Deer Resistant Plant List

The following information has been drawn from a variety of sources including: the Island Specialty Nursery Catalogue, 1999; The Island Grower, August/September, 1994; Cannor Nursery; The Home, Yard & Garden Pest Newsletter, University of Illinois Extension, 1997; Sunset Western Gardener; "Living with Wildlife in the Pacific Northwest" by Russell Link (University of Washington Press) and Dinter Nursery.

General comments about deer-proof plants:

- The most reliably deer-proof plants are those with **acrid sap** like Euphorbias; **strongly scented foliage** like lavender, sages and oregano; **dry-loving plants** like Cistus and Halimium; **fuzzy leafed plants** like Stachys and Pulmonaria; also most plants with **grey/silver foliage** such as dusty millers.
- Deer use their sense of smell to detect predators. Strongly-scented plants may "confuse" deer's sense of smell, which makes them uneasy. Plants with strongly-scented foliage may therefore act to deter deer from an area. Consider several plants with varying strong scents planted around the deer's usual pathway to your property, and as a perimeter around other plants as a possible protective/deterrent strategy. Good candidates include *santolina*, *helichrysum italicum* (curry plant), *Ruta graveolens* (Jackman's rue), *Lantana*, and very aromatic herbs like thyme and oregano.
- Plants not browsed for years can fall prey whenever food is in very short supply and the deer are desperate. Deer will "remember" these plants as edible and may start browsing them regularly in future years. Some gardeners have successfully planted a perimeter garden of "deer fodder" to provide food so the garden plants are left alone.

The usual caveats apply to this list:

- Deer will often try a new plant. This usually will not permanently disfigure perennials or even shrubs, but not so with trees. Best to fence them until the deer cannot reach the canopy. There are a number of commercial products which claim to repel or deter deer, and recipes for home made sprays. Gardeners should be advised to **use caution when trying home remedies**, similar to cautions about using home remedies for pest management. These remedies are not necessarily "tried and true" and may not be safe for use on all plants.
- Deer will often rub the felt off their antlers on your most tender tree trunk; potential for damage is high. To protect trees, wrap trunks loosely with chicken wire up to several feet off the ground (i.e. beyond height deer can reach.)
- Fawns will try just about anything.
- Often a plant's mature foliage is resistant, but deer may eat the new young growth, or nibble or bite off flower heads/buds.
- Deer broaden their menu on very dry years.
- Lastly, DEER DON'T READ THIS LIST!

Trees

Latin Name	Common Name	Evergreen/ Deciduous	Sun/Shade	Moisture	USDA Zone
Abes koreana	Korean fir	Е	¢	Moist well drained	5-7
Aesculus californica	California buckeye	D	(→○	Dry to moist; drought tolerant	7-8
Albisia julibrissin	Silk tree	D	े→)	Drought tolerant	6-10
Amelanchier	Juneberry; serviceberry	D	≎→	Dry to moist	Varies
Araucaria araucana	Monkey puzzle tree	Е	¢	Moist well drained	7
Betula	Birch	D	े→)	Moist	Varies
Cedrus		Е	¢	Well drained	6
Chamaecyparis	False cypress	Е	Varies	Varies	Varies
Cupressus arizonica	Arizona cypress	Е	¢	Drought tolerant	7-24
Cupressus leylandii	Leyiandii cypress	Е	¢		
Eucalyptus	Eucalyptus	Е	¢	Well drained	Varies
Fraxinus	Ash	D	¢	Drought tolerant	Varies
Fremontodendron	Flannel bush	E	¢	Dry or moist soil, drought tolerant once established	8-9
Ginko biloba	Maidenhair tree	D	(→○	Well drained not over watered	3-8
Juniperus sp	Juniper	Е	े→▶	Drought tolerant	Varies
Liquidambar styraciflua	Sweetgum	D	≎→	Moist well drained, drought tolerant	6-8
Magnolia	Magnolia	D	े→	Moist well drained	Varies
Morus	Mulberry	D	0	Average moisture	4-10
Picea sp.	Spruce, any	E	\$	Drought tolerant once established	Varies
Pinus sp.	Pine, any	E	¢	Drought tolerant once established	Varies
Rhus	Sumac	D or E	¢	Moist well drained	Varies
Styrax japonicus	Japanese snowbell	D	≎→	Moist well drained	5-9
Tsuga	Hemlock	Е		Moist	4-9

