

Autumn Color Expression For Selected Trees (SE-US)

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Scientific name, common name, and fall color range are provided for tree species found in the South-eastern United States. Colors were placed into basic wavelength categories. Color descriptions which are hyphenated denote a first dominant color modified by the second listed color. No metallic, artistic, or whimsical color descriptions are used. Color intensity and purity change across the color expression season. Early in the season chlorophyll green will taint color expression. Late in the season or after severe frosts, dead tissue's brown colors will modify colors expressed. Average color expression as observed by the author, or cited for each tree species, is listed following the Coder Leaf Color Code values presented in Figure 1. Table 1 summarizes the range of colors from the tree species listed here.

scientific name	common name	color expressed
<i>Acer barbatum</i>	Florida maple	4
<i>Acer buergerianum</i>	trident maple	3 5 7 8
<i>Acer ginnala</i>	amur maple	3 7
<i>Acer leucoderme</i>	chalk maple	3 3B 5 7
<i>Acer negundo</i>	boxelder	3 3B
<i>Acer nigrum</i>	black maple	3 7
<i>Acer palmatum</i>	Japanese maple	7
<i>Acer pensylvanicum</i>	striped maple	3
<i>Acer platanoides</i>	Norway maple	3 5
<i>Acer rubrum</i>	red maple	3 5 7
<i>Acer saccharinum</i>	silver maple	3 3B 5
<i>Acer saccharum</i>	sugar maple	3 5 7
<i>Aesculus flava</i>	yellow buckeye	5
<i>Aesculus glabra</i>	Ohio buckeye	3 5
<i>Aesculus hippocastanum</i>	horsechestnut	3 3B
<i>Aesculus octandra</i>	yellow buckeye	3
<i>Aesculus parviflora</i>	bottlebrush buckeye	3
<i>Aesculus pavia</i>	red buckeye	3
<i>Aesculus sylvatica</i>	painted buckeye	3 5
<i>Ailanthus altissima</i>	tree-of-heaven	3
<i>Alnus glutinosa</i>	European alder	3B
<i>Amelanchier arborea</i>	serviceberry	4 5
<i>Aralia spinosa</i>	devil's walkingstick	3 3B
<i>Asimina triloba</i>	pawpaw	3

scientific name	common name	color expressed
<i>Betula alleghaniensis</i>	yellow birch	3
<i>Betula lenta</i>	sweet birch	3 4
<i>Betula nigra</i>	river birch	3
<i>Broussonetia papyrifera</i>	paper mulberry	2
<i>Carpinus caroliniana</i>	blue-beech	3 5 7
<i>Carya cordiformis</i>	bitternut hickory	4
<i>Carya glabra</i>	pignut hickory	3 4
<i>Carya ovata</i>	shagbark hickory	4
<i>Carya tomentosa</i>	mockernut hickory	4
<i>Castanea dentata</i>	chestnut	3 5
<i>Castanea mollissima</i>	Chinese chestnut	3 3B
<i>Catalpa bignonioides</i>	Southern catalpa	2
<i>Celtis laevigata</i>	sugarberry	3
<i>Celtis occidentalis</i>	hackberry	3
<i>Cercis canadensis</i>	redbud	2 3
<i>Chionanthus virginicus</i>	fringe tree	3
<i>Cladrastis kentukea</i>	yellowwood	3 4
<i>Clethra acuminata</i>	cinnamon clethra	3
<i>Clethra alnifolia</i>	pepperbush	3B
<i>Cornus alternifolia</i>	alternate-leaf dogwood	8
<i>Cornus amomum</i>	silky dogwood	9B
<i>Cornus florida</i>	dogwood	7 8
<i>Cornus kousa</i>	Kousa dogwood	7 8
<i>Corylus americana</i>	filbert	2 7B
<i>Cotinus obovatus</i>	smoketree	5 7
<i>Crataegus calpodendron</i>	pear hawthorn	5 7
<i>Crataegus crus-galli</i>	cockspur hawthorn	5 6 8
<i>Crataegus mollis</i>	downy hawthorn	4 6
<i>Crataegus phaenopyrum</i>	Washington hawthorn	5 7
<i>Crataegus viridis</i>	green hawthorn	7
<i>Diospyros virginiana</i>	persimmon	3 5 7
<i>Elliottia racemosa</i>	Georgia plume	3B 6
<i>Euonymus americanus</i>	strawberry bush	7
<i>Euonymus atropurpureus</i>	burningbush	3 5 7
<i>Fagus grandifolia</i>	American beech	3 3B
<i>Fagus sylvatica</i>	European beech	3B 7
<i>Franklinia alatamaha</i>	Franklinia	5 7 8
<i>Fraxinus americana</i>	white ask	3 7 7B 8
<i>Fraxinus pennsylvanica</i>	green ash	3 9
<i>Ginkgo biloba</i>	ginkgo	3
<i>Gleditsia triacanthos</i>	honeylocust	3
<i>Gymnocladus dioica</i>	Kentucky coffeetree	3
<i>Hamamelis virginiana</i>	witch hazel	3 4
<i>Helesia diptera</i>	two-winged silverbell	3
<i>Helesia parviflora</i>	little silverbell	3
<i>Helesia tetraptera</i>	Carolina silverbell	3

