

List of Bird Species That Eat Berries and Seeds of Naturalized Shrub and Tree Species in South -Western BC.

Not in taxonomic order; grouped to show species utilizing plants.

References: K. Bell, A. Grass, G. Clulow, R. Lyske, M. Taitt, J. Ryder, personal observations; Campbell et al; and Contreras. A, 1997

Pine Grosbeak; all species of Mt. Ash, holly, cotoneaster & hawthorn.

***Purple Finch;** all species of blackberry, Mt ash, & cotoneaster (seeds).

***House Finch;** as above plus firethorn.

Evening Grosbeak: seeds of *Acer* and *Prunus* species.

***Golden-crowned Sparrow;** blackberry species, berries and seeds and small seeds from most shrubs

***White-crowned Sparrow;** }

***Dark-eyed Junco;** }

***Lincoln's Sparrow;** }

***Song Sparrow:** } all blackberry species berries and seeds & small seeds.

***Fox Sparrow;** holly berries & } Grass & "weed" seeds of many species.

***Savannah Sparrow;** }

***Chipping Sparrow;** }

***Spotted Towhee;** holly berries & }

***Black-headed Grosbeak;** ivy, Mt ash, cotoneaster, firethorn and blackberry species berries and seeds.

***Western Tanager;** berries of all blackberry species, & Mt ash species.

***Yellow-rumped Warbler;** soft mushy berries; e.g., privet, Mt ash.

***Orange-crowned Warbler:** juice from blackberries & other soft berries.

***MacGillveray's Warbler:** as above.

Bohemian Waxwing; }

***Cedar Waxwing:** } holly, firethorn, Mt ash, spruce laurel, ivy, hawthorn, and cotoneaster sp.

Northern mockingbird }

***American Robin;** } (*C. bullatus* is the most taken of all local species), yew and *Prunus* species.

***Varied Thrush;** }

***Hermit Thrush;** cotoneaster species, Mt ash, privet, blackberry species & firethorn.

***Townsend's Solitaire;** holly, ivy, cotoneaster & blackberry species, firethorn, Mt ash.

***Mountain Bluebird;** as above plus hawthorn species.

***Black-capped Chickadee;** seeds of blackberry & cotoneaster species, flesh of many berries & acorn bits.

Chestnut-backed Chickadee; seeds of introduced conifers; e.g., Norway Spruce, Scots Pine & Larch.

Red-breasted Nuthatch; as above, plus acorns and hazelnuts.

***Tree Swallow;** soft, mushy berries; e.g., Mt ash, cotoneaster spp, privet, & blackberry spp.

Red-eyed Vireo; red-osier dogwood (*Cornus alba* & *C. stolonifera*) berries & berries of that size.

Red-breasted Sapsucker; seeds from holly, cotoneaster spp, Mt. ash, & firethorn.

Hairy Woodpecker; }

Downy Woodpecker; } as above.

***Northern Flicker;** berries of blackberry spp, Mt ash, cotoneaster spp & acorn bits.

Band-tailed Pigeon; berries of holly, Mt ash, *Prunus* spp, & ivy, plus acorns.

***Steller's Jay**; blackberry spps, Mt. ash, holly, & ivy. Acorns & hazel nuts.

***Anna's Hummingbird**; juice from exotic blackberry and other soft berries

* *At least 25 of the above species eat the seeds, and / or berries of exotic blackberry species.*

Introduced Shrub and Tree Species Covered in text

European mountain ash, *Sorbus aucuparia*; very well naturalized.

European Gean Cherry; *Prunus avium*; very well naturalized.

Portugal Laurel; *Prunus lusitanica*; locally naturalizes.

European Cherry Laurel; *Prunus laurocerasus*; very well naturalized.

European Holly; *Ilex aquifolium*; an establish species.

European Firethorn; *Pyracantha coccinea*; locally naturalized; native from Italy to Turkey. Six other species from the Himalayan massif to China. Used by birds from Nov' to March

Cotoneaster nebrodensis; }

C. simonsii; }

C. bullatus; }

C. horizontalis; } there are over 70 species of cotoneasters. All are Eurasian in origin,

C. lacteus; } the Himalayan mountain massif being home to most of them. Birds

C. salicifolia; } find some species more attractive than others.

C. dielsiana; }

Siberian red barked dogwood; *Cornus alba*; very locally naturalized; flowers & berries for wildlife.

European Ivy; *Hedera helix*; an established species. Flowers in the fall & has berries in the spring for wildlife.

Evergreen Blackberry; *Rubus laciniatus*; very well naturalized.

Himalayan Blackberry; *R. discolor*. An established species.

European Hawthorn; *Crataegus monogyna*. Well naturalized.

English Midland Hawthorn; *C. oxyacantha*. Locally naturalized.

European Privet; *Ligustrum vulgare*. Very local naturalization.

Spruge Laurel; *Daphne laureola*. Well naturalized.

European Yew; *Taxus baccata*. Locally naturalized.

Other Introduced Species Mentioned In the Text

European Field Maple; *Acer campestre*; locally naturalized.

Japanese Maple; *A. palmatum*; very locally naturalized.

Asian/Himalayan Buddleia; *Buddleja davidii*; an establish species. The flowers provide food for bumble bee, butterfly, moth and many other insect species, also for hummingbirds.

European Hazelnut; *Corylus avellana*; a well naturalized species.

European Oak; *Quercus robur*; locally naturalized.

European-Japanese Hybrid Larch; *Larix X eurolepis*; } seed will germinate, but seedlings do not

Norway Spruce; *Picea abies*; } survive well.