Latin Name	Common Name	Evergreen/ Deciduous	Sun/Shade	Moisture	USDA Zone
Abelia grandiflora	Glossy abelia	D	≎→	Moist well drained & drought tolerant	6-9
Amelanchier spp	Juneberry; serviceberry	D	≎→	Moist to average, well drained	4-9
Archtostaphylos columbiana Gary Oak ecosystem native	Hairy Manzanita	E	\$	Dry well drained, drought tolerant	4-6
Atriplex canescens	Four-wing saltbush	Е	¢	Drought tolerant	6-10
Berberis darwinii	Barberry	D	े→)	Moist well drained	7
Brachyglottis greyi	Senecio greyi	Е	¢	Drought tolerant	8
Buddleia	Butterfly bush	D	\$	Well drained, drought tolerant	Varies 6-10
Buxus sempervirens	English boxwood	E	≎→	Moist, cool & mulched roots	5
Calluna vulgaris	Heather	E	¢	Drought tolerant once established	Varies
Calycanthus occidentalis	Spicebush	D	ं≯।	Moist soil	7-10
Ceanothus	California lilac	E	¢	Little moisture, drought tolerant ¹	7-9
Chaenomeles japonica	Japanese flowering quince	D	≎→	Drought tolerant	5
Chamaerops humilis	Mediterranean Palm fan	E	≎→	Drought tolerant once established	8-10
<i>Choisya ternata</i> 'Sundance' or 'Aztec pearl'	Mexican mock orange	E	≎→	Average	7-11
Cistus	Rockrose	Е	¢	Drought tolerant	8-10
Continus	Smokebush	D	\$	Tolerates moist to dry	3-9
Corokia cotoneaster	Wire netting bush	Е	े→	Average	8-10
Cotoneaster sp	Cotoneaster, several varieties	E/D	\$	Moist & drought tolerant	Varies
Daphne sp	Daphne, all	E	≎→	Moderate well drained	Varies
Elaeagnus angustifolia	Russian olive	D	¢	Dry well drained	3a
Elaeagnus pungens	Thorny Elaeagnus or silverthorn	E	(→○	Dry to average	7
Erica sp	Heather	Е	\$	Moist well drained	Varies
Escallonia sp.	Escallonia	Е	\$	Well drained	4-9
Forsythia	Forsythia	D	े→	Moist well drained	Varies
Gaultheria shallon	Salal	Е	€→≎	Moist to dry	6-8
Gaultheria procumbens	Wintergreen, winterberry	E	•	Dry to moist	1-7
Grevillea		Е	¢	Well drained	8-9
Halimium	Halimium, rockrose	E	¢	Drought tolerant	5-9
Hamamelis	Witch hazel	D	€→≎	Moist & drought tolerant	5

¹ According to a California-based native plant nursery website "Without water or fertilizing, a Ceanothus looks much less appetizing to a deer." <u>http://www.laspilitas.com/groups/ceanothus/Northern_california_lilacs/Northern_california_ceanothus.html</u>

