
Introduction

This book continues as volume 7 of a multi-compendium on *Edible Medicinal and Non-Medicinal Plants*. It covers plants with edible flowers whose floral parts including the stalk and flower nectar are eaten as conventional or functional food, as spice, and may provide a source of food colourant, additive or nutraceuticals. According to Health Canada (2002), a *functional food* is similar in appearance to, or may be, a conventional food that is consumed as part of a usual diet and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions, i.e. they contain bioactive compound. A *nutraceutical* is a product isolated or purified from foods that is generally sold in medicinal forms not usually associated with foods and is demonstrated to have a physiological benefit or provide protection against chronic disease. Biologically active components in functional foods that may impart health benefits or desirable physiological effects include the following: carotenoids (β -carotene, lutein, lycopene), dietary fibres (β -glucans, soluble fibre), fatty acids (omega fatty acids, conjugated linoleic acid), flavonoids (anthocyanins, flavanols, flavanones, flavonols, proanthocyanidins), isothiocyanates, phenolic acids, plant sterols, polyols and prebiotics/probiotics (fructooligosaccharides—inulin), vitamins and phytoestrogens (isoflavones—diadzein, genistein). Many plants with edible flowers contain many of these bioactive components and essential mineral elements (Mlcek and Rop 2011; Rop et al. 2012), carbohydrates and amino acids in the flowers and

other plant parts, imparting a wide array of health benefits and pharmacological properties. According to the Global Industry Analyst Inc., global nutraceuticals market is anticipated to exceed US 243 billion by 2015 (GIA 2012). The United States, Europe and Japan dominate the global market, accounting for a combined market share of more than 85 %. Spurred by the growing affluence, rising disposable income and increasing awareness, particularly in China and India, the Asia-Pacific region is projected to see significant growth in the long term. Functional foods that constitute the faster growing segment in the nutraceuticals market are rising in popularity, as the segment offers a cheaper alternative to dietary supplements. Value-added food products that feature edible flowers offer additional marketing opportunities.

This volume covers selected plant species with edible flowers from families Acanthaceae to Facaceae in a tabular form (Table 1) and 75 such species from the families Amaryllidaceae, Apocynaceae, Asclepiadaceae, Asparagaceae, Asteraceae, Balsaminaceae, Begoniaceae, Bignoniaceae, Brassicaceae, Cactaceae, Calophyllaceae, Caprifoliaceae, Caryophyllaceae, Combretaceae, Convolvulaceae, Costaceae, Doryanthaceae and Fabaceae in detail. Some plants with edible flowers, but are better known for their edible fruits, have been covered in earlier volumes and for other non-floral parts will be covered in subsequent volumes. Other plants with edible flowers from the family Geraniaceae to Zygophyllaceae will be covered in volume 8. The edible flower

Table 1 Plants with edible flowers in the families Acanthaceae to Fagaceae

Scientific name	English/common vernacular name	Flower edible uses	References
Acanthaceae			
<i>Adhatoda vasica</i> Nees	Malabar nut	Flowers are eaten	Sawian et al. (2007)
<i>Beloperone californica</i> Benth.	Red Justicia, Chuparosa	Red flowers are eaten raw or cooked	Clarke (1977), Facciola (1990)
<i>Justicia adhatoda</i> L.	Malabar Nut; Boga Bahak (Assamese); Nongmangkha Angoutha (Manipur)	Flowers are eaten fried in Assam	Patiri and Borah (2007), Yumnum and Tripathi (2012)
<i>Phlogacanthus curviflorus</i> (Wallich) Nees	Dhapa Tita (Assamese)	Young inflorescences and flowers are eaten as vegetables in Assam	Patiri and Borah (2007), Medhi and Borthakur (2012)
<i>Phlogacanthus thyrsoformis</i> (Roxb. ex Hardow) Mabb.	Ronga Bhahak, Titaphul, Titabahak (Assamese); Nongmankha (Manipur)	Flowers are bitter in taste and eaten as roasted vegetable by covering with banana leaf. Sometimes flowers are kept dried for future use. In Manipur, the people use the flowers in a dish called 'kangngou', a dry-fried dish. Another popular dish is 'sumtak', a bitter-tasting dish in which the flowers are fried in oil with small fish	Patiri and Borah (2007), Hauzel (2012)
<i>Phlogacanthus tubiflorus</i> Nees		Dry/fresh inflorescences eaten in Assam	Medhi and Borthakur (2012)
<i>Rhinacanthus nasutus</i> (L.) Kurz.	Snake Jasmine; Thong Phan Chang (Thai)	Flowers reported edible	Wongwattanasathien et al. (2010)
<i>Strobilanthes scaber</i> Nees	Raspatia (Assamese); Sam Siphra (Meghalaya)	Flowers are commonly eaten by the Garo communities in assam and in Meghalaya	Patiri and Borah (2007)
Adoxaceae			
<i>Sambucus calllicarpa</i> Greene = <i>Sambucus racemosa</i> var. <i>arborescens</i> (Torr. & A. Gray) A. Gray	Red Coast Elder	Flowers are eaten raw or cooked	Huxley et al. (1992), Fern (1992–2003)
<i>Sambucus canadensis</i> L.	American Elder, Canadian Elderberry	Flowers are dried and used for tea	Fernald et al. (1958), Facciola (1990), Barash (1997), Lauderdale and Evans (1999), McCullough (2007)
<i>Sambucus cerulea</i> Raf. = <i>Sambucus nigra</i> var. <i>cerulea</i> (Raf.) B.L. Turner	Blue Elderberry	Blossoms added to pancake to lighten batter and add flavour, used in tea and muffins	Barash (1997), Schofield (2003)
<i>Sambucus gaudichaudiana</i> DC.	White Elderberry	Flowers are eaten raw or cooked	Wikipedia (2012)

<i>Sambucus glauca</i> Nutt. = <i>Sambucus cerulea</i> Raf.	Blue Elderberry, Blue Elder	Blossoms added to pancake to lighten batter and add flavour, also ingredient for cakes and waffles. Dried flowers can be ground and added to baking mixes and flour. Also used for elder fritters Flowers are eaten raw or cooked	Schofield (2003)
<i>Sambucus javanica</i> Reinw. ex Blume	Chinese Elder		Facciola (1990)
<i>Sambucus melanocarpa</i> A. Gray = <i>Sambucus racemosa</i> var. <i>melanocarpa</i> (A. Gray) McMinn	Black Elder	Blossoms added to pancake to lighten batter and add flavour, also ingredient for cakes and waffles. Dried flowers can be ground and added to baking mixes and flour. Also used for elder fritters	Schofield (2003)
<i>Sambucus mexicana</i> auct. = <i>Sambucus cerulea</i> Raf.	Mexican Elder	Flowers eaten raw or cooked. Flower clusters dipped in batter, fried and sprinkled with sugar. Flowers shaken from stem to add flavour to pancakes, muffins and cakes	Uphof (1968), Clarke (1977), Facciola (1990)
<i>Sambucus microbotrys</i> Rydb. = <i>Sambucus racemosa</i> var. <i>microbotrys</i> (Rydb.) Kearney and Peebles	Red Elder	Flowers eaten raw or cooked	Kunkel (1984), Moerman (1998)
<i>Sambucus nigra</i> L.	Elderberry	Flowers fried in fritters, blossom eaten as sweet fritter or added to steamed fruit, jams, jellies, vinegar, make into elderflower wine, sparkling champagne. Blossoms added to pancake to lighten batter and add flavour, also ingredient for cakes and waffles. Dried flowers can be ground and added to baking mixes and flour. Also for elder fritters	MacNicol (1967), Hedrick (1972), Cribb and Cribb (1975), Tanaka (1976), Low (1989), Facciola (1990), Garland (1993), Burnie and Fenton-Smith (1996), Schofield (2003)
<i>Sambucus pubens</i> Michx. = <i>Sambucus racemosa</i> subsp. <i>pubens</i> (Michx.) House	American Red Elder	Blossoms added to pancake to lighten batter and add flavour	Schofield (2003)
<i>Sambucus racemosa</i> subsp. <i>kamischaitica</i> (E.L. Wolf) Hulten	Red Elder	Blossoms added to pancake to lighten batter and add flavour	Schofield (2003)
<i>Sambucus racemosa</i> L.	Red Elder	Blossoms added to pancake to lighten batter and add flavour	Schofield (2003)
<i>Sambucus sieboldiana</i> (Miq.) Blume ex Graebn.	Elderberry	Buds boiled and eaten as vegetables or used as substitute for tea	Tanaka (1976)
<i>Viburnum edule</i> Raf.	Mooseberry, Highbush Cranberry	Flowers added to pancake and cake batters. Blossoms can also be batter-dipped and fried	Schofield (2003)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Viburnum trilobum</i> Marshall	American Cranberrybush Viburnum, American Cranberrybush, Kalyna, Highbush, Highbush Cranberry	Flowers can be mixed with pancake or muffin batter or can be made into fritters	Deane (2007–2012u)
Aizoaceae			
<i>Carpobrotus deliciosus</i> (L. Bolus) L. Bolus	Sweet Hottentot Fig, Pigface	Edible flowers, also fruits and leaves (pickled)	King (2007)
<i>Carpobrotus edulis</i> (L.) N.E.Br.	Hottentot Fig, Ice Plant	Edible flowers, also fruits and leaves (pickled)	King (2007)
<i>Carpobrotus glaucescens</i> (Haw.) Schwantes	Coastal Noon Flower, Pigface	Pink flowers eaten, also fruits and leaves (pickled)	King (2007)
Alismataceae			
<i>Limnocharis flava</i> (L.) Buchenau	Yellow Burhead	Young unopened inflorescence and peduncle eaten	Ochse and van den Brink (1980), Tanaka and Nguyen (2007), van den Bergh (1994)
<i>Sagittaria latifolia</i> Willd. Amaranthaceae	Wapato, Duck Potato, Indian Potato	White flowers edible	Deane (2007–2012f)
<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Dwarf Copperleaf, Sessile Joyweed; Chuk-Tsit-Tsoi (Chinese)	Flowers are eaten in China	Facciola (1990), Uphof (1968), Tanaka (1976)
<i>Amaranthus cruentus</i> L.	Blood Amaranth, Purple Amaranth, Red Amaranth	Flowers are used to colour ceremonial maize bread in Guatemala	Facciola (1990)
<i>Amaranthus quitensis</i> Kunth	Ataco, Sangorache	Red inflorescences—source of dye used for colouring chicha and ceremonial maize dishes	Kunkel (1984), Facciola (1990)
<i>Amaranthus</i> sp. (<i>Amaranthus cruentus</i> × <i>Amaranthus powelli</i>)	Hopi Red Dye Amaranth	Water extract of flower clusters used to colour the pink maize wafer bread	Facciola (1990)
<i>Amaranthus viridis</i> L.	Green Amaranth, Slender Amaranth	Leaves, leafy stem and flower cluster used as spinach substitute.	Tanaka (1976), Cribb and Cribb (1987), Kunkel (1984), Ochse and van den Brink (1980), Facciola (1990)
<i>Atriplex canescens</i> (Pursh.) Nutt. <i>Atriplex</i> spp.	Four-Wing Salt Bush, Grey Sage Bush Salt Bush	Yellow flowers edible All parts including flowers are edible	Wilson (2012) McCullough (2007)
<i>Celosia argentea</i> L.	Plumed Cockscomb, Quailgrass, Soko	Leaves, stem and young inflorescences steamed and eaten as potherb or finely cut and used in soups	Dalziel (1937), Ochse and Bakhuizen van den Brink (1980), Facciola (1990)
<i>Celosia cristata</i> L. = <i>Celosia argentea</i> var. <i>cristata</i> (L.) Kuntze	Toreador Cockscomb; Maendrami Hwajeon (Korean)	Flowers used in 'hwajeon' cake in Korea	Anonymous (2012b)
<i>Chenopodium album</i> L.	Fat Hen	Young inflorescences are cooked	Fernald et al. (1958), Facciola (1990)

<i>Chenopodium bonus-henricus</i> L.	Good King Henry	Young flower buds are cooked	Organ (1960), Hedrick (1972), Facciola (1990)
<i>Chenopodium cornutum</i> (Torr.) Benth. and Hook.f. ex Watson	Goosefoot	Flowers eaten in Arizona	Yanovsky (1936)
<i>Chenopodium ficifolium</i> Sm.	Fig-Leaved Goosefoot	Flower buds eaten in soups, vegetable dishes, fried, roasted or parboiled and as potherb	Tanaka (1976), Facciola (1990)
<i>Chenopodium nuttalliae</i> Saf. = <i>Chenopodium quinoa</i> Willd.	Quinoa; Huauzontle	Flower clusters eaten cooked, used like broccoli; they are considered a gourmet food	Phillips and Rix (1998), Facciola (1990)
<i>Suaeda maritima</i> (L.) Dumort.	Annual Sea Blite	Green flowers eaten	Maisuthisakul et al. (2008), Maisuthisakul (2012)
Amaryllidaceae			
<i>Allium acuminatum</i> Hook.	Hooker's Onion, Tapertip Onion	Flowers raw, used as a garnish on salads	Moerman (1998), Fern (1992–2003)
<i>Allium aftunense</i> B. Fedtsch.	Ornamental Onion; Kirgisiök (Swedish)	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium akaka</i> S. G. Gmel. ex Schult. and Schult. F.	None	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium altaicum</i> Pall.	Altai Onion; Songino (Mongolia)	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium ampeloprasum</i> var. <i>babingtonii</i> (Borrer) Syme = <i>Allium ampeloprasum</i> L.	Babington's Leek, Wild Leek	Flowers raw, used as a garnish on salads. Flowers best used as a flavouring in cooked food	Fern (1992–2003)
<i>Allium ampeloprasum</i> L.	Leek	Flowers raw, used as a garnish on salads	Fern (1992–2003), Sulistiorini and van der Meer (1994)
<i>Allium angulare</i> Pall. = <i>Allium angulosum</i> L.	None	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium angulosum</i> L.	Mouse Garlic	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium ascalonicum</i> L.	Red Shallots; Hom (Thai)	Young inflorescences eaten	Ochse and van den Brink (1980), Maisuthisakul et al. (2008), Maisuthisakul (2012)
<i>Allium atropurpureum</i> Waldst. and Kit.	Purple-Flowered Onion	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium bisceptrum</i> S. Watson	Aspen Onion	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium bodeanum</i> auct. = <i>Allium walteri</i> Regel.	None	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium bolanderi</i> S. Watson	Bolander's Onion	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium brevistylum</i> S. Watson	Short-Style Onion	Flowers raw, used as a garnish on salads	Fern (1992–2003)

(continued)

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Scientific name	English/common vernacular name	Flower edible uses	References
<i>Allium canadense</i> L.	Canadian Garlic	Flowers raw, used as a garnish on salads	Fern (1992–2003)
<i>Allium carinatum</i> L.	Keeled Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium carolinianum</i> DC.	Jambo-Pharan, Janglee Piyaz, Ladam, Markua	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium cepa</i> L.	Garden Onion, Bulb Onion, Onion, White Onion	Flowers eaten raw, used as garnish on salads; flowers simmered in soups, eaten in salads or dipped in batter and fried as fritters	Schofield (2003), Fern (1992–2003), van der Meer and Leong (1994)
<i>Allium cepa</i> var. <i>aggregatum</i> G. Don	Potato Onion	Young inflorescence and flowers eaten raw; used as a garnish on salads	Fern (1992–2003), Permadi and van der Meer (1994), Maisuthisakul et al. (2008)
<i>Allium cernuum</i> Roth	Nodding Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium chinense</i> G. Don	Rakkyo	Flowers and young seedpods eaten raw; flowers used as a garnish on salads	Read (1946), Fern (1992–2003), van der Meer and Agustina (1994)
<i>Allium condensatum</i> Turcz.	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium cupani</i> Raf.	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium douglasii</i> Hook.	Douglas' Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium dregeanum</i> Kunth	Wild Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium drummondii</i> Regel	Prairie Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium fistulosum</i> L.	Welsh Onion	Flowers eaten raw, used as garnish on salads	Oyen and Soenoedjji (1994), Fern (1992–2003)
<i>Allium flavum</i> L.	Small Yellow Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium galanthum</i> Kar. and Kir.	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium geyeri</i> var. <i>tenerum</i> M.E. Jones	Bulbil Onion, Geyer's Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium giganteum</i> Regel	Giant Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium grayi</i> Regel = <i>Allium macrostemon</i> Bunge	Chinese Garlic, Japanese Garlic, Water Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium hookeri</i> Thwaites	Hooker Chives	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium kunthii</i> G. Don	Kunth's Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium kurrat</i> Schweinf. Ex K. Krause	Kurrat, Egyptian Leek	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium ledebourianum</i> Schult. and Schult. F.	Giant Siberian Chives; Asatsuki (Japanese)	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)

<i>Allium macleanii</i> Baker	Maclean Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium macropetalum</i> Rydb.	Large Flower Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium macrostemon</i> Bunge	Macrostemon Onion, No-Binu	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium moly</i> L.	Golden Garlic	Flowers eaten raw, have a pleasant onion flavour and used as garnish on salads	Fern (1992–2003)
<i>Allium monanthum</i> Maxim.	Wild Chive; Dan Hua Xie (Chinese); Hime Nira (Japanese)	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium mutabile</i> Michx. = <i>Allium canadense</i> var. <i>canadense</i>	Canada Garlic, Meadow Garlic, Wild Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium neapolitanum</i> Cirillo	Daffodil Garlic	Flowers eaten raw or cooked, excellent in salads	Fern (1992–2003)
<i>Allium obliquum</i> L.	Twisted leaf Garlic, Lopsided Ornamental Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium oleraceum</i> L.	Field Garlic	Flowers eaten raw, used as garnish on salads and as flavouring in soups and stews	Facciola (1990), Fern (1992–2003)
<i>Allium orientale</i> Boisse	Oriental Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium oschaninii</i> O. Fedtisch.	French Gray Shallot	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium paradoxum</i> (M. Bieb.) G. Don	Few-Flowered Leek	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium pendulinum</i> Ten.	Italian Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium platycaule</i> S. Watson	Flat-Stem Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium porrum</i> L. = <i>Allium ampeloprasum</i> L.	Leek, Garden Leek	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium przewalskianum</i> Regel	Ladakh Onion, Flowering Onion, Przewalski's Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium ramosum</i> L.	Flowering Leek, Fragrant-Flowered Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium roseum</i> L.	Rosy Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium rubellum</i> M. Bieb	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium rubrum</i> Osterh. = <i>Allium geyeri</i> var. <i>tenerum</i> M.E. Jones	Bulbil Onion, Geyer's Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium ruhmerianum</i> Asch. ex E.A. Durand and Barratte	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium sacculiferum</i> Maxim.	None	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Allium sativum</i> L.	Garlic	Flower peduncles used as vegetable	Tanaka (1976), Facciola (1990), Woodward (2000), van der Meer and Permedi (1994)
<i>Allium sativum</i> var. <i>ophioscorodon</i> (Link) Döll	Ophio Garlic, Spanish Garlic	Flower peduncles used as vegetable	Facciola (1990), Fern (1992–2003)
<i>Allium schoenoprasum</i> L.	Garden Chives	Flowers eaten fresh, tossed in salads or made into herb vinegars and butters; flowers simmered in soups, eaten in salads or dipped in batter and fried as fritters; flowers eaten in omelette, cheese and fish dishes or used as garnish	Burnie and Fenton-Smith (1996), Schofield (2003), Tanaka (1976), Facciola (1990), Lauderdale and Evans (1999), Roberts (2000), Newman and O'Connor (2009)
<i>Allium schoenoprasum</i> subsp. <i>sibiricum</i> Hayek and Markgraf = <i>Allium schoenoprasum</i> L.	Garden Chives	The bulb, root, leaves and flowers of most <i>Allium</i> plants are edible, although only the bulbs or leaves are usually consumed, depending on species	Facciola 1990)
<i>Allium scorodoprasum</i> L.	Rocambole	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium scorodoprasum</i> subsp. <i>rotundum</i> (L.) Stearn = <i>Allium rotundum</i> subsp. <i>rotundum</i>	Sand Leek; Ail Arrondi (French)	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium semenovii</i> Regel	Semenov's Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium senescens</i> L.	German Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium sphaerocephalon</i> L.	Round-Headed Leek, Round-Headed Garlic, Ball-Head Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium splendens</i> Willd. ex Schult. and Schult.f.	Glittering Onion; Miyama-Rakkyo (Japanese)	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium stellatum</i> Nutt. Ex Ker Gawl.	Prairie Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium stipitatum</i> Regel	Persian Shallot	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium stracheyi</i> Baker	Dunna, Pharan (Central Himalaya)	Flowers eaten raw; used as a garnish on salads; used as condiment in Central Himalaya	Laferriere (1992), Fern (1992–2003)
<i>Allium suaveolens</i> Jacq.	Fragrant Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium subhirsutum</i> L.	Hairy Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium textile</i> A. Nelson and J. F. Macbr.	Textile Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium thunbergii</i> G. Don	Japanese Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)

