegra</i>		X	X	X	X
<i>Formica subsericea</i>	X (edge)	X	X	X	X
<i>Lasius alienus</i>		X	X	X	X
<i>Lasius claviger</i>		X	X	X	X
<i>Lasius interjectus</i>		?			
<i>Lasius neoniger</i>		X			X
<i>Nylanderia faisonensis</i>				X	
<i>Nylanderia parvula</i>					X
<i>Nylanderia terricola</i>	X	X			X
<i>Polyergus mexicanus</i>		X	X		X
<i>Polyergus lucidus</i>		X			X
<i>Prenolepis imparis</i>		X	X	X	X
MYRMICINAE					
<i>Aphaenogaster</i> "N=19"		X			
<i>Aphaenogaster fulva</i>			X	X	X
<i>Aphaenogaster lamellidens</i>				X	
<i>Aphaenogaster rudis</i>				X	?

Aphaenogaster tennesseensis			X	X	X
Crematogaster cerasi	X	X	X	X	X
Crematogaster lineolata	X	X	X		
Crematogaster missouriensis					X
Monomorium minimum	X	X	X	X	X
Myrmecina americana				X	
Myrmica n. sp. af-sculpt		X	X		X
Myrmica americana		X			X
Myrmica emeryana		X	X		X
Myrmica pinetorum			X		
Myrmica punctiventris			X	X	
Myrmica spatulata			X	X	
Pheidole bicarinata		X			X
Pheidole pilifera	?	?			X
Pheidole tysoni	X	X			X
Protomognathus americanus			?	?	
Pyramica laevinasis			X	X	
Pyramica ohioensis			X	X	
Pyramica ornata			X	X	
Pyramica pergandei			X	X	X
Pyramica rostrata			X	X	
Pyramica talpa			X	X	
Solenopsis molesta	X	X	X		X
Solenopsis tennesseensis		X			
Solenopsis texana		X	X		X
Trachymyrmex septentrionalis	X		X		
Temnothorax ambiguus		X			X
Temnothorax curvispinosus			X	X	X
Temnothorax longispinosus				X	X
Temnothorax pergandei		X			X
Tetramorium tsushimae					X
PONEROID SUBFAMILIES					
Amblyopone pallipes			X	X	?
Hypoponera opacior					X
Ponera pennsylvanica	X	X	X	X	X
Proceratium croceum			X	X	
Proceratium pergandei			X	X	
Proceratium silaceum			X	X	