Latin Name	Common Name	Evergreen/ Deciduous	Sun/Shade	Moisture	USDA Zone
Hypericum sp	Several varieties, St John's wort	D	(→○	Moist well drained	Varies
Ilex sp Some Invasive	Holly	Е	0	Moist well drained	Varies
Kerria japonica	Kerria, Japanese yellow rose	D	(→○	Evenly moist	2-23
Laurus nobilis	Bay leaf	Е	≎→	Moist well drained	5-9
Lavandula sp	Lavender	Е	0	Drought tolerant	Varies
Lavatera	Mallow	D	0	Well drained	Varies
Leucothoe		Е	(→)	Moist well drained	Varies
Ligustrum japonica	Japanese privet	E	≎→	Average, drought tolerant	7-10
Mahonia	Oregon grape	E	•	Moist, drought tolerant	Varies
Myrica californica	Pacific wax myrtle	E	≎→	Moist, drought tolerant	7-10
Myrica pensylvanica	Northern Bayberry	D	≎→	Moist, drought tolerant	3-7
Nandina sp	Heavenly bamboo	E	≎→	Moderate, drought tolerant	4-10
Osmanthus sp	Japanese false holly; sweet olive	E	≎→	Moist well drained	6-9
Paeonia sp	Peony	D	¢	Drought tolerant once established	3
Phormium	New Zealand flax	Е	े→	Drought tolerant	7-9
Pieris sp	Lily-of-the-valley shrub	Е	 >●	Moist well drained	5-8
Potentilla fruticosa	Shrubby Cinquefoil, buttercup shrub	D	¢	Drought tolerant	2-9
Pyrecantha	Firethorn	E	≎→	Moderate to drought tolerant	6
Rhododendron	Rhodo	E	≎→	Average well drained	Varies
Ribes sanguineum Native plant	Red-flowering currant	D	•	Average to dry	6-9
Rosmarinus sp	Rosemary	Е	\$	Drought tolerant	6-8
Sarcoccocca	Sweet box	Е	•	Moist well drained	6-9
Skimmia sp	Skimmia	Е	≎→	Moist well drained	7-9
Spiraea sp		D	े→	Moist	4-8
Syringa sp	Lilac	D	¢	Average well drained	5-9
Vaccinum ovatum	Evergreen huckleberry		¢to ●	Moist well drained	7-9
Viburnum burkwoodii		D	(→)	Average to moist	5
Yucca sp		Е	0	Drought tolerant	Varies

Annuals and Perennials

Latin Name	Common Name	Annual/	Sun/	Moisture	USDA
		Perennial	Shade		Zone
Acanthus mollis	Bear's Breeches	Р	ं≯।	Varies	7-10
Achillea	Yarrow	Р	\$	Drought tolerant	Varies 3-10
Aconitum	Monkshood	Р		Moist	4-9

Latin Name	Common Name	Annual/ Perennial	Sun/ Shade	Moisture	USDA Zone
Agapanthus	African Lily	Р	े→▶	Water in spring & summer	Varies 7-11
Agastache	Anise hyssop	Р	¢	Average	4-9
Ageratum	Floss flower	A	°→)	Moist well drained	9-12
Ajuga		P		Keep moist	9-12
Alchemilla	Lady's mantle	P	° →)	Moist well drained	4-6
Anaphalis	Pearly Everlasting	P	\$	Well drained	Varies 5-10
Anemone x hybrida	Windflower	P	•	Moist well drained	6-9
Antirrhinum majus *	Snapdragon	Short-lived P	¢	Well drained soil	6-10
Aquilegia *	Columbine	P	~~→)	Well drained soil	Varies 3-10
• · ·	Rock Cress	P P	\$ \$	Very well drained	4-10
Arabis sp. Arctotis	KOCK CIESS	P treated as A	o o	Drought tolerant	9-11
	Manageritas		↔ ¢	Well drained	9-11 7-11
Argyranthemum Armeria	Marguerites Thrift	P treated as A	\$ \$		Varies 4-9
	Wormwood	P	\$ \$	Dry Well during d	
Artemesia Lactiflora		P	•	Well drained Moist	Varies 4-10 Varies 3-10
Asarum caudatum	Wild Ginger	P	°→)		
Aster		P		Moist	Varies 3-10
Astilbe*	Astilbe	P	-	Moist well drained	6-10
Aubrieta	Aubrieta	P	©→)	Well drained	4-9
Aurinia saxatilis	Alyssum saxatile	Р	<i>©</i>	Gritty well drained	4-9
Bacopa		A	≎→	Rich well drained	8-24
Ballota (all species)	Cuban oregano	Р	¢	Drought tolerant	2,3,6-9
Begonia	Tuberous begonia	P treated as A	D		9-11
Belamcanda chinensis	Leopard Lily	Р	¢	Water in summer	8-11
Brunnera macrophylla	Brunnera	Р		Moist	3-9
Calendula officinalis	English marigold	Α	े≯	Moist well drained	6-10
Campanula	Canterberry bells	Р			
Centaurea cineraria (Centaurea gymnocarpa)	Dusty miller (divided silver foliage)	P treated as A	0	Well drained	7-10
Centaurea cyanus	Bachelor's buttons; cornflower	А	¢	Well drained	5-10
Centaurea macrocephala	Globe cornflower; Armenian basket flower	Р	¢	Average	2-9
Cerastium tomentosum	Snow-in-summer	Р	≎→	Drought tolerant	1-9
Cheiranthus	Wall flower	P	~	Diought tolerant	1 2
Chrysanthemum	Hardy Chrysanthemum	P	¢	Well drained	7-10
Clarkia sp		A	े→	Moist well drained	7-11
Cleome hassleriana	Spider flower	A	\$	Well drained	1-24
Consolida ambigua	Larkspur	A	<u>й</u>	Well drained	1-24
Convallaria majalis	Lily-of-the-Valley	P)	Moist	3-9
Coreopsis	Tickseed	P or A	¢	Well drained	Varies 3-11
Cosmos	TICABECC	A	\$	Well drained	8-11
Crocosmia		P	ф.	Well drained	5-9
Cyclamen	Cyclamen	P	•	Well drained	Varies
Dahlia	Dahlia	P (tender if wet	0	Well-drained	8
Delphinium	Larkspur	over winter) P	0	Well drained	Varies
	Pinks, carnations	P or A	<u>↓</u>	Well drained,	Varies 3-10
Dianthus	rinks, carnations	r of A	×	drought tolerant	varies 3-10
	Twinspur	P treated as A	≎→	Moist well drained	9-11
Diagoia				I IVIOISE WELL (IF21DEO	7-
Diascia Dicentra	Bleeding Heart	P		Moist well drained	3-9