<i>Allium tricoccum</i> Sol.	Wood Leek	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium triquetrum</i> L.	Angled Onion, Three-Cornered Garlic	Flowers eaten raw; juicy with a mild garlic flavour, they make a tasty and decorative garnish on salads	Fern (1992–2003)
<i>Allium tuberosum</i> Rottler ex Spreng.	Garlic Chives	Inflorescence, flowers, unopened flower buds and flower peduncle used in Asian cooking Chive flowers have a mild onion flavour and are surprisingly crunchy. They are widely used tossed in salads, pasta, omelettes and scrambled eggs. They can be added to white fish dishes or to cheese sauce to give that extra bite	Van der Meer (1994), Facciola (1990), Woodward (2000), Tanaka and Nguyen (2007), Newman and O'Connor (2009), Anonymous (2012a)
<i>Allium unifolium</i> Kellogg	One-Leaved Onion	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium ursinum</i> L.	Wild Garlic	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium validum</i> S. Watson	Pacific Onion, Pacific Mountain Onion, Swamp Onion, Wild Onion,	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium victorialis</i> L.	Alpine Leek	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium wallichii</i> Kunth	Jimbur	Flowers eaten raw, used as garnish on salads	Fern (1992–2003)
<i>Allium x proliferum</i> (Moench) Schrad. ex Willd.	Beltsville Bunching Onion, Egyptian Onion, Top Onion	Inflorescence bulbils, bulbs and leaves used as spice	Siedmann (2005)
<i>Narcissus jonquilla</i> L.	Jonquil	Flowers eaten raw or candied and made into desserts	Crowhurst (1972), Facciola (1990)
<i>Tulbaghia alliacea</i> L.f.	Society Garlic	Flowers regarded as a delicacy by the native Zulu women	Facciola (1990), Newman and O'Connor (2009)
<i>Tulbaghia violacea</i> Harv.	Society Garlic	Flowers eaten raw or cooked; added to salads, used as a garnish or as a flavouring in cooked foods	Facciola (1990), Harris (1975)
Anacardiaceae			
<i>Mangifera indica</i> L.	Mango	Flowers are edible	Facciola (1990)
<i>Pistacia terebinthus</i> L.	Turpentine Tree	Flowers edible raw	Deane (2007–2012w)
<i>Spondias malayana</i> Kostermans	Malaysian Hog-Plum, Malaysian Mombin Plum	Inflorescence used as food flavouring	Jansen (1999)
<i>Spondias mangifera</i> Willd. = <i>Spondias pinnata</i> (L.f.) Kurz	Hog Plum, Malayan Mombin, Amra, Buah Amra	Tender panicles eaten steamed or dressed as salad, sour flowers used as flavouring	Burkill (1966), Ochse and van den Brink (1980), Facciola (1990)
Anthericaceae			
<i>Dichopogon fimbriatus</i> (R.Br.) J.F. Macbride	Nodding Chocolate Lily		Harden (1993)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Dichopogon stricatus</i> (R.Br.) Baker	Chocolate Lily		Harden (1993)
Apiaceae			
<i>Anethum graveolens</i> L.	Dill	Inflorescences used to flavour pickled cucumbers, onions, vinegar, sauces, gravies, stews, pastries and bread. Flowers added to fish dishes and omelettes or sprinkle over cooked vegetables. Whole flowers are added to pickled gherkins, cucumbers or beetroots	Hedrick (1972), Facciola (1990), Garland (1993), Van den Bergh (1994a, b), Lauderdale and Evans (1999), Newman and O'Connor (2009), Anonymous (2012a)
<i>Angelica archangelica</i> L.	Angelica, Garden Angelica, Holy Ghost, Wild Celery, Norwegian Angelica	Flowers are excellent with fish and the flower stems are especially popular candied; flowers used in pastries, cakes and confectionary	Uphof (1968), Tanaka (1976), Facciola (1990), Deane (2007–2012x)
<i>Anthriscus cerefolium</i> (L.) Hoffm.	Chervil, French Parsley	Flowers used as seasoning	Hedrick (1972), Facciola (1990), Lauderdale and Evans (1999), Newman and O'Connor (2009)
<i>Bumelia bulbocastanum</i> L.	Earth Chestnut, Pignut	Flowers and seeds used as condiment	Uphof (1968), Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Carum carvi</i> L.	Caraway	Flowers used in salads, peach 'pashka'	Roberts (2000)
<i>Cogswellia nudicaulis</i> M.E. Jones	Barestem Biscuitroot	Flowers used as beverage	Yanovsky (1936)
<i>Coriandrum sativum</i> L.	Coriander	The flowers are as adaptable as the leaves in a variety of different dishes. Flowers are scattered over cauliflower, added to the end of a stir-fry or added to cream cheese. A few flowers are scattered over an orange fruit salad to enhance the flavour. Some dishes include aubergine and coriander lunch dish; leeks, kale and coriander flower soup; green bean and potato salad with coriander flowers	Roberts (2000), Newman and O'Connor (2009), Kaisoon et al. (2011), Anonymous (2012a)
<i>Crithmum maritimum</i> L.	Samphire, Rock Samphire	Raw blossoms used in salad	Deane (2007–2012q)
<i>Cryptotaenia canadensis</i> (L.) DC.	Honewort, Wild Chervil	Young leaves, stems and flowers eaten raw or cooked as potherb	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Cryptotaenia japonica</i> Hassk.	Mitsuba, Japanese Honewort, Japanese Parsley	Flowers are edible cooked	Deane (2007–2012p)
<i>Daucus carota</i> L.	Carrot, Queen Anne's Lace, Wild Carrot	The flower clusters can be french fried to produce a carrot-flavoured gourmet's delight	Facciola (1990)
<i>Ferula assa-foetida</i> L.	Asafoetida, Devil's Dung	Immature flower heads eaten fresh	Garland (1993)

<i>Foeniculum vulgare</i> Mill.	Fennel, Sweet Fennel	Flowers used in fruit pies	Barash (1997), Lauderdale and Evans (1999), Roberts (2000), Newman and O'Connor (2009)
<i>Heracleum lanatum</i> Michx.	Cow Parsnip, Indian Celery, Pushki	Young flowers eaten	Yanovsky (1936)
<i>Heracleum maximum</i> Bartr.	Common Cow Parsnip	Flower stalks and leaf petioles peeled and eaten fresh	Perry (1952), Turner et al. (1980)
<i>Heracleum sphondylium</i> subsp. <i>montanum</i> (Schleich. ex Gaudin.) Michx. = <i>Heracleum lanatum</i> Michx.	Cow Parsnip, Indian Celery, Pushki	Young flowers are eaten	Uphof (1968), Usher (1974), Tanaka (1976)
<i>Levisticum officinale</i> W.D.J. Koch	Lovage, Garden Lovage	Flowers are eaten	Facciola (1990), Lauderdale and Evans (1999)
<i>Lomatium macrocarpum</i> (Hook. & Arn.) J.M. Coult. and Rose = <i>Lomatium hallii</i> (S. Watson) J.M. Coult. and Rose	Bigseed Biscuit Root, Bigseed Lomatium	Tea prepared from flowers	Facciola (1990)
<i>Lomatium nudicaule</i> (Pursh) J.M. Coult. and Rose	Beach Dill, Hogfennel, Indian Celery, Naked Desert Parsley, Naked-Stemmed Pestle Parsnip, Wild Celery,	An infusion of leaves, stems and flowers used as a beverage	Hedrick (1972), Facciola (1990)
<i>Myrrhis odorata</i> (L.) Scop.	Sweet Cicely, Cicely, Greater Chervil, Roman Plant, Cow Chervil, Smooth Cicely, Sweet Fern, British Myrrh, Shepherd's Needle, Sweets	The sweet anise-flavoured flowers are lovely added to apple, plum or rhubarb tarts	Brown (2011)
<i>Pimpinella saxifraga</i> L.	Black Caraway, Burnet Saxifrage, Greater Burnet, Saxifrage Burnet	Flower heads made into wine	Facciola (1990)
<i>Saposhnikovia divaricata</i> (Turcz.) Schischk.	Siler Root, Fang Feng (Chinese)	Leaves, flowers boiled used as tea	Hu (2005)
<i>Smyrniolum olusatrum</i> L.	Alexanders, Black Lovage	Flower buds eaten raw, added to salads	Larkcom (1980), Loewenfeld and Back (1978)
<i>Smyrniolum perfoliatum</i> L.	Perfoliate Alexanders	Flower buds eaten raw, added to salads	Larkcom (1980), Loewenfeld and Back (1978)
<i>Trachyspermum roxburghianum</i> (DC.) H. Wolff	Wild Celery; Ajmod (Hindi); Ajamodika (Sanskrit); Phakchee Rai, Phak Sangae (Thai)	Young plants are harvested and consumed fresh as side dish or added to soup. Dried whole plant with inflorescence is used as spice to flavour curries	Jircas (2010)
<i>Zizia aurea</i> W.D.J. Koch.	Golden Alexanders	The flowers, minus pedicels, are tossed in green salad. They are also a delicious cooked vegetable when used in a similar manner to broccoli	Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
Apocynaceae			
<i>Asclepias asperula</i> (Decne.) Woodson	Antelope Horns	Unopened flower buds eaten cooked. They taste somewhat like peas. They are used like broccoli. Flowers are used as a flavouring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup	Harrington (1974), Harris (1975), Facciola (1990), Kavasch (2005)
<i>Asclepias galioides</i> H. B. K.	Bedstraw Milkweed	Young buds eaten by boys of Zufii Indians of New Mexico	Yanovsky (1936)
<i>Asclepias hallii</i> A. Gray	Purple Silkweed	Flower buds eaten raw or cooked, taste like peas	Balls (1962), Usher (1974)
<i>Asclepias incarnata</i> L.	Swamp Milkweed	Unopened flower buds eaten cooked. They taste somewhat like peas. They are used like broccoli. Flowers are used as a flavouring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup	Yanovsky (1936), Uphof (1968), Usher (1974), Facciola (1990)
<i>Asclepias lanceolata</i> Walter	Purple Silkweed	Flowers edible	Wikipedia (2012)
<i>Asclepias mexicana</i> Cav.	Mexican Milkweed	Young blossoms eaten cooked	Yanovsky (1936), Kunkel (1984)
<i>Asclepias ovalifolia</i> Decne.	Oval-Leaved Milkweed, Dwarf Milkweed	Unopened flower buds eaten cooked. They taste somewhat like peas. They are used like broccoli. Flowers are used as a flavouring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup	Hedrick (1972), Harris (1975), Facciola (1990), Kavasch (2005)
<i>Asclepias pumila</i> (A. Gray) Vail.	Low Milkweed	As above	Harrington (1974), Facciola (1990), Kavasch (2005)
<i>Asclepias purpurascens</i> L.	Purple Milkweed	Flower buds eaten raw or cooked	Usher (1974), Elias and Dykeman (2009)
<i>Asclepias quadrifolia</i> Jacq.	Fourleaf Milkweed	Unopened flower buds eaten cooked. They taste somewhat like peas. They are used like broccoli. Flowers are used as a flavouring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup	Harrington (1974), Harris (1975), Kavasch (2005)
<i>Asclepias rubra</i> L.	Red Silkweed	The flower clusters can be boiled down to make a sugary syrup	Coffey (1993)

<i>Asclepias speciosa</i> Torr.	Showy Milkweed	Flowers eaten raw or boiled in Montana and California; buds boiled for soup or with meat	Yanovsky (1936), Balls (1962), Usher (1974)
<i>Asclepias syriaca</i> L.	Common Milkweed, Milkweed	Unopened flower buds eaten cooked. They taste somewhat like peas. They are used like broccoli. Flowers are used as a flavouring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup. Flowers stewed by Chippewa Indians	Yanovsky (1936), Harrington (1974), Harris (1975), Facciola (1990), Moerman (1998), Kavasch (2005)
<i>Asclepias tuberosa</i> L.	Butterfly Weed, Canada Root, Chigger Flower, Chiggerflower, Fluxroot, Indian Paintbrush, Indian Posy	Flowers produce so much nectar that crystallizes out into small lumps which can then be eaten like sweets. The flower clusters can also be boiled down to make a sugary syrup	Yanovsky (1936), Harrington (1974), Facciola (1990)
<i>Asclepias viridiflora</i> Raf.	Green Milkweed	Flowers eaten and used like common milkweed	Harris (1975), Facciola (1990)
<i>Dregea volubilis</i> (L.f.) Benth. ex Hook.f.	Sneeze Wort; Kratung-Maba (Thai)	Young shoot and inflorescence, which are available year-round, are cooked in a curry with dried, smoked fish	Jircas (2010)
<i>Fernaldia pandurata</i> (A. DC.) Woodson	Loroco, Quilite (El Salvador, Guatemala, Mexico)	Loroco is small green unopened flower buds used as an herb for flavouring in Central America. It is used in salads, rice dishes, stews and sauces. In El Salvador and in Honduras, it is added to the fillings in 'pupusas'	Facciola (1990), Morton et al. (1990)
<i>Holostemma rheedii</i> Wall.	Palay Keeray (Tamil); Pala Kura (Telugu)	Flowers eaten in India (Deccan)	Shortt (1887–1888), Watt (1908)
<i>Hoya viridiflora</i> (R.Br.) Griff	Hoya; Cooringee Keeray (Tamil)	Flowers eaten uncooked or prepared into a 'bhaji'. Flower powder (said to be pollen) is removed from the flowers and used in the preparation of 'Dhoklas', a small, thick bread	Shortt (1887–1888), Gammie (1902), Paton and Dunlop (1904), Watt (1908)
<i>Leichhardtia australis</i> R.Br. = <i>Marsdenia australis</i> (R.Br.) Druce	Doubah, Bush Banana	Flowers, leaves, shoots, roots, seed eaten	Low (1989)
<i>Leptadenia hastata</i> Vatke = <i>Leptadenia lancifolia</i> (Schumacher & Thonn.) Decne.	Idar; Cheila, Kayilla, Hayilla (Konsogna, Ethiopia); Moroh (Somali)	Flowers and tender shoots eaten like spinach	Dalziel (1937), Hedrick (1972), Facciola (1990)
<i>Morrenia odorata</i> (Hook. & Arn.) Lindl.	Milkweed Vine, Latex Plant, Strangler Vine	The flowers are very sweet and floral and can be eaten raw	Deane (2007–2012n)
<i>Orbea namaquensis</i> (N.E.Br.) Leach	Carrion Flower, Orbea; Aasblom, Bokhoring (Afrikaans)	Flowers eaten	Aiyambo (2010)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Pergularia daemia</i> (Forsk.) Chiov.	Trellis-Vine; Utaran, Sagovani, Aakasan, Gadaria Ki Bel, Jutak (Hindi)	Flowers cooked as potherbs	Fox et al. (1982), Tanaka (1976), Facciola (1990)
<i>Plumeria obtusa</i> L.	Frangipani, Temple Flower, Pagoda Tree	Flowers popular in omelettes, fried, in salads, as dried herbal tea. The crispy and tasty flavour of the tempura style fried flowers may accompany 'Khanom Jeen Nam Ya' (Chinese spaghetti with fish curry soup). Flowers also eaten in sweetmeats	Wetwiyaklung et al. (2008), Wongwattanasathien et al. (2010), Kaisoon et al. (2011)
<i>Plumeria rubra</i> L.	Frangipani, Temple Flower, Temple Tree, Tree of Life, West Indian Jasmine,	Flowers used as above	Burkill (1966), Kunkel (1984), Hu (2005)
<i>Rhyncharhena linearis</i> (Decne.) K.L. Wilson	Climbing Purple-Star, Purple Pentatropae	Flowers and buds eaten	Cribb and Cribb (1975)
<i>Telosma cordata</i> (Burm.f.) Merr.	Chinese Violet, Cowslip Creeper, Fragrant Telosma, Tonkin Creeper, Tonkin Jasmine; Thiên Lý, Hoa Lý, Hoa Lý (Vietnamese)	Flowers and young leaves eaten	Tanaka and Nguyen (2007)
<i>Telosma minor</i> (Andrews) Craib = <i>Telosma cordata</i> (Burm.f.) Merr.	Chinese Violet, Cowslip Creeper, Fragrant Telosma, Tonkin Creeper, Tonkin Jasmine	Flowers eaten raw or cooked in light curry, steamed or fried	Pongpangan and Poobrasert (1985), Wetwiyaklung et al. (2008), Kaisoon et al. (2011)
<i>Telosma procumbens</i> (Blanco) Merrill	Cowslip Creeper; Latok (Tagalog), Cam Thảo Đá Bia (Vietnamese)	Flowers eaten in the Philippines	Van den Bergh (1994a, b)
<i>Vallaris heynei</i> Spreng. = <i>Vallaris solanacea</i> (Roth) O Kuntze	Bread Flower	Flowers eaten in Thailand	Burkill (1966), Facciola (1990)
<i>Vallaris solanacea</i> (Roth) O Kuntze	Bread Flower	Flowers eaten in Thailand	Van den Bergh (1994a, b)
<i>Wattakaka volubilis</i> (L.f.) Stapf = <i>Dregea volubilis</i> (L.f.) Benth. ex Hook.f.	Green Milkwood Climber	Young leaves, tender stem and green flowers cooked locally as vegetables	Pongpangan and Poobarasert (1985)
<i>Wrightia tinctoria</i> R.Br.	Dyers' Oleander, Pala Indigo Plant, Sweet Indrajao	Flowers are edible	Jukema et al. (1992)