scientific name	common name	color expressed
<i>Juglans nigra</i>	black walnut	3 3B
<i>Koelreuteria paniculata</i>	goldenraintree	3 4
<i>Lagerstroemia indica</i>	crapemyrtle	4 7
<i>Lindera benzoin</i>	spicebush	3
<i>Liquidambar styraciflua</i>	sweetgum	3 5 7 8 9
<i>Liriodendron tulipifera</i>	yellow-poplar	3 4
<i>Maclura pomifera</i>	Osage orange	3
<i>Magnolia acuminata</i>	cucumber magnolia	4 7B
<i>Magnolia fraseri</i>	Fraser magnolia	3 3B
<i>Metasequoia glyptostroboides</i>	dawn redwood	5B 7B
<i>Morus alba</i>	white mulberry	3
<i>Morus rubra</i>	red mulberry	3
<i>Nyssa sylvatica</i>	blackgum	5 7 9
<i>Ostrya virginiana</i>	ironwood	3 5
<i>Oxydendrum arboreum</i>	sourwood	7
<i>Parthenocissus quinquefolia</i>	Virginia creeper	5 7
<i>Pistacia chinensis</i>	pistache	5 6
<i>Platanus occidentalis</i>	sycamore	3B 4
<i>Populus deltoides</i>	cottonwood	3
<i>Prunus pennsylvanica</i>	fire cherry	3 5 7 8
<i>Prunus serotina</i>	black cherry	2 4 5 7
<i>Prunus virginiana</i>	chokecherry	3
<i>Ptelea trifoliata</i>	hoptree	3
<i>Pyrus calleryana</i>	ornamental pears	5 7 9
<i>Quercus acutissima</i>	sawtooth oak	3 3B
<i>Quercus alba</i>	white oak	3 3B 7 7B
<i>Quercus bicolor</i>	swamp white oak	7
<i>Quercus chapmanii</i>	Chapman oak	3 5 7
<i>Quercus coccinea</i>	scarlet oak	7
<i>Quercus ellipsoidalis</i>	northern pin oak	3B 7B
<i>Quercus falcata</i>	Southern red oak	3B 7B
<i>Quercus falcata var. pagodifolia</i>	cherrybark oak	2 3B
<i>Quercus imbricaria</i>	shingle oak	3B 7B
<i>Quercus incana</i>	bluejack oak	7B
<i>Quercus laevis</i>	turkey oak	7
<i>Quercus lyrata</i>	overcup oak	3B 7B
<i>Quercus macrocarpa</i>	bur oak	3 3B
<i>Quercus marilandica</i>	blackjack oak	3B 5B 7B
<i>Quercus michauxii</i>	swamp chestnut oak	5B 7B
<i>Quercus montana (prinus)</i>	chestnut oak	3B 4 7
<i>Quercus muehlenbergii</i>	chinkapin oak	7B
<i>Quercus nigra</i>	water oak	3B 4B
<i>Quercus nuttallii</i>	Nuttall oak	7B
<i>Quercus oglethorpensis</i>	Oglethorpe oak	7
<i>Quercus palustris</i>	pin oak	7 7B

scientific name	common name	color expressed
Quercus phellos	willow oak	3B
Quercus robur	English oak	7 7B
Quercus rubra	red oak	7 7B
Quercus shumardii	Shumard oak	7 7B
Quercus stellata	post oak	3B 7
Quercus velutina	black oak	3B 7 7B
Rhus (Toxicodendron) vernix	poison sumac	3 5 7
Rhus aromatica	fragrant sumac red	7B
Rhus copallina	winged sumac	7 8
Rhus glabra	smooth sumac	7
Rhus radicans	poison ivy	3 5 7
Rhus typhina	staghorn sumac	5 7
Robinia pseudoacacia	black locust	3
Salix nigra	black willow	3
Sambucus canadensis	elder	3
Sapium sebiferum	tallowtree	7
Sassafras albidum	sassafras	3 5 7
Sophora japonica	pagodatree	3
Sorbus americana	American mountain-ash	4 8
Styrax americanus	American snowbell	2
Taxodium ascendens	pondcypress	7 7B
Taxodium distichum	baldcypress	5B 7B
Tilia americana	basswood	3 5B
Tilia cordata	littleleaf linden	3
Ulmus alata	winged elm	3 4
Ulmus americana	American elm	4
Ulmus parvifolia	lacebark elm	3 7 8
Ulmus rubra	red elm	3 3B
Vaccinium arboreum	sparkleberry	8
Viburnum dentatum	arrowwood	7
Viburnum lentago	nannyberry	5 7
Viburnum nudum	possumhaw	7
Viburnum prunifolium	blackhaw	6 7 8
Viburnum rufidulum	rusty blackhaw	3B 7
Vitis rotundifolia	muscadine grape	3
Wisteria frutescens	American wisteria	3
Zelkova serrata	zelkova	3B 5B

Literature Sources

Bell, C.R. & A.H. Lindsey. 1990. **Fall Color and Woodland Harvests**. Laurel Hill Press, Chapel Hill, NC. Pp.184.
 Dirr, M.A. 1998. **Manual of Woody Landscape Plants**. Stipes Publishing, Champaign IL. Pp.1187.
 Kirkman, L.K., C.L. Brown, & D.J. Leopold. 2007. **Native Trees of the Southeast**. Timber Press, Portland, Oregon. Pp.370.
 Little, E.L. 1984. **Audubon Society Field Guide to North American Trees (Eastern)**. Alfred A. Knopf, New York. Pp.714.