Latin Name	Common Name	Annual/ Perennial	Sun/ Shade	Moisture	USDA Zone
Digitalis	Foxglove	Biennial		Well drained	4-9
Dracocephalum	Dragon's head	Р	۵	Moist	4-9
Echinacea	Coneflower	Р	\$	Drought tolerant once established	3-10
Echinops	Globe Thistle	Р	¢	Heat tolerant	3-10
Epimedium	Barrenwort	P	•	Drought tolerant	Varies 4-9
Erigeron	Fleabane	P or A	¢	Well drained	5-9
Eriophyllum lanatum Native	Woolly sunflower	Р	¢	Drought tolerant	5-9
Eryngium amethystinum	Sea Holly	P or Biennial	0	Well drainage	Varies 3-9
Erysimum	Wallflower	P or A	۵	Well drained	Varies 3-11
Eschscholzia	California Poppy	Р	۵	Drought tolerant	6-11
Euphorbia sp	Wood Spurge	Р	े→)	Well drained	Varies 6-10
Euryops	Yellow bush daisy	P treated A	0	Drought tolerant	9b -11
Galium odoratum	Sweet Woodruff	Р	 >●	Moist well drained	5-9
Gaillardia sp	Blanket flower	P or A	¢	Well drained, drought tolerant	5-10
Gazania		А	0	Drought tolerant	9-10
Gentiana	Gentian	P			
Geranium x cantabrigiense	Cranesbill	Р	¢	Damp, well drained	5-9
Geranium macrorrhizum	Big root geranium	Р	D→●	Drought tolerant	4-9
Geum	Geum	Р	۵	Moist well drained	Varies 3-9
Gunnera manicata	Giant ornamental rhubarb	Р	¢	Moist	7-9
Gypsophilia paniculata	Baby's breath	P treated as A	۵	Well drained	4-10
Helichrysum (all species)	Strawflowers	P treated as A	0	Well drained	9-11
Helichrysum italicum or H. angustifolium	Curry plant (not the cooking spice)	P treated as A	¢	Drought tolerant	8-11
Helleborus	Hellebore	Р		Moist well drained	Varies 4-10
Hesperis matronalis	Dame's Rocket	P or Biennial	¢	Moist, well drained	4-9
Iberis	Candytuft	A or P	≎→	Well drained	4-11
Iris, esp. bearded types	Iris	P	Varies	Varies	Varies
Kniphofia	Red-hot poker, torch lily	Р	¢	Well drained	7-10
Lamium sp	False Salvia, deadnettle	A & P	Varies	Varies	Varies 4-10
Lantana spp.	Latan palm	P treated as A	\$	Drought tolerant	8-10
Lavendula	Lavender	Р	0	Well drained	8
Leucanthemum superbum	Shasta daisy	Р	0	Moist well-drained	5-10
Liatris spicata	Blazing star, gay feather	P	¢	Dry to damp	2-9
Linaria	Toadflax	Р	\$	Well drained	4-8
Liriope	Lily turf	Р	≎→●	Moist well drained	6-7
Lithodora diffusa	· ·	Р	©→)	Drought tolerant	7-10
Lobelia cardinalis	Lobelia, cardinal flower	Р	©→)	Moist	4-9
Lupinus	Lupine	Р	¢	Well drained	3-9
Lychnis sp	Campions	Р	¢	Varies	Varies
Matthiola	Stock	P treated as A	¢	Moist well drained	6-10
Monarda sp.	Bergamots	P, A	≎→	Moist, well drained	Varies
Myosotis	Forget-me-not	A, P		Well-drained	5-10
Nepeta sp.	Catmint; catnip	Р	¢	Well-drained	Varies