Aponogetonaceae				
<i>Aponogeton distachyos</i> L.f.	Cape Pond Lily, Cape Asparagus, Water Hawthorn; Waterblommertjie (Afrikaans)	Flowering spike—pickled or used as a spinach or asparagus substitute. The flowers are used as a flavouring and flower buds used as a key ingredient in tempura, 'waterblommertjes' and in the traditional South African dish of 'waterblommertjie bredie' (lamb stew)	Uphof (1968), Hedrick (1972), Facciola (1990), Roberts (2000)	
Araceae				
<i>Amorphophallus</i> spp.	Corpse Flower, Snake Plant; Buk (Thai)	Non-stinking flowers cooked for food	Pongpangan and Poobarasert (1985)	
<i>Lasia spinosa</i> (L.) Thaw.	Spiny Taro; Chengmora (Assam); Phak Naam (Thai)	Flower spadix eaten cooked as vegetable	Patri and Borah (2007)	
<i>Peltandra virginica</i> (L.) Schott	Green Arrow Arum	Spadix (the flowering stem) and berries—cooked. A great delicacy, but they must be thoroughly well cooked otherwise they are poisonous	Uphof (1968), Hedrick (1972), Tanaka (1976)	
<i>Schismatoglottis calyptrata</i> (Roxb.) Zollinger and Moritzi	Guang Xi Luo Yan (Chinese); Dujaruk (Malay)	Inflorescences are eaten	Van den Bergh (1994a, b)	
<i>Spathiphyllum phryniifolium</i> Schott.	Lirio, Busnay	Tender inflorescences eaten raw or used in soups or fried in egg batter	Martin and Ruberté (1975), Williams (1981), Facciola (1990)	
<i>Typhonium trilobatum</i> (L.) Schott.	Bengal Arum, Lobed Leaf Typhonium; Syam Kachu, Sam Ghas, Sam Kochu (Assamese)	Spadix are eaten cooked as vegetable by Bodo and Rajbongshi people in Assam	Patri and Borah (2007)	
<i>Wolffia globosa</i> (Roxb.) Hartog and Plas	Asian Watermeal, Tropical Watermeal; Pham, Khai Nae, Khai Nam (Thai)	Inflorescences are eaten	Dadaung et al. (2011)	
Araliaceae				
<i>Aralia armata</i> (Wallich ex G. Don) Seemann	Guang Dong Sonu Mu (Chinese); Tang Nok (Thai)	Young leaves, unopened flowers cooked, excellent	Pongpangan and Poobarasert (1985)	
<i>Eleutherococcus gracilistylus</i> (W.W.Sm.) S.Y. Hu =	Wu Jia Pi, Xi Zhu Wu Jia (Chinese)	Flowers are edible	Kunkel (1984)	
<i>Eleutherococcus nodiflorus</i> (Dunn) S.Y.Hu				
<i>Trevesia palmata</i> (Roxb. ex Lindl.) Vis.	Snowflake Aralia; Taang Luang (Thai)	Young flower buds, available by the end of rainy season, are eaten after cooking in hot and spicy curry in Thailand. Flower buds eaten cooked by Garos and Bodos peoples in Assam and in Meghalaya	Tanaka (1976), Facciola (1990), Patri and Borah (2007), Jircas (2010), Medhi and Borthakur (2012)	

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Areaceae</i>			
<i>Arenga ambong</i> Becc. = <i>Arenga undulatifolia</i> Becc.	Ambung, Aren Gelora	Buds are edible	Brown (1954), Tanaka (1976), Facciola (1990)
<i>Arenga engleri</i> Becc.	Formosan Sugar Palm	Buds are eaten, sap from inflorescence made into sugar	Tanaka (1976), Facciola (1990)
<i>Arenga pinnata</i> (Wurmb) Merr.	Sugar Palm, Arenga Palm, Areng Palm, Black-Fibre Palm, Gomuti Palm, Aren	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery, almost sap juice to make fresh drink, saguir or lightly fermented beverage, vinegar inflorescence peduncle tap for treacle, sugar, alcohol, toddy, tuba and vinegar; bids are cooked as a vegetable or pickled	Uphof (1968), Ochse and van den Brink (1980), Jones (1984), Facciola (1990), Smits (1996)
<i>Astrocaryum mexicanum</i> Lieb. ex Mart.	Chocho, Waree Palm	Flowers edible	Haynes and McLaughlin (2000)
<i>Borassus aethiopicum</i> Mart.	African Fan Palm, African Palmyra Palm, Deleb Palm, Ron Palm, Toddy Palm, Black Rhun Palm, Ronier Palm	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery Sap from cut inflorescence provides a drink; sap also processed into wine, alcohol or vinegar and dried into sugar cakes	Tanaka (1976), Jones (1984), Facciola (1990), Haynes and McLaughlin (2000)
<i>Borassus flabellifer</i> L.	Asian Palmyra Palm, Toddy Palm, Sugar Palm, Cambodian Palm	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery, almost sap juice to make lightly fermented beverage, toddy	Menninger (1977), Jones (1984), Morton (1988), Facciola (1990), Haynes and McLaughlin (2000)
<i>Calyptronoma dulcis</i> (C. Wright ex Griseb.) L.H. Bailey = <i>Calyptronoma plumeriana</i> (Mart.) Lourteig	Manaca, Palma Manaca (Spanish)	Flowers used for making candy in Cuba	Kunkel (1984), Facciola (1990)
<i>Caryota urens</i> L.	Fish Tail Palm	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery	Jones (1984)
<i>Chamaedorea costaricana</i> Oerst.	Parlour Palms	Young inflorescences (flower stems) are eaten raw, deep fried in batter or boiled or use in soups in Costa Rica	Williams (1981), Facciola (1990)
<i>Chamaedorea elegans</i> Mart.	Parlour Palm, Neanthe Bella Palm	Unopened inflorescences eaten raw or cooked	Haynes and McLaughlin (2000)
<i>Chamaedorea graminifolia</i> H. Wendl.	Pacaya, Xiat Palm	Unopened flower clusters eaten in salads, folded into egg batter and fried or used as boiled vegetables in Central America	Uphof (1968), Tanaka (1976), Williams (1981), Facciola (1990)

<i>Chamaedorea tepejilote</i> Liebm.	Pacaya Palm, Tepejilote Palm	Selectively propagated plants are grown for the young male inflorescences called 'pacyaya' eaten raw, boiled or fried in egg batter	Hedrick (1972), Williams (1981), Facciola (1990), Haynes and McLaughlin (2000)
<i>Cocos nucifera</i> L.	Coconut	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery, almost sap juice to make lightly fermented beverage, toddy, vinegar Yg inf enclosed in spathe eaten in lalab	Ochse and van den Brink (1980), Jones (1984)
<i>Collina elegans</i> (Mart.) Liebm. ex Oerst. = <i>Chamaedorea elegans</i> Mart.	Parlour Palm, Neanthe Bella Palm,	Young unexpanded flower spikes eaten like asparagus	Uphof (1968), Hedrick (1972), Facciola (1990)
<i>Copernicia cerifera</i> (Arruda) Mart. = <i>Copernicia prunifera</i> (Mill.) H.E. Moore	Carnauba Wax Palm	Young inflorescence eaten	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Corypha utan</i> Lam.	Gebang Palm, Ibus	Sap from inflorescence used to make wine and sugar	Haynes and McLaughlin (2000)
<i>Euglossona utilis</i> Becc.	Kadjatoa	Purple flower pollen used as condiment	Haynes and McLaughlin (2000)
<i>Guilielma gasipaes</i> (Kunth) L.H. Bailey = <i>Bactris gasipaes</i> Kunth var. <i>gasipaes</i>	Peach Palm, Pejibaye	Flowers may be chopped and added to salads	Facciola (1990)
<i>Hyphaene petersiana</i> Klotzsch ex Mart.	African Ivory Nut Palm	Palm wine made by fermenting mesocarp pulp and from sap by tapping flower bud (nondestructive)	Haynes and McLaughlin (2000)
<i>Iriartea ventricosa</i> Mart. = <i>Iriartea deltoidea</i> Ruiz and Pav.	Stilt Palm, Copa Palm, Barrigona Palm, Huacrapona	Flowers yield an ash used as a substitute for common salt in Guiana, Brazil	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Mauritia flexuosa</i> L.f.	Buriti Palm, Wine Palm	Sap from the inflorescence is drunk or made into palm wine or sugar	Hedrick (1972), Cavalcante (1977), Facciola (1990)
<i>Nannorrhops ritchiana</i> (Griff.) Aitch.	Mazari Palm	Young inflorescences eaten	Watt (1908), Hedrick (1972), Tanaka (1976), Facciola (1990)
<i>Nypa fruticans</i> Wurm	Mangrove Palm, Nipa, Nipa Palm, Nipah, Golpata (Bangladesh, India)	Inflorescences cooked in nipa syrup to produce an energy-giving sweetmeat	Hedrick (1972), Facciola (1990)
<i>Oncosperma filamentosum</i> (Kunth) Blume = <i>Oncosperma tigillarum</i> (Jack) Ridl.	Nibung, Nibong, Nibung Palm	Flowers used to flavour rice in Malaysia	Burkill (1966), Hedrick (1972), Tanaka (1976), Facciola (1990)
<i>Phoenix canariensis</i> Chabaud	Canary Island Date Palm	Sap from cut inflorescence stalk extracted to make palm sugar	Jones (1984)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Phoenix dactylifera</i> L.	Date Palm	Sap from cut inflorescence stalk extracted to make palm sugar, jaggery; male inflorescence eaten as delicacy	Jones (1984), Facciola (1990)
<i>Phoenix reclinata</i> Jacq.	Sengal Dat Eplam, Wild Date Palm; Wilde-Dadelboom (Afrikaans)	Sap from cut inflorescence stalk extracted to make palm sugar	Jones (1984)
<i>Phoenix sylvestris</i> (L.) Roxb.	Silver Date Palm, Toddy Palm, Wild Date Palm, India Date Palm, Date-Sugar Palm	Sap from cut inflorescence stalk extracted to make palm sugar	Jones (1984)
<i>Raphia hookeri</i> G. Mann and H. Wendl.	Raffia Palm, Wine Palm	Juice produced after removing immature inflorescence used to make wine	Hedrick (1972), Kunkel (1984), Facciola (1990), Haynes and McLaughlin (2000)
<i>Raphia vinifera</i> P. Beauv.	Bamboo Palm; King Bamboo Palm	Juice produced after removing immature inflorescence used to make wine	Hedrick (1972), Kunkel (1984), Facciola (1990), Haynes and McLaughlin (2000)
<i>Rhopalostylis sapida</i> (Sol. ex G. Forst.) H. Wendl. and Drude	Nika Palm, Nikau Palm	Young inflorescence eaten	Hedrick (1972), Facciola (1990)
<i>Trachycarpus fortunei</i> (Hook.) H. Wendl.	Chusan Palm, Chinese Windmill Palm	Unopened inflorescences eaten raw or cooked. The fresh flowers and terminal bud are also consumed	Hedrick (1972), Tanaka (1976), Stuart (1979), Facciola (1990), Haynes and McLaughlin (2000)
Aristolochiaceae			
<i>Aristolochia bracteata</i> Retz.	Dutchman's Pipe, Worm Killer; Um-Ghaigla (Arabic)	Flowers used as a tea substitute in southern Kordofan, Sudan	Abdelmuti (1991) (cited by Freedman 2013)
<i>Asarum canadense</i> L.	American Wild Ginger	Flowers used as flavouring, have fragrance and taste liken to ginger	Facciola (1990)
Asparagaceae			
<i>Agave attenuata</i> Salm-Dyck	Century Plant, Foxtail Agave	Young fat flower stalks roasted	King (2007)
<i>Agave americana</i> L.	Aguamiel, Century Plant, Maguey, American Aloe	The sweet sap from the flowering stem is drunk or fermented into an alcoholic beverage pulque which open distillation yields the spirit mescal. Kickapoo Indians baked the flower stalks on hot stones and made into 'quiote'	Facciola (1990), Deane (2007–2012a)
<i>Agave angustifolia</i> Haw.	Caribbean Agave	Young fat flower stalks roasted	King (2007)
<i>Agave atrovirens</i> Karw.ex Salm-Dyck	Century Plant, Maguey	Flower stalks roasted and eaten	Facciola (1990), Deane (2007–2012a)

<i>Agave cantala</i> (Haw.) Roxb. ex Salm-Dyck	Cantala, Bombay Aloe, Cebu Maguuey, Manila Maguuey	Flower stalks roasted and eaten	Deane (2007–2012a)
<i>Agave chrysantha</i> Peebles	Golden-Flowered Agave	Flower stalks roasted and eaten	Deane (2007–2012a)
<i>Agave complicata</i> Trel. ex Ochoa = <i>Agave americana</i> subsp. <i>americana</i>	Century Plant	Flower stalks roasted and eaten	Deane (2007–2012a)
<i>Agave crassipina</i> Trel. = <i>Agave salmiana</i> subsp. <i>crassipina</i> (Trel.) Gentry	Giant Agave, Pulque Agave	Flower stalks roasted and eaten	Deane (2007–2012a)
<i>Agave deserti</i> Engelm.	Desert Agave, Mescal, Century Plant, Maguuey	Flowers and buds are eaten. Young flower stalks are baked until they form a sweet, starchy cake called 'mescal'. Nectar from flowers consumed directly by Indians	Tanaka (1976), Clarke (1977), Facciola (1990)
<i>Agave palmeri</i> Engelm.		Flower stalks roasted and eaten	Deane (2007–2012a)
<i>Agave parryi</i> Engelm.	Century Plant, Parry's Agave	Young fat flower stalks roasted and eaten, nectar from the flowering stalk made into a sweet syrup	Facciola (1990), Deane (2007–2012a)
<i>Agave salmiana</i> Otto ex Salm-Dyck	Pulque Agave, Century Plant	Flower stalks cut for 'quiteo' which is sold in the streets and chewed like sugarcane in southwestern America	Uphof (1968), Facciola (1990), Deane (2007–2012a)
<i>Agave shawii</i> Engelm.	Shaw's Agave, Century Plant	Sweet nectar is used in California	Yanovsky (1936)
<i>Agave shrevei</i> Gentry		Flower stalk eaten	Laferriere et al. (1991)
<i>Agave sisalana</i> Perrine	Century Plant	Flowers can be boiled or roasted. The stalks before they blossom in summer can also be roasted and taste like molasses. The sap obtained after removal of the stalk can be used to make tequila. Flower nectar can be used to make sauces or sugar and bottled	Deane (2007–2012a)
<i>Agave</i> spp.	Century Plant	Flowers edible	Stangland (2004), McCullough (2007)
<i>Agave stricta</i> Salm-Dyck	Century Plant, Needle Agave, Needle Leaf Agave, Globe Agave, Hedgehog Agave, Hedgehog Century Plant	Flowers lightly cooked and dipped in egg batter for frying	King (2007)
<i>Agave tequilana</i> F.A.C. Weber	Blue Agave, Century Plant	Flowers used as above	Deane (2007–2012a)
<i>Agave utahensis</i> Engelm.	Utah Agave, Century Plant	Flower stalks edible	Harrington (1974), Facciola (1990), Deane (2007–2012a)
<i>Agave vivipara</i> auct. non. = <i>Agave angustifolia</i> Haw.	Century Plant	Flowering stalks eaten in India	Watt (1908)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Aloe barteri</i> Baker = <i>Aloe tenuifolia</i> Lam.	African Aloe	Blossoms used as a soup vegetable in West Africa	Irvine (1952), Uphof (1968)
<i>Aloe candelabrum</i> A. Berger = <i>Aloe ferax</i> Mill.	Bitter Aloe, Red Aloe; Bitteraalwyn, Bergaalwyn (Afrikaans); Inhlaba (Zulu); Ikhala (Xhosa)	Flowers sucked for nectar	Fox et al. (1982), Facciola (1990)
<i>Aloe chabaudii</i> Schönland		Flowers eaten as vegetables	Kunkel (1984), Facciola (1990)
<i>Aloe ferax</i> Mill	Cape Aloe, Bitter Aloe, Red Aloe (English); Bitteraalwyn, Bergaalwyn (Afrikaans); Inhlaba (Zulu); Ikhala (Xhosa)	Flowers sucked for sweet nectar, sippable blossoms	Fox et al. (1982), Facciola (1990), Deane (2007–2012u)
<i>Aloe greebii</i> Schönland	Spotted Aloe; Transvaalalwyn, Grasaalwyn (Afrikaans); Kgopane (Tswana)	Flower buds are a delicacy after being boiled	Kunkel (1984), Facciola (1990), Deane (2007–2012u)
<i>Aloe littoralis</i> Baker	Mopane Aloe; Bergaalwyn, Windhoekaalwyn, Mopanie-Aalwyn (Afrikaans)	Flowers used as potheerbs	Fox et al. (1982), Facciola (1990)
<i>Aloe macrocarpa</i> Tod.	Aloe	Flowers eaten as vegetable	Fox et al. (1982), Facciola (1990)
<i>Aloe marlothii</i> A. Berger	Mountain Aloe	Flowers with nectar that can be consumed, sippable blossoms	Fox et al. (1982), Facciola (1990), Deane (2007–2012u)
<i>Aloe zebrina</i> Baker	Zebra Leaf Aloe, Spotted Aloe	Edible flowers and buds after being boiled. In Angola, they are pressed into cakes	Fox et al. (1982), Facciola (1990), Deane (2007–2012u)
<i>Aspidistra sutepensis</i> K. Larsen	Lilao (Thai)	Steamed flowers eaten as vegetable	Pongpangan and Poobrasert (1985), Maisuthisakul et al. (2008), Maisuthisakul (2012)
<i>Clitocyba brevifolia</i> (Engelm.) Rydb. = <i>Yucca brevifolia</i> Engelm.	Joshua Tree	Young flower buds roasted on hot coals	Yanovsky (1936)
<i>Convallaria keiskei</i> Miq.	Lily of the Valley, Susuran; Kimigage-So (Japanese)	The flowers and flower buds are preserved in salt or mixed with leaf tea and drunk	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Convallaria majalis</i> L.	Lily of the Valley, Convall-Lily, Convallaria, Jacob's Ladder	In some parts of Germany, a wine is prepared from the flowers mixed with raisin	Grieve (1971), Facciola (1990)
<i>Dasylirotion texanum</i> Scheele	Texas Sotol, Sotol	Central bud roasted in mescal pits and used as food by Indians or made into a beverage	Uphof (1968), Facciola (1990)
<i>Dasylirotion wheeleri</i> S. Watson ex Rothr.	Common Sotol, Desert Spoon, Sotol	As above	Uphof (1968), Facciola (1990)