Scots Pine; *Pinus sylvestris*; very locally naturalizes.

Policeman's Helmet /Himalayan balsam; *Impatiens glandulifera*; well naturalized; nectar/pollen for insects & hummingbirds.

Canadian thistle; *Cirsium arvense*; established species; nectar / pollen (insects) and seeds (finch & sparrow).

Bull thistle; *C. vulgare*; as above & larval food of painted lady butterfly.

Purple Loosestrife; *Lythrum salicaria*; established species; nectar / pollen (insects), deer eat flowers
Wild birds and mammals utilize the food available and do not restrict their choice to native species of plants

Native Species mentioned in the text.

Fireweed; *Epilobium angustifolium*.

Red Elderberry; *Sambucus racemosa* . Good berries, generally eaten within weeks of ripening.

Hardhack spirea; *Spirea douglasii*. Good thick cover, it needs thorns. No berries.

Snowberry; *Symphoricarpos albus*; White berries are said by some to be poisonous for humans; birds avoid them, leaving unused until March. Not a good berry shrub for birds in s.w.-B.C.

Pacific Crab-apple; *Malus fusca*; one of the best native berry bearing shrub for birds. Berries last in a mushy state well into winter. This species should be part of every habitat planting project which has a site with full light and moist soils.

Dull Oregon-grape; *Mahonia nervosa*; } both species produce berries which are soon consumed by

Tall Oregon-grape; *M. aquifolium*; } birds.

Salmonberry; *Rubus spectabilis*; } both species produce berries which are soon eaten by birds; the

Thimbleberry; *R. parviflorus*; } seeds provide winter food for finch, towhee and sparrow species.

Black Cottonwood; *Populus balsamifera*.

Red Alder; *Alnus rubra*.

Western Red-cedar; *Thuja plicata*.

Western & Mountain Hemlocks; *Tsuga heterophylla* & *T. mertensiana*.

Sitka Spruce; *Picea sitchensis*.

Vine & Big-leaf Maples; *Acer circinatum* & *A. macrophyllum*

DeGraaf et al state that a further 11 species which occur in S.W. - B.C. consume berries as a part of their diet. They are:

Pileated Woodpecker: "...70% insect and some wild fruits, mast and seeds."

Western Wood-pewee: "...a few wild berries."

Say's Phoebe: "...some berries."

Western Kingbird: "...some fruit ..."

Eastern Kingbird: "Consumes ... more than 40 kinds of fruits ..."

Swainson's Thrush: "...and small fruits and berries."

Gray Catbird: "...in fall eats a variety of fruits."

Solitary Vireo: "...and small fruits."

Hutton's Vireo: "...and small berries."

Warbling Vireo: "...and fruit pulp."

Yellow-breasted Chat: "...also eats some berries and fruits."

DeGraaf et al do not say which species of fruits and berries these birds eat. Birds eat what is available and nutritious for them, so naturalized plants no doubt are included in these selections. All of these bird species are migratory, departing from B.C. for the winter except for Hutton's vireo and Pileated woodpecker. The woodpecker spends most of its hunting energy getting ants, termites and wood boring beetles and their grubs. It use berries, fruit, acorns, etc., in cold, snowy weather. The diminutive Hutton's vireo is at the northern end of its range and as an insectivore has a very hard time in cold weather. Small native berries that survive into mid-winter are few in number. Elder berries are the right size but are consumed soon after they ripen in July. None last into winter. The only candidate is the

Pacific Crab apple, which is soft and pulpy by mid-winter. Two hundred years ago there were bog and marsh shrubs (up to 12 species which may have kept their berries well into winter. One of these is the Swamp Rose (*Rosa pisocarpa*), which has a small hip easily eaten by vireo, chickadee and thrush sized birds. This rose species is now a rare plant and never planted in restoration projects).

The *Oleaceae* sp. Privet used by waxwings in the Kootenay region (L. M. VanDamme, 1995) is introduced from Eurasia (European Privet, *Ligustrum vulgare*; or Oval-leaved Privet, *L. ovalifolium*; or Japan / China Privet, *L. lucidum*). The small (6-8mm) glossy black berries are eaten in England by small thrush, warbler and chickadee species from November, peaking in January. These berries are small enough for Euro Robin, Euro Blackcap warbler, Blue and Marsh tits. All these species have west coast Canadian ecological equivalents amongst the North American warbler, vireo and chickadee species. The Snows point out the nutritive values of many of the British berries. Privet is rated as a good source of energy per g. of whole fruit (0.46), however ivy at 0.84 and European red dogwood at 1.07, Mt ash at 0.78 and holly at 0.66 are all more notorious. It is worth noting that the protein values of ivy, holly and spurge laurel (5.00, 4.75 & 5.20 respectively) are all amongst the highest nutritious values for British berries. Could it be that these food resources (European Holly, Ivy, & Spurge Laurel) far from being "...unpalatable to most wildlife... except for a few bird species..." are in fact highly nutritious berries available at the right time of year. (At least 30 bird species consume these 3 exotic berry species) – {quotes from the *G.V.R.D./Metro Vancouver Parks, G.V. Invasive Plant Council, & Evergreen Foundation's brochure; "Help Stop the Spread of Invasives"; 12/06/200K* }

In each ecosystem berry bearing plants produce their berries at staggered time intervals through the year. In temperate west coast climates (Western Europe and western North America) this generally means that berries are available in just about every month of the year. The berries which last into mid-winter and early spring are not ready for consumption until they have been exposed to frosts on a number of occasions. This increases the fructose content and softens the pulp, making them more attractive to the bird species