Latin Name	Common Name	Annual/ Perennial	Sun/ Shade	Moisture	USDA Zone
Nicotiana	Flowering tobacco	A, P	\$	Moist well drained	Varies 7-11
Oenothera	Evening Primrose	P, A, Biennial	¢	Drought tolerant	7-9
Origanum (all species)	Oregano, Marjoram, Sweet Marjoram	Р	¢	Drought tolerant	6-8
Osteospermum		P treated as A	\$	Well drained	Varies 8-11
Oxalis	Sorrel	Р	≎→►	Moderately moist well-drained	Varies
Pachysandra sp	Japanese spurge	Р	J→●	Well drained	4
Phlomis sp.	Jerusalem sage	Р	े→	Moist well drained	7-10
Paeonia	Peony	Р	े→	Moist well drained	Varies
Papaver	Рорру	A, P, B	\$	Moist well drained	7-10
Pelargonium sp	Geranium	P treated as A	\$	Well drained	9-11
Penstemon sp	Penstemon	Р	¢	Well drained	7-10
Perovskia	Russian Sage	Р	\$	Well drained, drought tolerant	6-9
Phlox subulata	Creeping phlox, moss phlox	Р	≎→	Moist, drought tolerant	2-9
Polemonium	Jacob's ladder	Р	≎→	Moist well drained	3-6
Polygonatum *	Solomon's Seal	P	•	Moist	6-9
Pulmonaria	Lungwort	P		Moist	6-9
Rheum acuminatum	Ornamental rhubarb	P P	¢→)	Moist	7
		P P	<u>∽</u> ∕•	Well drained,	7-10
Romneya coulteri	California tree poppy			drought tolerant	
Rudbeckia fulgida	Black-eyed Susan	Р	ं≯)	Average	3-9
Ruta graveolens	Jackman's rue	Р	¢	Drought tolerant	4-9
Salvia sp	Sage	A & P	¢	Drought tolerant	Varies
Santolina	Santolina	P treated as A	0	Well drained, drought tolerant	6-9
Scabiosa	Scabiosa	Р	0	Well drained	4
Sempervivum	Hen and chicks	Р	¢	Well drained	3-4
Senecio cineraria	Dusty Miller	P treated as A	0	Average	8-10
Sisyrinchium	Blue eyed grass	A or P	¢	Well drained	Varies
Solidago	Goldenrod	Р	¢	Average, drought tolerant	Varies 3-9
Stachys byzantina	Lamb's Ears	Р	\$	Drought tolerant	3-9
Stylophorum diphyllum	Celandine Poppy	Р		Evenly moist	4-8
Tagetes	French marigolds	А	\$	Well drained	9-11
Thalictrun	Meadow rue	Р		Varies	4-6
Tiarella	Foam flower	Р	J→●	Varies	5
Tibouchina	Princess flower	P requires winter protection in Victoria	¢	Average, do not overwater	9a - 11
Tradescantias	Spiderwort	Р	≎→●	Moist	Varies
Verbascum	Mullein	Р	⇔ or ●	Well drained	Varies 5-10
Veronica	Speedwell	Р	≎→●	Varies	Varies
Vinca major	Periwinkle (aggressive	Р	•	Moist	Varies
BC Invasive	spreader)				
Vinca minor BC Invasive	Dwarf; less invasive	Р	D→●	Moist, drought tolerant	4-8
Viola ordorata	Sweet violet	Р	≎→	Moist well drained	4-7
Zantedeschia aethiopica	Calla Lily	P	0	Moist to wet	8 - 10
Zamedeschia deimopica Zauchchneria	California fuchia	P	¢.	Drought tolerant	6 - 10

BULBS

The following bulbs are generally deer-resistant. However, in some cases, deer (usually the fawns) may nip off flower buds before they open.