<i>Dichelostemma pulchellum</i> (Salisb.) Heller = <i>Dichelostemma congestum</i> (Sm.) Kunth.	Wild Hyacinth	Flowers eaten raw make a nice decoration in the salad bowl	Moerman (1998), Facciola (1990)
<i>Dichopogon fimbriatus</i> (R.Br.) J.F. Macbr.	Nodding Chocolate Lily	Flowers are edible	Steenbeeke (2001)
<i>Dichopogon strictus</i> (R.Br.) J.G. Baker	Chocolate Lily Grass Lily	Flowers eaten raw; chocolate scented	Cribb and Cribb (1987)
<i>Hesperoyucca whipplei</i> (Torr.) Trel.	Chaparral Yucca	Flowers boiled and eaten	Yanovsky (1936), Tanaka (1976), Facciola (1990)
<i>Hosta</i> spp.	Plantain Lily	Flowers are edible	Deane (2007–2012k, t)
<i>Lomandra longifolia</i> Labill.	Longleaf Mat-Rush	Flowers eaten raw. Tiny creamy flowers eaten taste like peas with flower fragrance, flowers soaked in lemon juice, strained and base juice used as a fruit drink	Cribb and Cribb (1987), Low (1989)
<i>Lomandra</i> spp.	Mat Rush	Tiny creamy flowers eaten	Low (1989)
<i>Ornithogalum pyrenaicum</i> L.	Prussian Asparagus	Young unexpanded inflorescence cooked and served like asparagus vegetables	Grieve (1971), Facciola (1990)
<i>Ornithogalum umbellatum</i> L.	Star of Bethlehem	Flowers eaten baked in bread	Fernald et al. (1958), Hedrick (1972), Facciola (1990)
<i>Peltosanthus tetra</i> Andrews	China Lily; Cu Hua Qiu Zi Cao (Chinese)	The edible part is the inflorescence. This indigenous vegetable has become very popular and more cultivated in some rural areas of northern Thailand	Chaikla et al. (2011)
<i>Polygonum tuberosa</i> L.	Tuberose	Flowers eaten cooked; used in vegetable soups or added to the substrate of 'kecap', an Indonesian soy sauce. The flowers are the source of tuberosa-flower water	MacNicol (1967), Tanaka (1976), Facciola (1990), Roberts (2000)
<i>Samuela carnososana</i> Trel. = <i>Yucca carnososana</i> (Trel.) McKelvey	Palma Barreta	Young flower clusters eaten boiled or roasted in Mexico	Uphof (1968), Tate (1976), Facciola (1990)
<i>Sansevieria gracilis</i> N.E.Br.	Sansevieria	Flowers are edible	Kunkel (1984), Facciola (1990)
<i>Thysanotus patersonii</i> R.Br.	Fringed Lily	Flowers are edible	SERCUL (2011)
<i>Veltheimia bracteata</i> Harv. ex Baker	Winter Red Hot Poker, Forest Lily	Flowers eaten like spinach	Hedrick (1972), Kunkel (1984), Facciola (1990), Deane (2007–2012v)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Yucca aloifolia</i> L.	Aloe Yucca, Spanish Bayonet	Flowers edible raw or cooked. They are delicious raw or can be dried, crushed and used as a flavouring. Flowering stem is peeled and boiled, used like asparagus	Morton (1977), Kunkel (1984), Facciola (1990)
<i>Yucca angustissima</i> Engelm. ex Trevir.	Narrow/leaf Yucca	As above	Harrington (1974)
<i>Yucca baccata</i> Torr.	Banana Yucca, Datil Yucca, Spanish Bayonet	Flower buds edible cooked. The older flowers are best as they are rich in sugar. The flowers, harvested before the summer rains, have been used as a vegetable. Flowering peduncles eaten cooked	Yanovsky (1936), Hedrick (1972), Sweet (1962), Harrington (1974), Clarke (1977), Facciola (1990), Stangland (2004), Elias and Dykeman (2009)
<i>Yucca brevifolia</i> Engelm.	Joshua Tree	Flowers edible cooked. The flower buds, before opening, can be parboiled in salt water to remove the bitterness, drained and then cooked again and served like cauliflower. The opened flowers are rich in sugar and can be roasted and eaten as candy	Tanaka (1976), Tate (1976), Facciola (1990)
<i>Yucca constricta</i> Buckley	Buckley's Yucca	Flowers edible raw or cooked. Delicious raw, they can also be dried, crushed and used as a flavouring. Flowering stem eaten cooked and used like asparagus	Bird (1990)
<i>Yucca elata</i> (Engelm.) Engelm.	Soap Tree Yucca	As above	Tate (1976), Kunkel (1984), Bird (1990), Moerman (1998)
<i>Yucca elephantipes</i> Regel	Spineless Yucca, Soft-Tip Yucca	Petals edible after removal of bitter anthers, used in salad and fried in batter	Uphof (1968), Facciola (1990)
<i>Yucca filamentosa</i> L.	Spoonleaf Yucca, Adam's Needles, Eve's Thread	Blossoms are edible raw or boiled. Flowers also dried, crushed and used as a flavouring. Petals used as garnish and salad. One Mexican dish is sauteed yucca flowers with chipotle	Hedrick (1972), Kunkel (1984), Bird (1990), Belsinger (1990), Facciola (1990), Newman and O'Connor (2009), Deane (2007–2012c, 2007–2012zb)
<i>Yucca filifera</i> Chadaub	Palm China, China Palm	Flowers edible raw or cooked. Delicious raw, they can also be dried, crushed and used as a flavouring. Flowering stem cooked and used like asparagus	Bird (1990)
<i>Yucca glauca</i> Nutt.	Soapweed Yucca	Flowers eaten raw in salad or cooked as potherbs, flower stalk cooked and inner portion eaten	Yanovsky (1936), Harrington (1974), Facciola (1990)
<i>Yucca gloriosa</i> L.	Spanish Dagger	Flowers edible raw or cooked. They are delicious raw and can also be dried, crushed and used as a flavouring. Flowering stem cooked and used like asparagus	Bird (1990)

<i>Yucca harrimaniae</i> Trel.	Spanish Bayonet, Spanish Dagger	As above	Harrington (1974), Bird (1990)
<i>Yucca mohavensis</i> Sarg. = <i>Yucca schidigera</i> Roehl ex Ortgies	Mojave Yucca	Flowers boiled for food, flowers eaten raw or used in jellies	Yanovsky (1936), Tanaka (1976), Facciola (1990)
<i>Yucca recurvifolia</i> Salisb. = <i>Yucca gloriosa</i> var. <i>recurvifolia</i> (Salisb.) Engelm.	Curvleaf Yucca; Pendulous Yucca	Flowers eaten raw or cooked. They are delicious raw, and can also be dried, crushed and used as a flavouring. A crisp crunchy texture, the flowers are very substantial and need to be well chewed. Flowering stem cooked and used like asparagus	Fern (1992–2003), Wikipedia (2012)
<i>Yucca rupicola</i> Scheele	Twisted-Leaf Yucca	As above	Wikipedia (2012)
<i>Yucca schidigera</i> Roehl ex Ortgies	Mojave Yucca	Young flowering stems chopped and cooked like asparagus or baked like a sweet potato	Bird (1990), Facciola (1990)
<i>Yucca smalliiana</i> Fernald = <i>Yucca flaccida</i> Haw.	Adam's Needle	Flowers eaten raw or cooked. They are delicious raw and can also be dried, crushed and used as a flavouring. Flowering stem cooked and used like asparagus	Bird (1990)
<i>Yucca</i> spp.	Yucca		
<i>Yucca whipplei</i> Torr. = <i>Hesperoyucca whipplei</i> (Torr.) Tre.	Our Lord's Candle	Flowers eaten raw or cooked	Uphof (1968), Usher (1974)
Asteraceae			
<i>Achillea borealis</i> Bong. = <i>Achillea millefolium</i> L. subsp. <i>borealis</i> (Bong.) Breitung	Milfoil	Flowers used as below	Schofield (2003)
<i>Achillea millefolium</i> L.	Common Yarrow, Sneezewort, Soldier's Friend, Thousand-Leaf	Flowers used in herbal teas and lemonade; flowers fried in butter sprinkled with sugar or orange juice. An essential oil derived from the flowering tops is used commercially for flavouring soft drinks and alcoholic drinks	Uphof (1968), Grieve (1971), Facciola (1990), Schofield (2003)
<i>Achillea ptarmica</i> (Willd.) Rupr. Ex Heimerl	Sneeze-Wort, Pearl Sneeze-Wort	Flowers used as above	Schofield (2003)
<i>Achillea sibirica</i> Ledeb. = <i>Achillea alpina</i> L.	Chinese Yarrow; Nokogiri-Sou (Japanese)	Flowers used as above	Schofield (2003)
<i>Achyrocline satureioides</i> (Lam.) DC.	Alecrim Da Parede, Macela, Marcala Do Campo (Brazil)	Flowers used for flavouring bitter spirits	Seidemann (2005)
<i>Acemla oleracea</i> (L.) R.K. Jansen	Para Cress, Toothache Plant, Szechuan Buttons	Flowers eaten	Wetwiyaklung et al. (2008), Ochse and van den Brink (1980), Deane (2007–2012p)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Actinea odorata</i> (A. Gray) Kuntze = <i>Actinella odorata</i> (DC.) A. Gray	Bitterweed	Infusion of flowering tops used as beverage in Texas	Yanovsky (1936)
<i>Ageratum conyzoides</i> L.	Billygoat-Weed, Chick Weed, Goatweed, Whiteweed	Fragrant flowers and foliage used for scenting coconut oil in south eastern Polynesia	Facciola (1990), Brown (2011)
<i>Anthemis nobile</i> L. = <i>Chamaemelum nobile</i> (Hl.) All.	Camomile, Chamomile, Roman Chamomile, English Chamomile, Low Chamomile	Flower used to flavour food and brewed into tea. Flowers have a sweet apple flavour	Newman and O'Connor (2009)
<i>Arctium lappa</i> L.	Great Burdock, Gobo	Pith of flower stalk eaten raw in tossed salads, boiled as potherb or made into conffection	Facciola (1990), Roberts (2000)
<i>Arctium minus</i> (Hill.) Benth.	Lesser Burdock, Beggars Buttons	Pith of flower stalk eaten raw in tossed salads or cooked as asparagus	Harrington (1974), Facciola (1990), Roberts (2000)
<i>Argyranthemum frutescens</i> (L.) Sch. Bip.	Marguerite Daisy	Flowers edible	Rop et al. (2012)
<i>Artemisia absinthium</i> L.	Wormwood	Flowering tops used to counter grassiness of goose and duck dishes	Uphof (1968), Grieve (1971), Facciola (1990)
<i>Artemisia ludoviciana</i> Nutt.	Prairie Sage, White Sagewort, Gray Sagewort, White Sagebrush, Mountain Sagewort	The flower heads can be used as seasoning or to make a tea	Dean (2007–2012s)
<i>Artemisia vulgaris</i> L.	Mugwort	Flowering tops added to beer or steeped into tea	Fernaldet al. (1958), Grieve (1971), Facciola (1990)
<i>Aster kantoensis</i> Kitam.	Kawara-Nogiku (Japanese)	Flowers eaten	Kunkel (1984)
<i>Aster koraiensis</i> Nakai	Korean Starwort	Flowers eaten	Kunkel (1984)
<i>Balsamorhiza deltoidea</i> Nutt.	Puget Balsam Root, Deltoid Balsam Root	Flower stalk eaten as cooked vegetables	Dean (2007–2012s)
<i>Balsamita major</i> Desf. = <i>Tanacetum balsamita</i> L.	Costmary, Bible-Leaf, Alecost, Balsam Herb, Bible Leaf, Mint Geranium	Flower petals used for conserve	Grieve (1971), Larkcom (1980), Facciola (1990)
<i>Balsamorhiza sagittata</i> (Pursh) Nutt.	Arrowleaf Balsam Root, Oregon Sunflower	Young immature flower stalks peeled and inner pith eaten	Hedrick (1972), Facciola (1990)
<i>Bellis perennis</i> L.	Common Daisy, Common Lawn Daisy, Daisy, English Daisy, European Daisy, True Daisy, Bruisewort	Flowers eaten with lettuce or greens, salad, crystallized or petals garnish on cakes. Flower and petals eaten in salads, flower buds eaten in sandwiches, soups and salads, preserved in vinegar used as substitute for capers	Hedrick (1972), Cribb and Cribb (1987), Larkcom (1980), Facciola (1990), Barash (1997), Lauderdale and Evans (1999), Newman and O'Connor (2009)

<i>Berlandiera lyrata</i> Benth.	Chocolate Daisy, Chocolate Flower, Lyreleaf Greeneyes, Green-Eyed Lyre Leaf	Flowers used for seasoning foods	Yanovsky (1936), Facciola (1990)
<i>Bidens alba</i> (L.) DC.	Spanish Needles, Beggar's Tick, Butterfly Needles, Harry Beggarticks	Blossoms excellent for salad, they hold their flavour while cooking and can be added to a variety of dishes	Deane (2007–2012d)
<i>Bidens bigelovii</i> A. Gray	Bigelow's Beggarticks	Infusion of flowering tops used as beverage in Texas	Yanovsky (1936)
<i>Calendula arvensis</i> (Vaill.) L.	Field Marigold	Flower heads pickled	Kunkel (1984), Facciola (1990)
<i>Calendula officinalis</i> L.	Calendula, Pot Marigold, English Marigold, Poet's Marigold	Flowers used in salad, soup, butter, sauce, drinks, cookie; fresh petals are chopped and added to salads. The dried petals have a more concentrated flavour and are used as a seasoning in soups, cakes, omelette, curry, custard, etc. An edible yellow dye is obtained from the petals and used as a saffron substitute to colour and flavour rice, soups, stews, cheese, cakes, puddings	Organ (1960), Uphof (1968), Facciola (1990), Garland (1993), Barash (1997), Lauderdale and Evans (1999), Roberts (2000), Lust (2001), Newman and O'Connor (2009), Micek and Rop (2011)
<i>Carduus nutans</i> L.	Musk Thistle, Nodding Thistle	Pith of flowering stem, boiled, salted and dressed. Dried flowers used in some countries as rennet to curdle milk	Fernald et al. (1958), Facciola (1990)
<i>Carlina acanthifolia</i> All.	Carlina Thistle	Flowering head cooked; used as a globe artichoke substitute	Hedrick (1972), Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Carlina acaulis</i> L.	Stemless Carlina Thistle	Flowers used as above	Kunkel (1984), Facciola (1990)
<i>Carlina vulgaris</i> L.	Carlina Thistle	Flowers used as above	Hedrick (1972), Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Carthamus tinctorius</i> L.	Safflower, Dyer's Saffron False Saffron	Bitter flower petals used as saffron substitute for colouring bread, butter and liqueurs and also used in herbal tea	Yanovsky (1936), Uphof (1968), Griever (1971), Tanaka (1976), Facciola (1990), Hu (2005), Newman and O'Connor (2009)
<i>Centaurea cyanus</i> L.	Cornflower, Bachelor's Button, Bluebottle, Boutonniere Flower, Hurtsickle, Cyani Flower	Flowers edible raw or cooked. The fresh florets can be used in salads, as a vegetable or a garnish. An edible blue dye is obtained from the flowers, used for colouring sugar, gelatin and confections. Flowers are ideal for mixing with other flowers to make attractive confetti for sprinkling over salads, omelettes and pasta dishes	Facciola (1990), Bown (1995), Lauderdale and Evans (1999), Roberts (2000), Newman and O'Connor (2009), Rop et al. (2012), Anonymous (2012a)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Centaurea nigra</i> L.	Black Knapweed, Lesser Knapweed, Common Knapweed	Flower petals eaten raw, added to salads	Facciola (1990)
<i>Chamaemelum nobile</i> (L.) All.	Roman Chamomile, Chamomile, Garden Chamomile, Ground Apple, Low Chamomile	Fresh or dried flowers used to flavour sherry in Spain, used in herbal tea	Grieve (1971), Garland (1993), Barash (1997), Facciola (1990), Lauderdale and Evans (1999), Newman and O'Connor (2009)
<i>Chamomilla aurea</i> J. Gray = <i>Matricaria aurea</i> (Loefl.) Sch. Bip.	Golden Chamomile, Hungarian Chamomile	Dried flower heads brewed into an aromatic tea, also used for flavouring fine liqueurs of the French types viz. Benedictine and D.O.M., a source of essential oil for food industry	Uphof (1968), Morton (1976), Facciola (1990)
<i>Chamomilla recutita</i> (L.) Rauschert = <i>Matricaria chamomilla</i> L.	German Chamomile, Camomile, Scented Mayweed, Wild Chamomile, Hungarian Chamomile	Flowers used in herbal teas	Garland (1993), Burnie and Fenton-Smith (1996)
<i>Chrysanthemum coronarium</i> L.	Garland Chrysanthemum, Chrysanthemum Coronarium Greens, Edible Chrysanthemum Coronarium, Chop-Suey Greens, Crown Daisy	Flowers petals are used fresh, blanched briefly and added to salads, soups or pickles and eaten with fish, or dried and used in teas. A fragrant pickle known as 'kikumi' is made from the petals in Japan	Harrington (1974), Tanaka (1976), Facciola (1990), Dasuki and van den Bergh (1994), Lauderdale and Evans (1999), Woodward (2000), Roberts (2000), Newman and O'Connor (2009)
<i>Chrysanthemum frutescens</i> L. = <i>Argyranthemum frutescens</i> (L.) Sch. Bip.	Marguerite Daisy	Flowers edible	Rop et al. (2012)
<i>Chrysanthemum indicum</i> L.	Mother Chrysanthemum, Mother Daisy, Winter Aster, Ground Apple, Whig Plant; Manzanilla (Spanish)	Flower heads pickled in vinegar	Tanaka (1976), Facciola (1990)
<i>Chrysanthemum leucanthemum</i> L. = <i>Chrysanthemum vulgare</i> (Vaill.) Lam.	Oxeye Daisy	Unopened flowers can be marinated and used like capers. They are also used in salad and as condiment with fish or stuffed in a chicken breast	Newman and O'Connor (2009), Anonymous (2012c)
<i>Chrysanthemum morifolium</i> Ramat.	Chrysanthemum, Florist Chrysanthemum, Hardy Garden Mum	Edible leaves and flower heads boiled served as salads with fish and tofu and seasoned with vinegar and soy sauce. Flowers also prepared as tempura, pickled, dried or added to soups. Flower petals brewed into 'tangu', an aromatic tea	Tanaka (1976), Clarke (1977), Facciola (1990), Lauderdale and Evans (1999)
<i>Chrysanthemum parthenium</i> (L.) Pers. = <i>Tanacetum parthenium</i> (L.) Sch. Bip.	Feverfew	Flowers edible	Rop et al. (2012)

<i>Chrysanthemum sinense</i> Sabine = <i>Chrysanthemum morifolium</i> Ramat.	See <i>Chrysanthemum morifolium</i>	In China leaves and flowers eaten in soups	Read (1946)
<i>Chrysanthemum spatiosum</i> L.H. Bailey = <i>Chrysanthemum coronarium</i> L.	See <i>Chrysanthemum coronarium</i>	Used as for Florist <i>Chrysanthemum</i>	Facciola (1990), Dasuki and van den Bergh (1994), Woodward (2000)
<i>Chrysanthemum confinis</i> Greene = <i>Ericameria nauseosa</i> subsp. <i>consimilis</i> (Greene) G.L. Nesom and G.I. Baird	Douglas Rabbitbrush	Flower buds eaten with salt in New Mexico	Yanovsky (1936)
<i>Cichorium intybus</i> L.	Chicory, Raddichio, Endive, Succory	Blue flowers crystallized and used to decorate cakes and puddings; flowers can be used in salads, fresh or pickled. The fresh flowers have a mild lettuce flavour and make a decorative addition to salads, while flower buds can be pickled. Picked blooms look attractive frozen in ice cubes and added to drinks	Fernald et al. (1958), Larkcom (1980), Facciola (1990), Burnie and Fenton-Smith (1996), Lauderdale and Evans (1999), Roberts (2000), McCullough (2007), Newman and O'Connor (2009)
<i>Cirsium arvense</i> (L.) Scop	Canadian Thistle	Flower stalk boiled and eaten as vegetables	Uphof (1968), Launert (1981), Facciola (1990)
<i>Cirsium eriophorum</i> (L.) Scop.	Woolly Thistle	Flower buds cooked used as a globe artichoke substitute	Hedrick (1972), Kunkel (1984), Facciola (1990)
<i>Cirsium oligophyllum</i> (Franch. & Sav.) Matsum.	Nohara Azami (Japanese)	The flower heads are fried or used in salads	Facciola (1990)
<i>Cirsium palustre</i> (L.) Coss.ex Scop.	Marsh Thistle, European Swamp Thistle	Flower stalks eaten in salad or boiled as vegetables	Fernald et al. (1958), Grieve (1971), Harrington (1974), Facciola (1990)
<i>Cirsium tanakae</i> (Franch. & Sav.) Matsum. = <i>Cirsium oligophyllum</i> (Franch. & Sav.) Matsum.	Nohara Azami (Japanese)	Flower heads fried or used in salad in East Asia	Tanaka (1976), Facciola (1990)
<i>Cirsium vulgare</i> (Savi.) Ten.	Spear Thistle, Common Thistle	Unopened flower heads eaten, receptacle cooked and served like artichoke, young flower stalks eaten, dried flower used as substitute for rennet in curdling milk for cheese making	Fernald et al. (1958), Harrington (1974), Clarke (1977), Kunkel (1984), Cribb and Cribb (1987), Facciola (1990)
<i>Cnicus benedictus</i> L.	Blessed Thistle	Flower heads, harvested before the flowers open, have been used as a globe artichoke substitute	Stuart (1987)
<i>Cosmos bipinnatus</i> Cav.	Garden Cosmos, Mexican Aster	Petals source of carotenoids for the food industry	Tinoi et al. (2006)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Cosmos sulphureus</i> Cav.	Cosmos, Sulphur Cosmos, Yellow Cosmos, Orange Cosmos, Klondike Cosmos	Flowers used in salad	Kaisoon et al. (2011, 2012)
<i>Crotalaria juncea</i> L.	Brown Hemp, Indian Hemp, Sunn Hemp; O-Hawaii Maton (Manipur)	Young shoots and inflorescences eaten in Manipur India	Yumnum and Tripathi (2012)
<i>Cynara cardunculus</i> L.	Cardoon, Artichoke Thistle, Cardone, Cardoni, Carduni, Cardi	Flower bases steamed, cooked; fleshy receptacle of unopened flower head, dried flowers used as substitute for rennet in making Serra cheese in Portugal. Some dishes included pickled artichokes, artichoke with mint and yoghurt, artichoke dip	Hedrick (1972), Cribb and Cribb (1987), Low (1989), Facciola (1990), Van den Bergh (1994a, b), Roberts (2000), Newman and O'Connor (2009)
<i>Cynara humilis</i> L.	Wild Artichoke, Artichoke Thistle; Alcachofra-Brava (Portuguese); Alcachofa, Alcachofa De Campo (Spanish)	Flower receptacle used in preparation of a popular tangine stew. In Morocco, the dried flowers used as rennet in coagulating rape, a kind of sweetened junket	Wolfert (1973), Facciola (1990)
<i>Cynara scolymus</i> L. = <i>Cynara cardunculus</i> subsp. <i>flavescens</i> Wiktund	Globe Artichoke, Bur Artichoke, Artichoke Thistle	Flower buds steamed, basal fleshy portion of phyllaries (involucral bracts) of the capitula and young receptacle used as vegetables. Fleshy receptacle of unopened flower head used as substitute for rennet	Van den Bergh (1994a, b), Low (1989), Hu (2005)
<i>Dahlia juarezii</i> Van der Berg = <i>Dahlia coccinea</i> Cav.	Dahlia, Cactus Dahlia, Single-Flowered Dahlia	Flowers used in salads, cream, cheese, dahlia dip, sundried tomato and dahlia bread	Roberts (2000)
<i>Dahlia pinnata</i> Cav.	Dahlia, Garden Dahlia	The flower petals are used in salads	Kunkel (1984), Facciola (1990)
<i>Dahlia rosea</i> Cav. = <i>Dahlia pinnata</i> Cav.	See <i>Dahlia pinnata</i>	Flowers used in salads, cream, cheese and dahlia dip, sundried tomato and dahlia bread	Hedrick (1972), Roberts (2000)
<i>Dahlia</i> spp.	Dahlia	Used as above	Roberts (2000)
<i>Dendranthema grandiflorum</i> (Ramat.) Kitam.	Chrysanthemum, Garden Mum, Hardy Mum, Cushion Mum	The flower heads or petals are parboiled and served as a salad with tofu and seasoned with vinegar or soya sauce. They can also be prepared as tempura, pickled, dried or added to soups	Read (1946), Uphof (1968), Facciola (1990), Newman and O'Connor (2009)
<i>Dendranthema indicum</i> (L.) Des Moul.	Chrysanthemum, Winteraster	The flower heads are pickled in vinegar	Uphof (1968), Kunkel (1984), Facciola (1990)
<i>Dendranthema vestitum</i> (Hemsl.) Ling = <i>Chrysanthemum vestitum</i> (Hemsl.) Stapf.	Ju-Hua (Chinese)	Dried flowers used in herbal teas	Hu (2005)