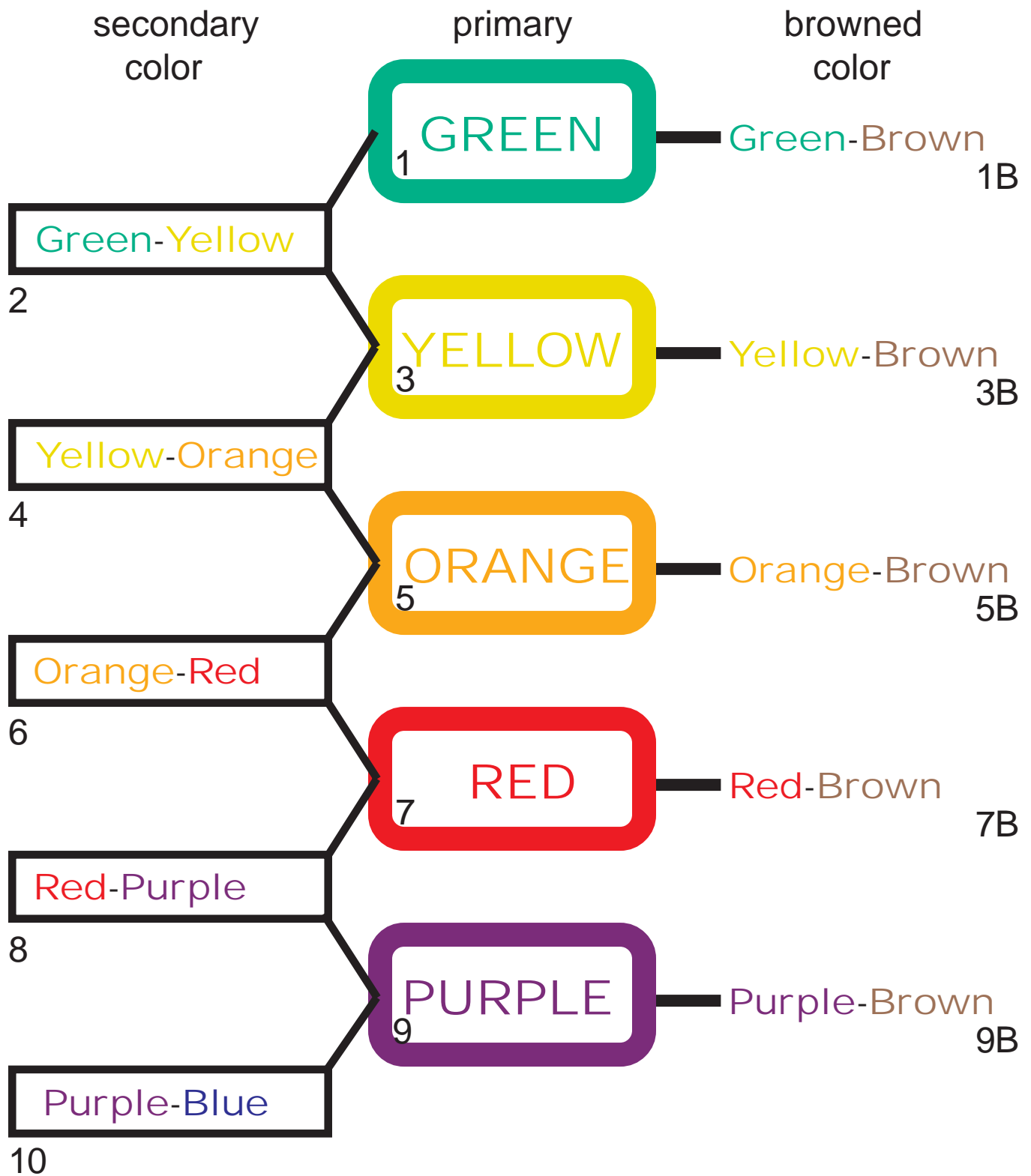


Figure 1: The 15 primary, secondary, and browned autumn tree colors with associated Coder Leaf Color Code values. Each color is modified by light (L) / dark (A), and by intense (I) / dull (U).

CODE #	COLOR	PERCENT
1	GREEN	0
1B	Green-Brown	0
2	Green-Yellow	6%
3	YELLOW	28%
3B	Yellow-Brown	10%
4	Yellow-Orange	7%
5	ORANGE	12%
5B	Orange-Brown	2%
6	Orange-Red	2%
7	RED	20%
7B	Red-Brown	7%
8	Red-Purple	5%
9	PURPLE	1%
9B	Purple-Brown	0
10	Purple-Blue	0

Table 1: The distribution of colors among tree species listed.