Latin Name	Common Name	Sun/Shade	Moisture	USDA Zone
Allium sp	Allium	Varies	Varies	Varies
Amaryllis		ं→)	Average	6-11
Chionodoxa	Glory-of-the-snow	¢	Consistently moist	4-9
Colchicum sp	Autumn crocus	ं→)	Varies	5
Crocus	Crocus	ं→)	Well drained	1-24
Eranthus hyemalis	Winter aconite	ं→)	Consistently moist	3-7
Fritillaria *		ं→)	Varies	Varies
Galanthus	Snowdrops		Moist	1-9
Hyacinth	Hyacinth	¢	Moist well drained	Varies
Leucojum	Summer Snowflake	¢	Moist or dry	4-9
Muscari	Grape hyacinth	¢	Moist well drained	Varies
Narcissus sp.	Daffodil	¢	Well drained	Varies
Scilla	Scilla			Varies
Zantedeschia aethipica	Hardy calla lily	ं→)	Moist to dry	8-11

Herbs

Most garden herbs (with the exception of basil, parsley and sometimes chives) are deer-resistant due to their aromatic foliage with high oil content including: thyme, oregano, sage, rosemary, mint, marjoram, verbena, chives (not reliably) and lavender.

Vines

Latin Name	Common Name	Evergreen/	Sun/Shade	Moisture	USDA
		Deciduous			Zone
Clematis	Clematis	E or D	¢Cool roots	Average	Varies
Jasminum	Jasmine	E or D	े→	Average	Varies
Parthenocissus	Boston ivy	D	⇔ or ●	Average	Varies
Wisteria	Wisteria	D	¢	Dry to moist	3-24

Grasses

Generally, all the true sedges ("with edges" that feel sharp when you run your hand down a clump of them) should be deer resistant, as their edges can be quite sharp.

Latin Name	Common Name	Evergreen/ Deciduous	Sun/Shade	Moisture	USDA Zone
Bambusa	Bamboo	E			Zone
Carex sp	Sedge	Е	Varies	Varies	Varies
Cortaderia selloana	Pampas grass	Е	¢	Average to dry	8-10
Fargesia nitida	Fountain bamboo	E		Moist well drained	7-11
Festuca glauca	Common blue fescue	E	0	Well drained, drought tolerant	4-8
Miscanthus sinensis	Maidenhair grass, most varieties	E	¢	Moist well drained	2-24

Latin Name	Common Name	Evergreen/ Deciduous	Sun/Shade	Moisture	USDA Zone
Ophiopogon (or liriope)	Mondo grass; lilyturf	E	≎→	Moist well	6-10
	(not a true grass but			drained, drought	
	treated as such)			tolerant	
Pennisetum setaceum	Fountain grass	P treated as A	¢	Average to moist	9-10
Phyllostachys nigra	Black bamboo	E	°→)		6
Stipa tenuissima	Mexican feather grass	Е	¢	Drought tolerant	6

Groundcover (up to 1 foot tall)

Latin Name	Common name	Evergreen/	Sun/Shade	Moisture	USDA
		Deciduous			Zone
Archtostaphylos uva-ursi	Kinnikinick	E	े→	Well drained	2-6
Cornus canadensis	Bunchberry	D	●→▶	Moist well drained	3
Cotoneaster sp?		D, some E			Varies
Gaultheria procumbens	Wintergreen	E	•	Moist	Varies
Fragaria sp	Wild strawberry	Р	े→		Varies
Mahonia	Oregon grape	Е			Varies
Ceanothus sp?		E	¢	Drought tolerant	5-9
Rosmarinus officianalis	Trailing rosemary	Е	¢	Drought tolerant	
prostratus					
Thymus	Thyme	Е			
Helianthemum	Sunrose	E	¢	Drought tolerant	2b-9
Lithodora diffusa		Р	े→)	Drought tolerant	7-10
Vinca major	Periwinkle (aggressive	E	●→▶	Average, drought	4-9
	spreader)			tolerant	
Vinca minor	Dwarf; less invasive	E	●→▶	Average, drought	4-9
				tolerant	
Rubus calycinoides	Ornamental raspberry,	E	े→)	Average to dry,	6-9
	crinkled creeper			drought tolerant	

* Occasionally browsed