<i>Dendranthema morifolium</i> (Ramat.) Tzvel.	Florists Chrysanthemum, Hardy Garden Mum; Ju Hau (Chinese)	Ligulate florets used for special Chinese delicacy, dried florets used for chrysanthemum tea, in Korea rice wine flavoured with chrysanthemum flowers is called 'gukwaju', florets mix with a thick snake meat soup	Hu (2005), Wikipedia (2012)
<i>Dicoria brandegeei</i> A. Gray = <i>Dicoria canescens</i> A. Gray	Desert Twinbugs	Flowers and seeds ground for food in Arizona	Yanovsky (1936)
<i>Echinacea purpurea</i> (L.) Moench	Eastern Purple Coneflower, Purple Coneflower, Echinacea, Snakeroot	Some dishes include Echinacea Pane bagna (bathed bread) decorated with fresh echinacea petals and a wedge of lemon; American Indian savoury Echinacea spread, Echinacea and melon fruit salad	Roberts (2000)
<i>Emilia sonchifolia</i> (L.) DC.ex DC.	Lilac Tasselflower, Red Tassel Flower, Cupid's Shaving Brush, Emilia, Purple Sow Thistle, Flora's Paintbrush	The whole plant, including the unopened flowers, can be eaten raw or cooked	Cribb and Cribb (1987)
<i>Erechtites hieracifolia</i> (L.) Raf.	American Burnweed, Fireweed, Pilewort	Young inflorescence head, flowering top eaten raw or steamed and served with rice	Rifai (1994)
<i>Erechtites valerianifolia</i> (Link ex Wolf) Less ex DC.	Brazilian Fireweed, Tropical Burnweed, Ceylon Thistle, Fireweed, Fireweed Daisy	Young inflorescence head, flowering top eaten raw or steamed and served with rice	Burkill (1966), Ochse and van den Brink (1980), Cribb and Cribb (1987), Facciola (1990), Rifai (1994)
<i>Galacites tomentosa</i> Moench	Purple Milk Thistle	Tender flower stalk eaten	Hedrick (1972), Facciola (1990)
<i>Galinsoga parviflora</i> Cav.	Gallant Soldier, Potato Weed, Yellow Weed, Galinsoga	The leaves, stem and flowering shoots eaten raw or cooked and eaten as a potherb, or added to soups and stews	Fernald et al. (1958), Harrington (1974), Cribb and Cribb (1987), Facciola (1990), Elias and Dykeman (2009)
<i>Gundelia tournefortii</i> L.	Galgal, Tumbleweed, Tumble Thistle	The thick flowering stem, with the young and still undeveloped flower buds, is sold in the local markets in Jerusalem. It is a sought after vegetable, cooked like globe artichokes	Hedrick (1972), Kunkel (1984), Wright (2001)
<i>Gynura nepalensis</i> DC.	Cholesterol Spinach; Tera Paibi (Manipur)	Young shoots and inflorescences are eaten	Yumnum and Tripathi (2012)
<i>Helianthus annuus</i> L.	Common Sunflower, Sunflower, Mirasol	Young flower buds are steamed and served like globe artichokes with butter and vinegar; petals of openend flowers can be used	Hedrick (1972), Harrington (1974), Facciola (1990), Garland (1993), Barash (1997), Lauderdale and Evans (1999), Roberts (2000)
<i>Helianthus tuberosus</i> L.	Jerusalem Artichoke, Sunroot, Sunchoke, Earth Apple, Topinambour	Flower reported edible	King (2007)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Helichrysum italicum</i> (Roth) G. Don	Curry Plant, Immortelle	Flower heads used for tea; also a source of essential oil used to enhance fruit flavours in candy, ice cream, baked goods, soft drinks and chewing gum	Morton (1976), Facciola (1990)
<i>Lactuca serriola</i> L.	Prickly Lettuce	Unopened flower heads can be used as a green (raw or cooked); they are very bitter	Harden (1992)
<i>Leucanthemum vulgare</i> (Vaill.) Lam.	Ox-Eye Daisy	Flower heads used like dandelion in home wine making	Fernald et al. (1958), Launert (1981), Facciola (1990)
<i>Matricaria matricarioides</i> (Less.) Porter	Pineapple Weed, Wild Chamomile, Disc Mayweed	Flower heads eaten raw or cooked, a tasty nibble. Fresh or dried flowers are used to make herbal teas—golden pineapple scented tea when steeped in hot water	Facciola (1990), Schofield (2003)
<i>Matricaria recutita</i> L. = <i>Matricaria chamomilla</i> L.	German Chamomile, Chamomile, Blue Chamomile, Wild Chamomile, Hungarian Chamomile, Scented Mayweed	Flower heads eaten raw, added to salad, vegetable casseroles and stir-fries. Flowers used to flavour tea	Garland (1993), Brotonegora (2000), Schofield (2003)
<i>Melampodium divaricatum</i> (Rich.) DC.	Butter Daisy, Million Gold Melampodium	Petals source of carotenoids for the food industry	Tinoi et al. (2006)
<i>Onopordum acanthium</i> L.	Scotch Thistle, Heraldic Thistle	Green base of flower head cooked and eaten like artichokes; floral parts used as an adulterant of saffron	Fernald et al. (1958), Grieve (1971), Hedrick (1972), Cribb and Cribb (1987), Facciola (1990)
<i>Onopordum illyricum</i> L.	Illyrian Cotton Thistle	Flower buds eaten cooked, used as a globe artichoke	Facciola (1990)
<i>Pectis papposa</i> Harv. and A. Gray	Field Marigold, Chickweed, Manybristle Cinchweed	Flowers used for seasoning meat by Indians in New Mexico	Yanovsky (1936), Uphof (1968), Facciola (1990)
<i>Petasites frigidus</i> (L.) Fries	Sweet Coltsfoot, Arctic Butterbur, Arctic Sweet Coltsfoot	Flower heads eaten cooked, steamed, dressed with garlic butter or cheese sauce. Flowers battered and fried as floral fritters or chopped and added to casseroles and soups	Uphof (1968), Kunkle (1984), Facciola (1990), Schofield (2003)
<i>Petasites hyperboreus</i> Rydb.	Arctic Sweet Coltsfoot, Northern Coltsfoot	Used as above	Schofield (2003)
<i>Petasites japonicus</i> var. <i>giganteus</i> F. Schmidt ex Makino = <i>Petasites japonicus</i> subsp. <i>giganteus</i> F. Schmidt ex Kitam.	Giant Sweet Coltsfoot	Flower buds eaten as vegetable or used as a condiment	Tanaka (1976), Facciola (1990)

<i>Petasites japonicus</i> (Siebold. & Zucc.) Maxim.	Sweet Coltsfoot, Butterbur	Flower heads eaten cooked, steamed and dressed with garlic butter or cheese sauce. Flowers battered and fried as floral fritters or chopped and added to casseroles and soups. Flower buds have a slightly bitter but agreeable taste and are prized as a vegetable and condiment in Japan	Uphof (1968), Tanaka (1976), Douglas (1978), Facciola (1990), Van den Bergh (1994a, b)
<i>Petasites palmatus</i> (Aiton) A. Gray	Palmate Butter, Butterbur	Flowering stems and flower buds are boiled, steamed and dressed with garlic butter or cheese sauce. Flowers battered and fried as floral fritters or chopped and added to casseroles and soups	Tanaka (1976), Kunkel (1984), Facciola (1990), Schofield (2003)
<i>Petasites sagittatus</i> (Pursh.) A. Gray	Arrowleaf Sweet Coltsfoot	Flowers used as above	Schofield (2003)
<i>Pluchea indica</i> (L.) Less	Indian Fleabane, Indian Camphorweed, Indian Pluchea	Young leaves, shoot tips and young inflorescences eaten raw in salad, cooked or steamed	Martin and Ruberté (1975), Ochse and van den Brink (1980), Facciola (1990)
<i>Ratibida columnifera</i> (Nutt.) Wootton and Standl.	Cone Flower, Mexican Hat	Flower heads brewed into tea	Yanovsky (1936), Facciola (1990)
<i>Scolymus hispanicus</i> L.	Spanish Salsify, Golden Thistle, Scorzonera, Spanish Oyster Plant	Flowers used to adulterate saffron. Flower buds eaten raw, added to salads. Also used in French omelette	Uphof (1968), Hedrick (1972), Kunkel (1984), Facciola (1990)
<i>Scorzonera mollis</i> M. Bieb	Skorzonerë Butloshe (Albanian)	Flowers eaten raw. The flowers have a scent of chocolate	Uphof (1968), Usher (1974), Tanaka (1976), Kunkel (1984)
<i>Scorzonera mongolica</i> Maxim.	Mongolian Viper's Grass Meng Gu Ya Cong (Chinese)	Flowers eaten raw	Kunkel (1984)
<i>Scorzonera papposa</i> DC.	Oriental Viper's Grass	Flowers eaten raw	Kunkel (1984)
<i>Scorzonera undulata</i> Vahl	L-Giz, Talma (Morocco)	Capitula (chocolate taste) eaten raw by children and shepherds	Usher (1974), Kunkel (1984), Bellakhdar (1997)
<i>Scorzonera undulata</i> subsp. <i>deliciosa</i> (DC.) Maire	Scorzonera Zuccherina (Italian)	Flowers eaten raw	Usher (1974), Kunkel (1984)
<i>Sigesbeckia orientalis</i> L.	Sticky Weed, Siegesbeckia Herb, Yellow Crown Beard; Xi Xian Xao (Chinese); Colle Colle (Creole); Tuskushi-Me-Namomi (Japanese)	Fragrant flowers used for scenting coconut oil	Brown (1954), Facciola (1990)
<i>Silphium laciniatum</i> L.	Compass Flower, Compass Plant, Rosinweed	Flower stalks used as chewing gum	Fernald et al. (1958), Facciola (1990)
<i>Silybum marianum</i> (L.) Gaertn.	Blessed Milk Thistle, Variegated Thistle	Flowers buds steamed, eaten cooked or steamed like globe artichoke	Low (1989), Facciola (1990), Bown (1995)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Solidago canadensis</i> L.	Canada Golden Rod, Rock Goldenrod	Flower steeped for beverage or added to herbal tea blends. Blossoms can be added to pancakes and fritter batters, bread and biscuit doughs. Goldenrods edible raw, can be used for decoration and making tea	Roberts (2000), Schofield (2003)
<i>Solidago lepida</i> DC.	Western Canada Golden Rod	Flowers used as above	Schofield (2003)
<i>Solidago odora</i> Aiton	Sweet Golden Rod, Fragrant Golden Rod	Fully expanded flowers and leaves used to brew tea	Fernald et al. (1958), Facciola (1990)
<i>Solidago spathulata</i> DC.	Coast Golden Rod	Flowers used as for Canadian Goldenrod flowers	Schofield (2003)
<i>Solidago virgaurea</i> L.	Golden Rod, Aaron's Rod, European Goldenrod, Goldrute,	Goldenrods edible raw, can be used for decoration and making tea	Roberts (2000)
<i>Spilanthes acmella</i> (L.) Murray = <i>Blainvillea acmella</i> (L.) Philipson	Toothache Plant, Paracress	Young leaves and flower heads are eaten raw, boiled. Flowers chewed	Ochse and van den Brink (1980), Roemantyo (1994), Wetwitayaklung et al. (2008)
<i>Spilanthes tabadicensis</i> A.H. Moore = <i>Acemella uliginosa</i> (Sw. Cass)	Legetan; Zhao Sheng Jin Niu Kou (Chinese)	Young leaves and flower heads are eaten raw or boiled	Roemantyo (1994)
<i>Spilanthes paniculata</i> Wall. ex DC. = <i>Acemella paniculata</i> (Wall. ex DC.) R.K. Jansen	Daisy Cress, Panicled Spot Flower; Jin Niu Kou (Chinese); Kaan, Phak Khraat (Thai); Yari Sennichimodoki (Japanese)	Young leaves and flower heads are eaten raw, boiled or added to curry	Roemantyo (1994), Jircas (2010)
<i>Tagetes tenuifolia</i> L.	Lemon Marigold, Signet, Signet Marigold	Flowers used sparingly as garnish, in salads and sandwiches, or added to desserts and wines and made into herbal tea	Facciola (1990), Barash (1997), Newman and O'Connor (2009), Deane (2007–2012g)
<i>Tagetes erecta</i> L.	African Marigold, Aztec Marigold, Mexican Marigold; Daao Rueang (Thai)	Flowers used in salad, herbal tea and garnish or fried in light curry. Food colourant lutein extracted from the flowers	Cantrill (2004), Newman and O'Connor (2009), Kaisoon et al. (2011, 2012), Deane (2007–2012g)
<i>Tagetes lucida</i> Cav.	Mexican Marigold, Pericón, Mexican Mint Marigold, Mexican Tarragon, Spanish Tarragon, Cempaxóchitl, Texas Tarragon, Sweet Mace	Salad, herbal tea, garnish, flowering heads brewed into anise-flavoured tea; used in salad garnish	Hedrick (1972), Facciola (1990), Brown (2011), Deane (2007–2012g)
<i>Tagetes patula</i> L.	French Marigold, Dwarf Marigold, Marigold; Amarillo (Spanish, Tagalog)	Flowers used in refreshing drink, salad, herbal tea, garnish; dried flowers served as adulterant of saffron or as colouring for butter and cheese	Kunkel (1984), Morton (1976), Facciola (1990), Lauderdale and Evans (1999), Rop et al. (2012), Deane (2007–2012g)

<i>Tagetes signata</i> Bartl. = <i>Tagetes tenuifolia</i> L.	Signet Marigold	Flowers used in salad, herbal tea, garnish, marigold butter and muffins	Barash (1997), Lauderdale and Evans (1999)
<i>Tanacetum parthenium</i> (L.) Sch. Bip.	Feverfew, Featherfew, Featherfoil, Flirtwort	Dried flowers used in tea, in wine and certain pastries	Uphof (1968), Facciola (1990)
<i>Tanacetum vulgare</i> L.	Tansy, Bitter Buttons	The flowers have a unique flavour and are eaten or used as a garnish. A bitter, somewhat lemon-flavoured tea is made from the leaves and flowering tops	Fernaldet al. (1958), MacNicol (1967), Grieve (1971), Facciola (1990)
<i>Taraxacum albidum</i> Dahlst.	White Dandelion; Shirobana-Tanpopo (Japanese)	Flowers eaten after parboiled	Tanaka (1976), Facciola (1990)
<i>Taraxacum bessarabicum</i> (Hornem.) Hand.-Mazz.	Pissenlit De Bessarabie (French)	Flowers eaten raw or cooked. A pleasant tea is made from the flowers	Fern (1992–2003)
<i>Taraxacum formosanum</i> Kitam.	Formosan Dandelion	The unopened flower buds can be used in fritters and tea	Fern (1992–2003)
<i>Taraxacum heterolepis</i> Nakai and Koidz ex Kitag.	Kanto Tanpopo (Japanese)	Flowers eaten raw or cooked. The unopened flower buds can be used in fritters. A pleasant tea is made from the flowers	Fern (1992–2003)
<i>Taraxacum hondoense</i> Nakai and Koidz	Kanto Tanpopo (Japanese)	The unopened flower buds can be used in fritters	Fern (1992–2003)
<i>Taraxacum hybernum</i> Steven	Japanese Dandelion, Daiho-Kwansaitanpopo (Japanese)	Flowers used as above	Fern (1992–2003)
<i>Taraxacum japonicum</i> Koidz.	Rubber Dandelion, Russian Dandelion	Flowers used as above	Fern (1992–2003)
<i>Taraxacum kok-saghyz</i> L.E. Rodin	Red-Seed Dandelion	Flowers used as above	Fern (1992–2003)
<i>Taraxacum laevigatum</i> (Willd.) DC.	Native Dandelion; Tohetaka, Tohetake, Tohetea (Maori)	Flowers used as above	Fern (1992–2003)
<i>Taraxacum magellanicum</i> Comm. ex Sch. Bip.	Cyprus Dandelion, Big-Root Dandelion; Pentaramia, Agrioradiko (Crete)	Flowers used as above	Fern (1992–2003)
<i>Taraxacum mongolicum</i> Hand.-Mazz.	Chinese Dandelion	Flowers used as above	Fern (1992–2003)
<i>Taraxacum obovatum</i> (Willd.) DC.	Pissenlit À Feuilles Obovales, Pissenlit Obovale	Flowers eaten raw or cooked. The unopened flower buds can be used in fritters	Fern (1992–2003)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Taraxacum officinale</i> Webb	Dandelion, Blowball, Lion's Tooth, Cankerwort, Milk-Witch, Yellow-Gowan, Irish Daisy, Monks-Head, Priest's-Crown and Puff-Ball, Faceclock, Pee-A-Bed, Wet-A-Bed, Canker-Wort, Swine's Shout	Young leaves, flowers and buds are edible. Dandelion buds make good pickles. Dandelion flowers rolled in flour and fried in butters taste much like morel mushrooms. Flowers eaten in pancakes, omelettes, fritters, salads, e.g. dandelion and bacon salad. Flowers used in dandelion wine. Flowers can be crystallized. Flowers used as an ingredient in the Arabic cake 'yublo'	Harrington (1974), Garland (1993), Van den Bergh (1994a, b), Barash (1997), Facciola (1990), Lauderdale and Evans (1999), Roberts (2000), Schofield (2003), Newman and O'Connor (2009)
<i>Taraxacum platycarpum</i> Dahlst.	Tanpopo (Japanese)	The unopened flower buds can be used in fritters and tea	Fern (1992–2003)
<i>Taraxacum sinicum</i> Kitag.	Jian Di Pu Gong Ying (Chinese)	Flowers edible raw or cooked. The unopened flower buds can be used in fritters	Fern (1992–2003)
<i>Thelesperma filifolium</i> (Hook.) A. Gray	Showy Navajo Tea	Flowers used for tea substitute	Facciola (1990)
<i>Thelesperma gracile</i> (Torr.) A. Gray = <i>Thelesperma megapotanicum</i> (Spreng.) Kuntze	Cota, Indian Tea, Hopi Tea, Navajo Tea, Zuni Tea, Greenthread	Flower buds eaten. A tea is made from the leaves and dried flowers	Usher (1974), Kunkel (1984), Facciola (1990)
<i>Thelesperma megapotanicum</i> (Spreng.) Kuntze	Cota, Indian Tea, Hopi Tea, Navajo Tea, Zuni Tea, Greenthread	Flower buds eaten. A tea is made from the fresh or dried leaves and flowering stems, imparts a delicious hint of mint in its aftertaste	Facciola (1990), Moerman (1998)
<i>Tragopogon porrifolius</i> L.	Salsify, Purple Salsify, Common Salsify, Oyster Plant, Vegetable Oyster, Jerusalem Star, Goatsbeard	Flowers eaten raw, added to salads or as garnish. Flowers also pickled. Flower stalks cooked and dressed like asparagus	Uphof (1968), Grieve (1971), Hedrick (1972), Facciola (1990), Anonymous (2012a)
<i>Tragopogon pratensis</i> L.	Meadow Salsify, Showy Goat's-Beard, Jack-Go-To-Bed-At-Noon	Flowering stems and buds cooked served like asparagus	Fernald et al. (1958), Launert (1981), Facciola (1990)
<i>Tussilago farfara</i> L.	Coltsfoot, Assfoot, British Tobacco, Bull's-Foot, Clayweed, Cleats, Colt-Herb, Coltsfoot, Coughwort, Dove-Dock, Dummyweed, Foalfoot, Ginger, Gingerroot, Gowan, Hoofs, Horsefoot, Horsehoof, Kuan Dong, Sowfoot, Tussilage, Pas-D'âne (French)	Flower buds and young flowers eaten raw or cooked in soups or pothers have a pleasant aniseed flavour imparting a distinctive aromatic flavour to salads. A wine can be made from the blossoms; Fresh and dried flowers can be used to brew an aromatic tea	Uphof (1968), Launert (1981), Facciola (1990), Deane (2007–2012t)

