

SCAFFOLDING FOR KUDZU

Many species in the understory provide props or scaffolds enabling kudzu to enter the canopy layer. Tree saplings, particularly sweetgum and hackberry, support the kudzu vines and aid it in establishing a Kudzu curtain at the woods edge. The primary culprits, however, are the evergreen and semi-evergreen shrubs and vines common at the field/forest interface.

The evergreen habit enables a plant to exist beneath the summer shade of kudzu. These plants build up food reserves in the winter months when kudzu has died back opening the understory to a flood of sunlight.

In the shrub layer Chinese privet is ubiquitous, often forming a monoculture of small green leaves on multi-branched shrubs uniformly 2 to 4 feet high. *Eleagnus*, *Ilex*, Japanese privet and *Mahonia* are common in area where they have escaped from cultivation. Only two deciduous shrubs, multi-flora rose and blackberry, *Rubus*, are common components of the understory. *Rubus* persists only along the extreme edges of fields while multi-flowered rose can form localized dense thorn-rich patches flooded with sunlight.

Of the vines *Lonicera japonica*, honeysuckle, is found commonly in all kudzu curtains examined to date. In this area it is tardily deciduous to semi-evergreen and can actively photosynthesize throughout the winter. The vines drape loosely over the vegetation and are anchored securely by extensively twining branches. The stems provide easy purchase and support for kudzu. *Hedera*, English ivy, is found at Valley Falls, the Heliport and most extensively at Mary Wright Greenway. Its stems attach tenaciously to tree trunks offering little twining room for kudzu. Only when kudzu enters old growth stands of ivy where horizontal branches are well established does ivy offer scaffolding for kudzu. At Valley Falls the ivy is restricted to the more shaded sections of the woods in

regions where kudzu can not grow. Here and at the heliport site the two vines have little zone of overlap. Even at Mary Wright Greenway the domination of ivy occurs in the shadiest portions of the forested area. At the greenway kudzu truly dominates only at the interface of road edge and forest and where the forest has thinned.

Smilax, greenbrier, is almost a co-dominant species at the interface of sun and shade. Tardily deciduous with green stems, greenbrier is a constant companion of kudzu and honeysuckle at the forest edge. Its number two ranking as a scaffolding support for kudzu (see tables) is due more to its failure to twine and its weak stems and not a result of rareness.

Grape vines are relatively slow growing and die back in winter. Only in moister areas and in areas where it has persisted for a long time can it compete successfully with kudzu.

Any plant existing at the forest/field interface can function as a scaffold for this opportunistic vine. But it is the fast growing evergreen aliens Japanese honeysuckle and Chinese privet that are the most important scaffolding plants for kudzu's climb into the canopy.

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SHRUB IMPORTANT IN PROVIDING SCAFFOLDING FOR KUDZU

LOCATION	E.	I.o.	L.j.	L.s.	M.b.	P	R.	R.m.
Glendale	2			1			3	
Mary Wright Greenway	3		4	1				2
Peter's Creek Dam	2			1			4	3
Peter's Creek Entrance		1		2			3	
Spartanburg High School	2	5	3	1		4		
Valley Falls, 4th St.	2			1	4			3
W. Main Underpass				1				
W. Main Heliport	1	3		2			4	
Y.M.C.A.								

E = *Eleagnus*

I.o. = *Ilex opaca* - Holly

L.j. = *Ligustrum japonica* - Japanese Privet

L.s. = *Ligustrum sinense* - Chinese Privet

M.b. = *Mahonia bealei* - Oregon grape

P = *Photinia* - Red Tip

R = *Rubus* - Blackberry

R.m. = *Rosa multiflora* - Multiflower rose

Number values indicate rank of importance

VINES IMPORTANT IN PROVIDING SCAFFOLDING FOR KUDZU

LOCATION	A.c.	H.h.	L.j.	<i>Smilax</i>	T.r.	V.r.	W.
Glendale				1	2	3	
Mary Wright Greenway	4	3	1	2			
Peter's Creek Dam			1	2		3	
Peter's Creek Entrance			1	2		3	
Spartanburg High School	4		1	2		3	
Valley Falls, 4th St.		4	1	2		3	
W. Main Underpass	4		1	2		3	
W. Main Heliport		2	1				
Y.M.C.A.			2				1

Ac = *Anisostichus capreolata* - Crossvine

Hh = *Hedera helix* - English Ivy

Lj = *Lonicera japonica* - Honeysuckle

Smilax = *S. glauca* or *S. bona-nox*

Tr = *Toxicodendron radicans* - Poison Ivy

Vr = *Vitis rotundifolia* - Grape

W = *Wisteria*

Number values indicate rank of importance