<i>Youngia chelidoniifolia</i> (Makino.) Kitam. = <i>Paraixeris chelidoniifolia</i> (Makino) Nakai	None	Flowers eaten cooked	Tanaka (1976), Kunkel (1984)
<i>Youngia japonica</i> (L.) DC. Balsaminaceae	Japanese Hawkweed	Shoot and flowers used as 'liangcha'	Hu (2005)
<i>Impatiens balsamina</i> L.	Garden Balsam, Rose Balsam, Touch Me Not	Flowers made into 'kofia' fritters or used to flavour tea	Paul (2011)
<i>Impatiens walleriana</i> Hook.f.	Garden Balsam, Impatiens, Busy Lizzie	Petals or whole flowers come in many colours and look attractive, used as a garnish in salads or floated in cold drinks	Ropp et al. (2012), Anonymous (2012a)
Basellaceae			
<i>Basella alba</i> L.	Indian Spinach, Malabar Spinach	Young shoots and flowers eaten after steaming or blanching and serve with chilli sauce or add in curry	Jircas (2010)
<i>Basella rubra</i> Roxb. = <i>Basella</i> <i>alba</i> L.	Indian Spinach, Malabar Spinach	Flowers and young stem used as vegetable	Pongpangan and Poobarasert (1985)
Begoniaceae			
<i>Begonia boliviensis</i>	Bolivian Begonia	Flowers edible	Rop et al. (2012)
<i>Begonia cucullata</i> Willd.	Wax Begonia	Flowers edible	Deane (2007–2012b)
<i>Begonia elatior</i>	Begonia	Flowers edible	Friedman et al. (2007)
<i>Begonia semperflorens</i> Hook. = <i>Begonia cucullata</i> var. <i>hookeri</i> (A.DC.) L.B.S.M and Schub.	Wax Begonia	Flower used in fruit salad, crystallized, or as garnish, used to prepare Begonia spread	Friedman et al. (2007), Deane (2007–2012b, e)
<i>Begonia</i> × <i>tuberhybrida</i> Voss	Tuberous Begonia. Hybrid Tuberous Begonia	The brightly coloured flowers have a delicious light, lemon taste and a crisp texture. Use snipped petals as a garnish in salads and sandwiches or dip whole petals in flavoured yogurt and serve as an appetizer	Newman and O'Connor (2009), Deane (2007–2012b), Anonymous (2012a)
Berberidaceae			
<i>Berberis aristata</i> DC.	Chitra, Indian Barberry, Tree Turmeric	Flower buds added to sauces	Kunkel (1984), Facciola (1990)
<i>Berberis canadensis</i> Mill.	Allegheny Barberry	Flowers edible	Kavasch (2005)
<i>Mahonia aquifolium</i> (Pursh.) Nutt. = <i>Berberis aquifolium</i> Pursh.	Oregon Holly Grape	Flowers edible raw. They can also be used to make a lemonade-like drink	Hedrick (1972), Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
Betulaceae			
<i>Alnus oregona</i>	Oregon Alder	Catkins eaten raw or cooked have a bitter flavour; added to soups, dried and powdered as a spice, or nibbled raw	Schofield (2003)
<i>Alnus rhombifolia</i> Nutt.	White Alder	Flowers used as above	Schofield (2003)
<i>Alnus rubra</i> Ong.	Red Alder	Flowers used as above	Schofield (2003)
<i>Alnus sinuata</i> (Regel.) Rydb.	Sitka Alder	Flowers used as above	Schofield (2003)
<i>Alnus tenuifolia</i> Nutt.	Mountain Alder	Flowers used as above	Schofield (2003)
<i>Alnus viridis crispata</i> (Aiton.) Turill.	American Green Alder	Flowers used as above	Schofield (2003)
<i>Betula glandulosa</i> Michx.	Scrub Birch	Flowers used as above	Schofield (2003)
<i>Betula kenaica</i> W.H. Evans	Kenai Birch	Flowers used as above	Schofield (2003)
<i>Betula nana</i> L.	Dwarf Birch	Flowers used as above	Schofield (2003)
<i>Betula occidentalis</i> Hook.	Water Birch	Flowers used as above	Schofield (2003)
<i>Betula papyrifera</i> Marshall	Paper Birch	Flowers used as above	Schofield (2003), Facciola (1990)
<i>Betula pendula</i> Roth.	Silver Birch	Young catkins eaten	Bryan and Castle (1975), Schofield (2003)
<i>Betula pubescens</i> Ehrh.	White Birch	Young catkins eaten	Bryan and Castle (1975), Schofield (2003)
Bignoniaceae			
<i>Catalpa bungei</i> C.A. Meyer	North China Catalpa; Qiu Shu (Chinese)	Unopened buds pickled, flowers stir-fried	Hu (2005)
<i>Catalpa kaempferi</i> Sieb. and Zucc. = <i>Catalpa ovata</i> G. Don	Chinese Catalpa	In China, fresh or dried flowers washed, thoroughly boiled and eaten with oil and salt	Read (1946)
<i>Catalpa ovata</i> G. Don	Chinese Catalpa	Flowers and young pods eaten cooked	Facciola (1990)
<i>Chilopsis linearis</i> (Cav.) Sweet	Desert Willow	The blossoms used for food	Moerman (1998)
<i>Dolichandrone rheedii</i> (Spreng.) Seem. = <i>Dolichandrone spathacea</i> (L.f.) Schum.	Mangrove Trumpet Tree; Thakut (Burmese)	Flowers eaten in Myanmar	Tanaka (1976)
<i>Dolichandrone serrulata</i> (Wall. DC.) Seem.	Khao Khao (Thai); Thakut (Burmese)	Flowers eaten	Wetwityaklung et al. (2008), Maisuthisakul et al. (2008), Maisuthisakul (2012)

<i>Dolichandrone stipulata</i> (Wall.) Benth. and Hook.f. = <i>Markhamia stipulata</i> (Wall., Seem.)	Mahlwa (Burmese); Xi Nan Mao Wei Mu (Chinese)	Flowers eaten in Myanmar	Hedrick (1972), Facciola (1990)
<i>Heterophragma adenophyllum</i> (Wall. Ex G. Don) Seem. Ex Benth. and Hook. f. = <i>Haplophragma adenophyllum</i> (Wall. Ex G. Don.) Dop	Karenwood; Khae Khon (Thai)	Flowers, young fruit, slightly bitter, cooked as vegetables	Pongpangan and Poobarasert (1985)
<i>Markhamia stipulata</i> (Wall.) Seem. ex K. Schum.	Khae Hang Kang (Thai)	Flowers, young fruit cooked as vegetables	Pongpangan and Poobarasert (1985)
<i>Millingtonia hortensis</i> L.f.	Indian Cork Tree, Tree Jasmine	Flowers edible	Wongwattanasathien et al. (2010)
<i>Oroxylum indicum</i> (L.) Kurz.	Broken Bones Plant, Indian Trumpet Flower, Middy Marvel, Tree of Damocles; Kotodu, Boongli (Assamese)	In Andhra Pradesh and Assam, the flowers are cooked and eaten as vegetables. In Java, the young leaves, flowers and the bark of the trunk are eaten uncooked with rice usually prepared as 'sambal pepet'	Ochse and van den Brink (1980), Patiri and Borah (2007), Reddy et al. (2007), Medhi and Borthakur (2012)
<i>Spathodea campanulata</i> Beauv. Bixaceae	African Tulip Tree, Fire Bell	Flowers eaten in Thailand	Wetitayaklung et al. (2008)
<i>Cochlospermum fraseri</i> Planch. Boraginaceae	Kapok Bush	Flowers eaten in salad	Low (1991)
<i>Anchusa azurea</i> Mill.	Anchusa, Italian Bugloss, Alkanet, Wild Bugloss	Flowers eaten raw, make an excellent and decorative addition to the salad bowl, or used as a garnish	Larkcom (1980), Facciola (1990)
<i>Anchusa capensis</i> Thunb.	Cape Forget-Me-Not	Prized blue flowers eaten in salads, including seafood, fruit, potato, vegetable and tossed green salads, also used in cold drinks, pasta, puddings, custards, icing and hot and cold soups	Kunkel (1984), Facciola (1990)
<i>Anchusa officinalis</i> L.	Alkanet, Common Bugloss, Common Alkanet, Common Anchusa, Alkanet, Bee Bread, Ox's Tongue, Starflower, Common Borage, Orchanet, Spanish Bugloss, Enchusa, Lingua Bovina, Blue Bugloss	Flowers eaten raw. An excellent and decorative addition to the salad bowl, or used as a garnish	Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Borago officinalis</i> L.	Borage, Starflower	Flowers used in vegetable and fruit salads or used to garnish soups or to decorate desserts, cakes and pudding. Flowers impart flavour to summer fruit drinks (punch, compote), beer, cider and wine. Flower petals used to colour vinegar blue. Flowers make an excellent choice for freezing in ice cubes and floating on iced tea. Petals have a cucumber taste and the stamens add a hint of sweetness	Hedrick (1972), Launert (1981), Chiej (1984), Facciola (1990), Garland (1993), Barash (1997), Lauderdale and Evans (1999), Roberts (2000), Newman and O'Connor (2009)
<i>Cordia dichotoma</i> G. Forst.	Fragrant Manjack, Snotty Gobbles, Glue Berry, Pink Pearl, Bird Lime Tree, Indian Cherry, Clammy Cherry	Flowers are eaten	Cribb and Cribb (1987), Tanaka (1976), Facciola (1990)
<i>Cordia myxa</i> L.	Assyrian Plum, Sebasten, Large Sebasten, Lasora (Hindi), Uddhala (Tamil), Sleshmatika (Sanskrit)	Flowers eaten as vegetables	Dalziel (1937), Hedrick (1972), Facciola (1990)
<i>Echium vulgare</i> L.	Blue Devil, Blue Echium, Blue Thistle, Blue Weed, Blueweed, Common Viper's Bugloss, Common Vipersbugloss, Viper's Bugloss	Flowers are candied and added to salads	Deane (2007–2012t)
<i>Mertensia bella</i> Piper	Beautiful Bluebells, Oregon Lungwort	Flowers eaten raw as snacks or added to salad	Schofield (2003)
<i>Mertensia ciliata</i> (James ex Torr.) G. Don	Mountain Bell, Tall Fringed Bluebells, Streamside Bluebells	Flowers used as above	Schofield (2003), Wikipedia (2012)
<i>Mertensia longiflora</i> Greene	Mall Bluebells, Long Bluebells	Flowers used as above	Schofield (2003)
<i>Mertensia maritima</i> (L.) Gray	Oysterleaf, Oysterplant, Sea Bluebells	Flowers used as above	Schofield (2003)
<i>Mertensia oblongifolia</i> (Nutt.) G. Don = <i>Cerinthodes oblongifolia</i> (Nutt.) Kuntze	Oblongleaf Bluebells, Sagebrush Bluebells	Flowers used as above	Schofield (2003)
<i>Mertensia paniculata</i> (Aiton) G. Don = <i>Cerinthodes paniculatum</i> Kuntze	Tall Lungwort, Tall Bluebell	Flowers used as above	Schofield (2003)
<i>Myosotis sylvatica</i> Ehrh. ex Hoffm.	Forget-Me-Not, Wood Forget-Me-Not	Blossoms are added to salads, used as a garnish, and make excellent candied blossoms	Deane (2007–2012o)
<i>Pentaglottis sempervirens</i> (L.) Tausch.	Evergreen Alkanet, Green Alkanet, Evergreen Bugloss, Alkanet	Flowers edible raw, have a mild flavour and mucilaginous texture and are mainly used as an ornament in fruit drinks and salads	Larkcom (1980), Launert (1981), Facciola (1990)

Brassicaceae					
<i>Alliaria petiolata</i> (M. Bieb.) Cavara and Grande	Garlic Mustard	Flowers eaten raw	Elias and Dykeman (2009)		
<i>Arabis alpina</i> L.	Alpine Rock Cress	Flowers eaten raw or cooked and have a cress-like flavour	Tanaka (1976), Kunkel (1984), Facciola (1990), Deane (2007–2012u, x)		
<i>Arabis lyrata</i> L. = <i>Arabidopsis lyrata</i> (L.) O'Kane and Al-Shebbaz	Kamchatka Rockcress	Buds are used as salad garnish or boiled in water and served with butter and parmesan cheese	Schofield (2003)		
<i>Argula</i> sp.	Rocket, Rockette	Light yellow flowers are sprinkled on salads or put afloat in soups to add a bit of pepper	Deane (2007–2012d)		
<i>Armoracia rusticana</i> P. Gaertn., B. Mey. and Scherb.	Horseradish	Flowers edible sprinkle onto salad	Deane (2007–2012p)		
<i>Barbarea orthoceras</i> Ledeb.	American Yellowrocket, American Wintercress	Flower buds used as salad garnish or boiled and eaten with butter and parmesan cheese	Schofield (2003)		
<i>Barbarea vulgaris</i> R. Br.	Bittercress, Yellow Rocketcress	Flowering stems are harvested before the flowers open and cooked like broccoli	Fernald et al. (1958), Facciola (1990)		
<i>Brassica alboglabra</i> L.H. Bailey = <i>Brassica oleracea</i> (Alboglabra Group); <i>Brassica oleracea</i> L. cv. group Chinese Kale	Chinese Kale, Kai Lan	Open and unopened flowers, stalks and shoots eaten	Larkcom (1980), Sagwansupyakom (1994), Woodward (2000)		
<i>Brassica campestris</i> L. = <i>Brassica rapa</i> L.	Field Mustard; Hangam (Manipur)	In Northeast India, the flowers are a delicacy; they are used to make a vegetable soup. The flowers are cleaned and boiled without any herbs, not even salt, and the soup is consumed in a mug along with meals. It is slightly bitter	Hauzel (2012)		
<i>Brassica carinata</i> A. Braun	Abyssinian Cabbage	Immature flowering stems cooked; used like broccoli	Larkcom (1980), Facciola (1990)		
<i>Brassica chinensis</i> L. = <i>Brassica rapa</i> L. cv. group Pak Choi	Chinese Cabbage, Pak Choi	Flowers eaten	Larkcom (1980), Tay and Toxopeus (1994)		
<i>Brassica cretica</i> Lam. = <i>Brassica oleracea</i> var. <i>botrytis</i> L., <i>Brassica oleracea</i> L. cv. group Cauliflower	Cauliflower	Immature flowering head eaten raw or cooked	Uphof (1968), Simons (1975), Hu (2005), Newman and O'Connor (2009)		
<i>Brassica juncea</i> var. <i>crispifolia</i> L.H. Bailey = <i>Brassica juncea</i> subsp. <i>juncea</i>	Curled Mustard	Flowers and young flowering stems eaten raw or cooked	Larkcom (1980)		
<i>Brassica juncea</i> var. <i>foliosa</i> L.H. Bailey = <i>Brassica juncea</i> subsp. <i>juncea</i>	Plain-Leaved Mustard; Da Wang Jie (Chinese); Setsuriko (Japanese)	Flowers used as above	Larkcom (1980)		

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Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Brassica juncea</i> var. <i>multiceps</i> N. Tsen and S.N. Lee = <i>Brassica juncea</i> subsp. <i>juncea</i>	Nine-Headed Mustard, Red in Snow, Serrated-Leaved Mustard, Multishoot Mustard	Flowers used as above	Larkcom (1980)
<i>Brassica juncea</i> var. <i>napiiformis</i> (Paillieux & Bois) Kitam = <i>Brassica juncea</i> subsp. <i>juncea</i>	Turnip-Rooted Mustard	Flowers used as above	Larkcom (1980)
<i>Brassica juncea</i> var. <i>tumida</i> N. Tsen and S.N. Lee = <i>Brassica juncea</i> L. Czern	Sichuan Pickled Mustard, Sichuan Swollen Stem Mustard, Big Stem Mustard, Yangtze River Mustard	Flowers used as above	Larkcom (1980)
<i>Brassica juncea</i> (L.) Czern.	Brown Mustard	Flowers used as above	Larkcom (1980)
<i>Brassica juncea</i> var. <i>rugosa</i> (Roxb.) Kitam. = <i>Brassica juncea</i> subsp. <i>juncea</i>	Cabbage Leaf Mustard, Heading Leaf Mustard, Broad-Leaved Mustard, Swatow Mustard	Flowers used as above	Larkcom (1980)
<i>Brassica napus</i> L.	Rape, Oilseed Rape	Inflorescences used like broccoli	Uphof (1968), Tanaka (1976), Facciola (1990)
<i>Brassica nigra</i> (L.) K. Koch	Black Mustard	Young flower clusters used like broccoli	Uphof (1968), Grieve (1971), Facciola (1990)
<i>Brassica oleracea</i> (Acephala Group) = <i>Brassica oleracea</i> L. cv. group Kale	Kale, Collard, Flowering Kale	Unopened flower clusters called broccolini used like broccoli	Facciola (1990), Kraft and Kraft (1977)
<i>Brassica oleracea</i> (Alboglabra Group) = <i>Brassica oleracea</i> L. cv. group Chinese Kale	Chinese Broccoli, Chinese Kale, Kai Lan	Leaves, flowers, flower stalks and young inflorescences steamed, stir-fried, cooked with oyster sauce or used in 'sukiyaki'. Florets cut from stems dipped in tempura batter and deep fried	Herklots (1972), Tanaka (1976), Kraft and Kraft (1977), Facciola (1990), Larkcom (1991), Sagwansupyakorn (1994)
<i>Brassica oleracea</i> (Botrytis Group) = <i>Brassica oleracea</i> L. cv. group Cauliflower	Cauliflower; Kobi Yhamchet (Manipur)	Immature flower heads eaten raw in salads, boiled, steamed, braised, fried, used in soups and casseroles and prepared as tempura, etc.; flower stalks make excellent eating, made into soups	Tanaka (1976), Larkcom (1980), Facciola (1990), Van der Vossen (1994), Newman and O'Connor (2009), Yumnum and Tripathi (2012)
<i>Brassica oleracea</i> (Italica Group) = <i>Brassica oleracea</i> L. cv. group Broccoli	Broccoli, Cape Broccoli, Sprouting Broccoli	Immature flower heads eaten raw in salads, boiled, steamed, sauteed, prepared as tempura, marinated, serve as au gratin or with a cream sauce	Facciola (1990), Van der Vossen (1994), Lauderdale and Evans (1999), Newman and O'Connor (2009)
<i>Brassica oleracea</i> var. <i>palmifolia</i> DC. = <i>Brassica oleracea</i> (Palmifolia Group)	Jersey Kale	Young flowering shoots eaten raw or cooked	Fern (1992–2003)

<i>Brassica oleracea</i> var. <i>asparagoides</i> DC. = <i>Brassica oleracea</i> L.	Nine-Star Perennial Broccoli	Flowering shoots used as above	Fern (1992–2003)
<i>Brassica oleracea</i> var. <i>italica</i> Plenck = <i>Brassica oleracea</i> (Italica Group), <i>Brassica oleracea</i> L. cv. group Broccoli	Broccoli, Calabrese; Ye-Hua (Chinese)	As for broccoli	Van der Vossen (1994), Hu (2005), Newman and O'Connor (2009)
<i>Brassica oleracea</i> var. <i>viridis</i> L. = <i>Brassica oleracea</i> (Viridis Group)	Collards, Cow Cabbage, Kale, Tall Kale, Tree Kale, Fodder Kale	Young flowering shoots eaten raw or cooked	Fern (1992–2003)
<i>Brassica parachinensis</i> Bailey = <i>B. rapa</i> L. cv. group Caisin	Caisin, Choi Sum	Young flowering shoots – raw or cooked	Larkcom (1980, 1991), Opeña and Tay (1994)
<i>Brassica pekinensis</i> (Lour.) Rupr. = <i>Brassica rapa</i> (Pekinensis Group), <i>Brassica rapa</i> L. cv. group Chinese Cabbage	Chinese Cabbage, Celery Cabbage, Peking Cabbage, Peksai	Young flowering shoots eaten raw or cooked	Larkcom (1980), Kuo and Toxopeus (1994)
<i>Brassica perviridis</i> (L.H. Bailey) L.H. Bailey = <i>Brassica rapa</i> (Perviridis Group)	Mustard Spinach, Komatsuna	Young flowering shoots eaten raw or cooked	Larkcom (1980, 1991)
<i>Brassica rapa</i> Ruvo Group	Broccoli Raab, Rumip Broccoli, Rapini	Flowering stem and leaves pleasantly bitter taste, eaten boiled, steamed, braised, sautéed or served with pasta, potatoes, Italian sausages, etc.	Kraft and Kraft (1977), Halpin (1978), Facciola (1990)
<i>Brassica rapa</i> Sarson Group	Sarson, Toria	Flower cluster used for culinary purposes, flower stalks cooked as vegetables	Tanaka (1976), Facciola (1990)
<i>Brassica rapa</i> var. <i>parachinensis</i> (L.H. Bailey) Hanelt. = <i>Brassica rapa</i> (Caisin Group)	Choysum, Caixin, False Pakchoi	Mature inflorescence, flowers and flowering shoots and leaves eaten cooked, steamed or stir-fried	Opeña and Tay (1994)
<i>Brassica rapa</i> L.	Field Mustard, Wild Turnip, Turnip Mustard, Turnip Rape	Immature flower clusters served like broccoli	Crowhurst (1972), Tanaka (1976)
<i>Brassica rapa</i> var. <i>campestris</i> (L.) Peterm. = <i>Brassica rapa</i> L.	Oil Rape Shoot; Yoi-Cai-Tia (Chinese)	Flowering shoots eaten	Hu (2005)
<i>Brassica rapa</i> var. <i>nipposinica</i> L.H. Bailey = <i>Brassica rapa</i> (Nipposinica Group)	Potherb Mustard, Mibuna Salad Green, Kyoto Salad Green Japanese Salad Green; Mizuna, Mibuna (Japanese)	Immature flowering shoots and leaves cooked like broccoli	Larkcom (1980, 1991)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Brassica rapa</i> var. <i>parachinensis</i> (L.H. Bailey) Hanelt = <i>Brassica rapa</i> (Caisin Group)	False Pak Choi, Choysum, Caixin, Caisin	Immature flowering shoots and leaves cooked like broccoli	Larkcom (1980, 1991), Woodward (2000), Hu (2005)
<i>Brassica rapa</i> var. <i>purpurea</i> (L.H. Bailey) Kitam. = <i>Brassica rapa</i> L.	Red Oil Rape, Purple-Stem Mustard; Hon Tsai Tai (Chinese)	Flowering shoots and leaves eaten	Larkcom (1991), Hu (2005)
<i>Brassica rapa</i> var. <i>rosularis</i> (Tsen & Lee) Hanelt = <i>Brassica rapa</i> L. subsp. <i>chinensis</i> (L.) Hanelt	Flat Cabbage, Flat Pak Choi, Rosette Pakchoi, Spoon Mustard, Tatsoi	Flowering shoots and leaves eaten	Larkcom (1991)
<i>Brassica</i> spp.	Wild Mustard	Flower buds used as salad garnish or boiled and eaten with butter and parmesan cheese	Schofield (2003), Newman and O'Connor (2009)
<i>Bunias orientalis</i> L.	Turkish Warty Cabbage, Turkish Rocket, Hill Mustard	Flower buds and flowering stems eaten raw or cooked	Phillips and Rix (1998)
<i>Cakile edentula</i> (Bigelow) Hook.	American Sea Rocket	Flower buds combined with milder greens used as potherb	Fern et al. (1958), Facciola (1990)
<i>Cakile maritima</i> Scop.	Sea Rocket, European Seacroket	Leaves, stems, flower buds and immature seedpods eaten raw or cooked	Grieve (1971), Hedrick (1972), Facciola (1990)
<i>Cardamine heptaphylla</i> (Vill.) O.E. Schulz.	Seven-Leaf Toothwort, Pinnate Coral Root	Flowers eaten raw	Fern (1992–2003)
<i>Cardamine hirsuta</i> L.	Hairy Bittercress, Nursery Weed, Common Bitter Cress, Splitting Jenny, Flickweed	Leaves and flowers eaten raw or cooked, mainly used as a garnish or flavouring in salads etc., but are also sometimes used as a potherb	Hedrick (1972), Tanaka (1976), Larkcom (1980), Facciola (1990)
<i>Cardamine kitaibelii</i> Bech.	Kitaibel's Bittercress	Flowers eaten raw	Fern (1992–2003)
<i>Cardamine pentaphyllos</i> (L.) Crantz	Showy Toothwort	Flowers eaten raw	Fern (1992–2003)
<i>Cardamine pratensis</i> L.	Lady's Smock, Cuckoo Flower	Flowers and flower buds with a pungent cress-like flavour eaten raw as a pleasant nibble and also add a delicious flavour to salads	Facciola (1990), Fern (1992–2003)
<i>Cochlearia anglica</i> L.	English Scurvy Grass	Flower heads eaten raw in salads and sandwiches	Facciola (1990)
<i>Crambe maritima</i> L.	Sea Kale	The flowering shoots used like sprouting broccoli; they are quite nice raw and delicious when lightly steamed	Fern (1992–2003)
<i>Crambe orientalis</i> L.	Oriental Sea Kale	Flower stalks prepared like broccoli	Hedrick (1972), Facciola (1990)

<i>Diplotaxis muralis</i> (L.) DC.	Annual Wall Rocket, Stinking Wall-Rocket, Stink-Weed, Cross-Weed, Sand-Rocket, Wall-Mustard	The flowers and the leaves have a spicy, peppery flavour and are delicious added to a salad and rice or sprinkled over cooked French beans. Whole flowers added to 'taramasalata' and serve with brown toast	Anonymous (2012a)
<i>Eruca sativa</i> Mill. = <i>Eruca vesicaria</i> (L.) Cav.	Rocket Salad, Arugula, Roquette	Flowers are used as a garnish; the flowers and the leaves have a spicy, peppery flavour and are delicious added to a salad and rice or sprinkled over cooked French beans. Add whole flowers to 'taramasalata' and serve with brown toast	Kraft and Kraft (1977), Halpin (1978), Facciola (1990), Lauderdale and Evans (1999), Newman and O'Connor (2009), Anonymous (2012a)
<i>Eruca vesicaria</i> var. <i>sativa</i> (Mill.) Thell. = <i>Eruca vesicaria</i> (L.) Cav.	Rocket Arugula	Flowers eaten raw (make a nice garnish on the salad bowl)	Larkcom (1980), Facciola (1990), Lauderdale and Evans (1999)
<i>Eutrema wasabi</i> (Sieb.) Max. = <i>Eutrema japonicum</i> (Miq.) Koidz.	Japanese Horse Radish, Wasabi	Flowers soaked in salt water mixed with sake lees to make a popular pickle called 'wasabi-zuke'	Tanaka (1976), Facciola (1990)
<i>Hesperis matronalis</i> L.	Sweet Rocket, Dame's Violet	Flowers add spicy flavour to salads and fruit dishes. It combines well with chicken dishes and many fish recipes. Flowers can also be made into a flavoursome hot tea	Deane (2007–2012n), Anonymous (2012a), McVicar (2003)
<i>Lepidium densiflorum</i> Schrad.	Common Pepperweed, Prairie Peppergrass, Peppercress	Flower buds used as salad, garnish, or boiled and eaten with butter and parmesan cheese	Schofield (2003)
<i>Lobularia maritima</i> (L.) Desv.	Sweet alyssum	Flowers can be used as flavouring herb in salads or other dishes	Facciola (1990), Deane (2007–2012o, x)
<i>Matthiola incana</i> (L.) R.Br.	Stock	Flowers eaten as a vegetable or used as salad, garnish especially with sweet desserts	Tanaka (1976), Facciola (1990)
<i>Peltaria alliacea</i> Jacq.	Garlic Cress	Flowers eaten raw; make a very tasty addition to summer salads	Fern (1992–2003)
<i>Raphanus landra</i> Moretti ex DC. = <i>Raphanus raphanistrum</i> subsp. <i>landra</i> (Moretti ex DC.) Bonnier and Layens	Radish	Flowers used as above	Fern (1992–2003)
<i>Raphanus maritimus</i> Don = <i>Raphanus raphanistrum</i> subsp. <i>landra</i> (Moretti ex DC.) Bonnier and Layens	Sea Radish	Flowers used as above	Fern (1992–2003)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Raphanus raphanistrum</i> L.	Wild Radish	Flowers eaten raw, a nice addition to salads. The flower buds are lightly steamed and used as a broccoli substitute	Launert (1981)
<i>Raphanus sativus</i> L.	Radish, European Radish, Jointed Charlock; Lobak (Chinese)	Flower heads eaten as cooked vegetables. Young inflorescences and leaves serve as a vegetable or sepan Flowers add colour to the top of a salad or sprinkle over cooked vegetables to add a little spice	Tanaka (1976), Ochse and Van Den Brink (1980), Larkcom (1980), Facciola (1990), Woodward (2000), Newman and O'Connor (2009), Brown (2011)
<i>Raphanus sativus</i> var. <i>caudatus</i> (L.f) H. Vilm. = <i>Raphanus sativus</i> var. <i>mougrii</i> H.W.J. Helm	Radish (English), Hatsuka Daikon (Japanese) Rat-Tail; Radish Phak Khee Huut (Thai)	In Thailand, inflorescences and young fruits are eaten with 'nam phrik' or cooked in the mixed vegetable curry, 'kaeng kae'. Flowers eaten raw, a nice spicy addition to salads	Uphof (1968), Grieve (1971), Tanaka (1976), Larkcom (1980), Facciola (1990), Jircas (2010), Anonymous (2012a)
<i>Raphanus sativus</i> var. <i>niger</i> J. Kern = <i>Raphanus sativus</i> var. <i>sativus</i>	Oriental Radish	Young flower clusters eaten raw or cooked. Flowers have a spicy flavour with a crisp pleasant texture; they make a nice addition to salads or can be used as a broccoli substitute	Launert (1981), Facciola (1990), Fern (1992–2003)
<i>Raphanus sativus</i> var. <i>oleiformis</i> Pers.	Fodder Radish	Flowers used as above	Launert (1981), Facciola (1990), Fern (1992–2003)
<i>Rhynchosinapis wrightii</i> (O.E. Schulz.) Dandy = <i>Coincya wrightii</i> (O.E. Schultz) Stace	Lundy Cabbage	Flowers and young flowering stems eaten raw or cooked	Fern (1992–2003)
<i>Sinapis arvensis</i> L.	Charlock, Wild Mustard, Wild Turnip	Young inflorescence and flowering stems—cooked. A pleasant, cabbage/radish flavour, they can be used as a broccoli substitute	Hedrick (1972), Launert (1981), Facciola (1990), Steenbeeke (2001), Komarov (2004)
<i>Sisymbrium irio</i> L.	London Rocket, Londonrocket, Rocket Mustard	Flowers eaten raw in salad	Bailey (1949), Kunkel (1984), Facciola (1990)
<i>Thlaspi arvense</i> L.	Field Pennycress	Flower buds used as salad garnish, or boiled and eaten with butter and parmesan cheese	Schofield (2003)
Bromeliaceae			
<i>Bromelia pinguin</i>	Wild Pineapple, Wild Pine, Pinguin, Bayonette	Fried inflorescence eaten in El Salvador	Uphof (1968), Williams (1981), Facciola (1990)
<i>Karatas plumieri</i> E. Morren = <i>Bromelia karatas</i> L.	Karatas, Monkey Banana, Pinguin, Pinguin, Pingwing, Plumier Pingwing, Wild Pin	Young inflorescences cooked or used with eggs	Williams (1981)
<i>Tillandsia erubescens</i> Schlecht.	Flor De Encino	Inflorescences eaten reputed to be sweet	Laferriere et al. (1991)

	Inflorescences eaten		
<i>Tillandsia recurvata</i> L.			Laferriere et al. (1991)
Burseraeae			
<i>Boswellia serrata</i> Roxb. ex Colebr.	Indian Olibanum Tree, Olibanum, Luban, Gond	In India, flowers and seeds eaten by the Bhils peoples	Watt (1908)
Cactaceae			
<i>Epiphyllum oxypetalum</i> (DC.) Haw.	Dutchman Pipe Cactus, Night Queen, Orchid Cactus, Jungle Cactus, Night Blooming Cereus; Tan Hua (Chinese)	Dried open flowers used for making soups	Hu (2005)
<i>Ferocactus acanthodes</i> (Lem.) Britton and Rose	Barrel Cactus	Flower buds eaten cooked	Clarke (1977), Facciola (1990)
<i>Ferocactus viridescens</i> (Nutt. ex Torr. & A. Gary) Britton and Rose	Coast Barrel Cactus	Flower buds edible	Hedrick (1972), Tate (1976), Facciola (1990)
<i>Ferocactus wislizenii</i> (Engelm.) Britton and Rose	Arizona Barrel Cactus	Flower buds eaten cooked	Hedrick (1972), Tate (1976), Facciola (1990)
<i>Hamatocactus hamatacanthus</i> (Muehlepf.) F.M. Knuth	Turks Head, Lemon Cactus	Unopened flowers soaked overnight in water and boiled or fried	Tate (1976), Uphof (1968), Facciola (1990)
<i>Hylocereus megalanthus</i> (K. Schum. ex Vaupel) Ralf Bauer	Yellow Pitahaya, Midnight Cactus.	Flowers used as below	Lim (2012a)
<i>Hylocereus polyhizus</i> (F.A.C. Weber) Britton and Rose = <i>Hylocereus lemairei</i> (Hook.) Britton and Rose	Red Pitaya, Red Pitahaya, Dragonfruit, Night Blooming Cereus, Strawberry Pear, Belle Of The Night, Conderella Plant	Unopened flower buds are cooked and eaten as vegetable. The flowers are harvested before anthesis and dried for subsequent use as vegetable in soups	Lim (2012a)
<i>Hylocereus undatus</i> (Haw.) Britton and Rose	Pitahaya, Dragonfruit, Night Blooming Cereus, Strawberry Pear, Belle Of The Night, Conderella Plant; Ba Wang (Chinese)	Flowers used as above vegetable in soups	Morton (1987), Facciola (1990), Hu (2005), Lim (2012a)
<i>Marshalllocerues thurberi</i> (Engelm.) Backeb. = <i>Stenocereus thurberi</i> subsp. <i>thurberi</i>	Organ Pipe Cactus	Petals are eaten in southwestern America	Yanovsky (1936), Tate (1976), Facciola (1990)
<i>Myrtillocactus geometrizans</i> (Mart. ex Pfeiff.) Console	Blue Candle, Whortleberry Cactus, Garambulla Cactus, Garambullo, Bilberry Cactus, Blue Flame, Blue Candle, Blue Myrtle Cactus	Flowers eaten raw in salads or cooked with eggs	Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Opuntia basilaris</i> Engelm. and J.M. Bigelow	Bakersfield Beavertail, Beavertail, Branching Beavertail, Elongated Beavertail, Kern Beavertail, Short-Joint Beavertail, Trelase Beavertail, Trelase's Beavertail, Woodbury Beavertail	Flowers and flowerbuds eaten cooked	Yanosky (1936), Facciola (1990)
<i>Opuntia ficus-indica</i> (L.) Mill.	Prickly Pear, Indian Fig, Tuna Cactus, Barbary Fig, Cactus Pear, Christian Fig,	Among all the <i>Opuntia</i> , the Prickly Pear Cactus flower is the most often eaten, not raw but cooked, usually boiled. Their flavour leans towards tart. The blossoms also make a good wine	Deane (2007–2012), Roberts (2000)
Calycanthaceae			
<i>Chimonanthus praecox</i> (L.) Link	Wintersweet, Japanese Allspice; La Mei Hua (Chinese)	In China, the flowers are thoroughly boiled and eaten with oil and salt. The flower petals are used to flavour and scent tea	Read (1946), Tanaka (1976), Kunkel (1984), Facciola (1990)
Campanulaceae			
<i>Campanula alliarifolia</i> Willd.	Cornish Bellflower	Flowers—a pleasant taste and texture with a slight sweetness	Thomas (1977)
<i>Campanula carpatica</i> var. <i>turbinata</i> (Schott, Nyman and Kotschy) Nyman = <i>Campanula carpatica</i> Jacq.	Carpathian Bellflower, Tussock Bellflower	Flowers—raw or cooked. Slightly sweet, they make a very pleasant and decorative addition to the salad bowl[K]	Fern (1992–2003)
<i>Campanula carpatica</i> Jacq.	Carpathian Bellflower, Tussock Bellflower	Flowers and leaves, flowers used in salads	Fern (1992–2003)
<i>Campanula cochlearifolia</i> Lam	Fairies' Thimbles, Earleaf Bellflower	Flowers added to salad. Flowers eaten raw, added to salad, imparting a pleasant sweetness and a very attractive decoration to a salad	Fern (1992–2003)
<i>Campanula fenestrellata</i> Feer	Adriatic Bellflower	Flowers used as above added to salad	Fern (1992–2003)
<i>Campanula garganica</i> Ten.	Adriatic Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula glomerata</i> L.	Crown Of Snow, Snow Crown	Flowers used as above	Fern (1992–2003), Deane (2007–2012q)
<i>Campanula lactiflora</i> M. Bieb.	Milky Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula latifolia</i> L.	Giant Campanula, Large Campanula	Flowers used as above	Fern (1992–2003)
<i>Campanula latifolia</i> A. DC. = <i>Campanula grandis</i> subsp. <i>grandis</i>	Latiloba Campanula, Great Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula medium</i> L.	Canterbury Bells, Bellflower	Flowers used as above	Fern (1992–2003)

<i>Campanula persicifolia</i> L.	Peach-Leaved Bellflower, Harebell, Willow Bell	Flowers used as above	Fern (1992–2003)
<i>Campanula portenschlagiana</i> Schult.	Dalmation Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula poscharskyana</i> Degen	Serbian Bellflower, Trailing Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula punctata</i> Lam.	Spotted Bellflower	Flowers and leaves cooked as potherb. The flowers make a decorative and tasty addition to the salad bowl	Read (1946), Tanaka (1976), Kunkel (1984), Facciola (1990), Fern (1992–2003), Dean (2007–2012q)
<i>Campanula pyramidalis</i> L.	Chimney Bellflower	Flowers eaten raw. A nice decorative addition to salads, the flowers have a pleasant sweet flavour	Fern (1992–2003)
<i>Campanula takessimana</i> Nakai = <i>Campanula punctata</i> var. <i>punctata</i>	Korean Bellflower	Flowers used as above	Fern (1992–2003)
<i>Campanula versicolor</i> Andrews	Bellflower	Flowers used as above	Fern (1992–2003), Dean (2007–2012q)
<i>Platycodon grandiflorus</i> (Jacq.) A.DC.	Balloon Flower, Japanese Bellflower, Common Balloon Flower	Blossoms sweet, used in salads, stuffed, candied or dipped in butter	Deane (2007–2012o)
<i>Wahlenbergia ceracea</i> Lothian	Alpine Bluebell, Waxy Bluebells	Flowers may be eaten, making a colourful (albeit tasteless) addition to a salad	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia communis</i> Carolin = <i>Wahlenbergia capillaris</i> (Lodd.) G. Don.	Tufted Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia fluminialis</i> (J.M. Black) E. Wimm. ex H. Eichler	River Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia gracilentia</i> Lothian	Annual Bluebell, Hairy Annual Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia gracilis</i> (G. Forst.) A.DC.	Australian Bluebell	Flowers edible	Harden (1992), King (2007)
<i>Wahlenbergia graniticola</i> Carolin	Granite Bluebell	Flowers may be eaten, making a colourful (albeit tasteless) addition to a salad	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia littoricola</i> P.J. Sm.	Coast Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia luteola</i> P.J. Sm.	Bronze Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia multicaulis</i> Benth.	Tadgell's Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia planiflora</i> P.J. Sm.	Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
<i>Wahlenbergia queenslandica</i> Carolin ex P.J. Sm.	Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Wahlbergia</i> sp.	Native Blue Bells	Flowers used in salads	Cribb and Cribb (1987), Low (1991), Symmons and Symmons (1994)
<i>Wahlbergia stricta</i> (R.Br.) Sweet	Austral Bluebell, Tall Bluebell, Austral Bluebell	The flowers of <i>Wahlbergia</i> may be eaten, making a colourful (albeit tasteless) addition to a salad	Harden (1992), Steenbeeke (2001)
<i>Wahlbergia tumidifructa</i> P.J. Sm.	Mallee Annual-Bluebell	Flowers used as above	Harden (1992), Steenbeeke (2001)
Cannabaceae			
<i>Humulus lupulus</i> L.	Hops, Common Hop; Pi-Jua-Hua (Chinese)	Pistillate inflorescence used for flavouring beer; buds eaten; dried flower heads used to flavour beer and liquor also used to leaven bread, used in tea, used in aperitif	Garland (1993), Hu (2005)
Capparaceae			
<i>Boscia albitrunca</i> (Burch.) Gilg and Benedict	Shepherd's Tree, Witgatboom, Matoppie	Flower buds pickled and used as caper substitute	Uphof (1968), Fox et al. (1982), Facciola (1990)
<i>Capparis arborea</i> (F. Muell.) Maiden	Native Pomegranate, Wild Lime, Wild Lemon, Brush Caper Berry	Edible flower buds pickled	Cribb and Cribb (1987), Low (1991), Symmons and Symmons (1994)
<i>Capparis decidua</i> (Forssk.) Edgew.	Caper, Kari; Kursan, Murkheit, Sodad, Tundub (Arabic); Meringa (Somali)	Flower bud eaten as potherb or pickled in India. Floral nectar also eaten in Rajasthan, India	Hedrick (1972), Bhandari (1974), Tanaka (1976), Saxena (1979), Facciola (1990)
<i>Capparis ovata</i> Desf. = <i>Capparis spinosa</i> L.	Caper, Caper Berry, Caper Bush	Flower buds can be pickled and used like capers	Kunkle (1984), Facciola (1990)
<i>Capparis sarmentosa</i> A. Cunn. ex Benth.	Climbing Caper	Edible flower buds pickled	Cribb and Cribb (1987), Low (1991), Symmons and Symmons (1994)
<i>Capparis septaria</i> L.	Indian Capers, Wild Caper Bush, Hedge Caper Bush	Flower buds can be pickled and used like capers	Tanaka (1976), Facciola (1990)
<i>Capparis spinosa</i> L.	Caper, Caper Berry, Caper Bush	Flower buds pickled and used to flavour sauces, butter, salads, stuffing, fish, meat, cheese and hors d'oeuvres	Hedrick (1972), Facciola (1990)
<i>Capparis spinosa</i> L. var: <i>maritima</i> (Jacq.) K. Schumann = <i>Capparis maritima</i> Jacq.	Caper, Caper Berry, Caper Bush	Pickled flower buds used to complement salty or oily foods, olives, salted meat and fish and to flavour casseroles	Garland (1993), Ong and Siemonsma (1999)
<i>Capparis velutina</i> P.I. Forst.	Kin Kin Scrub, Native Pomegranate	Edible flower buds pickled	Cribb and Cribb (1987), Low (1991), Symmons and Symmons (1994)

<i>Cratava adansonii</i> DC.	Garlic Pear Tree, Three-Leaf Caper, Obuse Leaf Crateva; Kumbok (Thai)	Flowers consumed as food	Weitayaklung et al. (2008)
<i>Cratava magna</i> (Lour.) DC. = <i>Cratava religiosa</i> G. Forst.	Spider Tree, Sacred Garlic Pear, Three-Leaved Caper; Kum Nam (Thai)	Flowers consumed as food	Weitayaklung et al. (2008)
<i>Cratava religiosa</i> G. Forst.	Spider Tree, Sacred Garlic Pear, Three-Leaved Caper; Kum Nam (Thai)	In Myanmar, the flowers are pickled and eaten for their digestive action	Hedrick (1972), Uphof (1968), Tanaka (1976), Facciola (1990)
Caprifoliaceae			
<i>Centranthus macrosiphon</i> Boiss	Long-Spurred Valerian, Pretty Betsy, Spur Valerian	Flowers eaten raw	Tanaka (1976)
<i>Lonicera affinis</i> Hook. and Arn.	Wild Honeysuckle, Coastal Honeysuckle; Hama-Nindou (Japanese)	Flowers used as a flavouring in drinks	Kunkel (1984)
<i>Lonicera caprifolium</i> L.	Goat-Leaf Honeysuckle, Italian Honeysuckle, Perfoliate Honeysuckle, Pefoliate Woodbine	Flowers eaten	McVicar (2003)
<i>Lonicera henryi</i> Hemslay = <i>Lonicera acuminata</i> var. <i>acuminata</i>	Central China Honeysuckle; Xi Ye Ren Dong (Chinese)	Flowering shoots and flowers used for tea	Tanaka (1976), Facciola (1990), Hu (2005)
<i>Lonicera japonica</i> Thunb.	Japanese Honeysuckle; Jin Yin Hua, Er Hua, Shuang Hua (Chinese); Suikazura (Japanese)	Flower and buds used as ingredient in five-flower tea 'wu-hua cha' use in wine in China and beverage in Japan. The petals have also been used for making sorbet dessert. Flowers sucked for their sweet nectar and used as vegetable or made into syrup and puddings	Crowhurst (1972), Tanaka (1976), Facciola (1990), Barash (1997), Lauderdale and Evans (1999), Roberts (2000), Hu (2005)
<i>Patrinia scabiosifolia</i> Fisch. ex Trevit.	Yellow Patrinia, Golden Lace; Omina-Eshi (Japanese)	Flower buds eaten steamed, fried, oil-roasted, preserved, in soups, or parboiled and dried for later use	Tanaka (1976), Facciola (1990)
<i>Patrinia villosa</i> (Thunb.) Juss.	Patrinia; Bai Jiang Cao (Chinese), Otoko-Eshi (Japanese)	Flower buds eaten, fried, preserved or as potherb	Tanaka (1976), Facciola (1990)
<i>Sambucus australasica</i> (Lindl.) Fritsch	Yellow Elderberry	Flowers eaten raw or cooked	Cribb and Cribb (1987), Low (1991)
<i>Valeriana officinalis</i> L.	Valerian, Garden Valerian, Valerian Root	Flowers edible	McVicar (2003)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Valerianella locusta</i> (L.) Laterr.	Corn Salad, Lamb's Lettuce, Lewiston Cornsalad	Inconspicuous flowers edible and flowering stems eaten raw	Larkcom (1980), Facciola (1990)
Caricaceae			
<i>Carica papaya</i> L.	Papaya	Inflorescence and flowers steamed, eaten with rice or added to soups and stews. In Indonesia, flowers are candied	Ochse and van den Brink (1980), Facciola (1990), Lim (2012a)
Caryophyllaceae			
<i>Dianthus barbatus</i> L.	Sweet William	The flowers can be crystallized. They have a mild flavour and are used as a garnish for vegetable and in fruit salads, cakes, desserts, cold drinks, lemonades butter and lemonade. The petals of Sweet Williams will add zest to ice cream, sorbets, salads, fruit salad, dessert sauces, seafood and stir-fries. It is advisable to remove the white heel at the base of the petal as this has a bitter taste	Facciola (1990), Lauderdale and Evans (1999), Anonymous (2012a)
<i>Dianthus caryophyllus</i> L.	Carnation, Pinks, Chinese Pink, Clove Pink	Flowers can be crystallized. The flower petals have a strong smell of cloves and are candied, used as a garnish in salads, for flavouring fruit, fruit salads, butter, lemonade, etc. They can also be used as a substitute for rose petals in making syrup. Petals preserved in sugar, syrup or vinegar and added to cordial, used to flavour food and drink, wine, tea, marmalade and sorbet. The petals should be removed from the calyx and their bitter white base should be removed	Morton (1976), Facciola (1990), Garland (1993), Barash (1997), Lauderdale and Evans (1999), Anonymous (2012a), Rop et al. (2012)
<i>Dianthus chinensis</i> L.	Dianthus, Pinks, Chinese Pinks	Most dianthus have a pleasant spicy, floral, clove-like taste, especially the more fragrant varieties, and are ideal for decorating or adding to cakes. They also make a colourful garnish to soups, salads and the punch bowl	Lauderdale and Evans (1999), Anonymous (2012a)
<i>Dianthus deltooides</i> L.	Maiden Pinks	Flowers used as above	Barash (1997), Lauderdale and Evans (1999), Anonymous (2012a)
<i>Dianthus plumarius</i> L.	Pink, Modern Border Pink	The petals are used in making cordials, syrups, sauces, salads, vinegars, lemonade and butter. They can be crystallized and used as garnish. Children suck the flowers for their sweet edible nectar	Tanaka (1976), Kunkel (1984), Facciola (1990), Anonymous (2012a)

<i>Dianthus</i> spp.	Carantions, Pinks	Flowers used as above	Lauderdale and Evans (1999), Newman and O'Connor (2009)
<i>Dianthus superbus</i> L.	Fringed Pink	Children suck the flowers for their sweet edible nectar	Tanaka (1976), Kunkel (1984), Facciola (1990), Lauderdale and Evans (1999), Anonymous (2012a)
<i>Paronychia argentea</i> Lam.	Algerian Tea, Silver Nailroot, Silvery Whitlow Wort	Infusion of flower used as tea	Uphof (1968), Facciola (1990)
<i>Paronychia capitata</i> (L.) Lam.	Algerian Tea, Whitlow Wort	Flowers used as substitute for tea	Uphof (1968), Facciola (1990)
<i>Petrohragia prolifera</i> (L.) P.W. Ball and Heywood	Childing Pink, Proliferous Pink	Flowers used as tea	Uphof (1968), Facciola (1990)
<i>Stellaria media</i> (L.) Vill.	Chickweed, Five-Petaled Chickweed, Chickenwort, Craches, Martuns, Winterweed	Flowering top used as vegetable or garnish	Cribb and Cribb (1987), Clarke (1977), Facciola (1990)
Celastraceae			
<i>Celastrus dependens</i> Wall. = <i>Celastrus paniculatus</i> subsp. <i>multiflorus</i> (Roxb.) D. Hou.	Black Ipecac, Black Oil Plant, Black Oil Tree, Celastrus Dependens, Climbing Staff Plant, Climbing Staff Tree, Dhimarbel, Intellect Tree	The young flowers are used as a vegetable	Facciola (1990)
<i>Celastrus paniculatus</i> Willd.	Shubby Bittersweet, Black Ipecac, Black Oil Plant, Black Oil Tree, Celastrus Dependens, Climbing Staff Plant, Climbing Staff Tree, Dhimarbel, Intellect Tree	Young flowers used as vegetable	Kunkel (1984)
Cleomaceae			
<i>Cleome gynandra</i> L.	African Spider Flower, Spider Flower, Shone Cabbage; Phak Sian (Thai)	Young shoots and young inflorescences are fermented in salt water and served with 'nam phrik'. The leaves are also eaten in soup with spareribs	Jircas (2010)
<i>Cleome integrifolia</i> Torr. and A. Gray = <i>Cleome serrulata</i> Pursh.	Rocky Mountain Beeplant, Bee Spider-Flower	Flowers boiled, eaten as potherb	Uphof (1968), Harrington (1974), Facciola (1990)
<i>Cleome monophylla</i> L.	Single-Leaved Cleome	Flowers eaten	Fox et al. (1982), Facciola (1990)
<i>Cleome serrulata</i> Pursh	Rocky Mountain Beeplant, Bee Spider-Flower	Young shoots, leaves and flowers are cooked and used as potherbs. Flowers used in New Mexico and Arizona	Yanovsky (1936), Uphof (1968), Tanaka (1976), Facciola (1990)
Clusiaceae			
			(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Mammea americana</i> L.	Mammee Apple, Mamey	A liqueur called 'Eau de Créole', or 'Crème de Créole', is distilled from the fragrant white flowers	Morton (1987), Facciola (1990)
<i>Mesua ferrea</i> L.	Ceylon Ironwood, Indian Rose Chestnut, Cobra's Saffron, Mesua	Flowers eaten	Wessapan et al. (2007), Wettayaklung et al. (2008)
Combreteaceae			
<i>Combretum grandiflorum</i> G. Don	Ohwirennini (Ghana – Akan-Asante); Fu Yayos (Gambia—Diola)	Flowers sucked for the nectar	Dalziel (1937), Facciola (1990)
<i>Combretum paniculatum</i> Vent.	Burning Bush, Forest Flame-Creeper (English); Bambagwena, Mupfurura (Zimbabwe—Shona)	Flowers sucked for the nectar	Dalziel (1937), Facciola (1990)
<i>Combretum platypterum</i> (Welw.) ex M.A. Lawson	Kyeramoa, O-Hwiremo Spaka (Ghana—Akan—Asante)	Flowers sucked for the nectar	Dalziel (1937), Facciola (1990)
<i>Quisqualis indica</i> L. = <i>Combretum indicum</i> (L.) DeFilipps	Chinese Honeysuckle, Drunken Sailor, Quisqualis, Rangoon Creeper, Red Jasmine	Flowers eaten in Thailand	Wettayaklung et al. (2008)
Commelinaceae			
<i>Commelina africana</i> L.	Yellow Commelina	Flowers eaten cooked	Deane (2007–2012n)
<i>Commelina communis</i> L.	Asiatic Dayflower	Leaves, flowers and young shoots eaten raw or cooked	Hedrick (1972), Tanaka (1976), Facciola (1990)
<i>Commelina cyanea</i> R.Br.	Native Wandering Jew, Wandering Sailor, Scurvy Weed	Flowers edible	King (2007)
<i>Rhoeo spathacea</i> Sw = <i>Tradescantia spathacea</i> Sw.	Oyster Plant, Moses-in-the-Cradle, Boat Lily, Moses-in-a-Boat; Bang Hua (Chinese)	Leafy shoots and flowers eaten in China	Hu (2005)
<i>Tradescantia virginiana</i> L.	Spiderwort, Indian Paint, Moses in the Bulrushes	Flowers eaten raw. They make an attractive edible garnish and can be made into candy	Fernald et al. (1958), Peterson (1977), Facciola (1990)
Convolvulaceae			
<i>Calonyction aculeatum</i> (L. House) = <i>Ipomea alba</i> L.	Moonflower, Moonlight Flower, Prickly Ipomea, Giant Moon Flower; Yue Guang Hua (Chinese); Terulak (Indonesian)	Leafy shoots and fleshy sepals eaten as potherb, dried flowers used for soup and also in pastries in Yunnan. In Indonesia, flowers used fresh or dried in 'kimlo' (a vegetable soup)	Ochse and van den Brink (1980), Hu (2005), Ng (2011)
<i>Calonyction album</i> (L. House) = <i>Ipomea alba</i> L.	Moonflower, Moonlight Flower, Prickly Ipomea, Giant Moon Flower; Yue Guang Hua (Chinese); Terulak (Indonesian)	As above	Burkill (1966), Martin and Ruberté (1975), Ochse and van den Brink (1980), Facciola (1990), Ng (2011)

<i>Ipomoea alba</i> L.	Moonflower, Moonlight Flower, Prickly Ipomoea, Giant Moon Flower; Yue Guang Hua (Chinese); Terulak (Indonesian)	As above	Hu (2005), Ng (2011)
Costaceae			
<i>Chetlocostus spectiosus</i> (J. Koemig) C.D. Specht	Cane-Reed, Crepe Ginger, Crepe Ginger, Elegant Costus, Malay Ginger, Spiral Flag, Spiral Ginger, Wild Ginger	Flowers edible in salad or as garnish	Carle (1995), Chan (1998)
<i>Costus barbatus</i> Suess.	Spiral Ginger, Red Tower Ginger	Flowers used as above	Carle (1995), King (2007)
<i>Costus erythrophyllus</i> Loes.	Blood Red Spiral Costus, Oxblood Ginger, Violet Spiral Flag	Flowers used as above	Carle (1995), King (2007)
<i>Costus productus</i> Gleason ex Maas	Costus Ginger, Dwarf Orange Ginger, Orange Tulip Ginger, Spiral Ginger	Flowers used as above	Carle (1995), Campbell (2006), NTBG (2013)
<i>Costus</i> spp.	Spiral Gingers	Many species, each with distinct citrus flavours—added to salads	Carle (1995), King (2007)
Cucurbitaceae			
<i>Benincasa hispida</i> (Thunberg ex Murray) Cogniaux cv-group Fuzzy Gourd Group	Fuzzy Gourd, Fuzzy Melon, Hairy Gourd, Hairy Melon	Young leaves and flower buds are steamed and eaten as a vegetable or are added as a flavouring to soups. Young shoots, flowers and fruits are consumed as vegetable in various parts of Thailand and Indonesia	Facciola (1990), Huxley et al. (1992), Jircas (2010), Lim (2012b)
<i>Benincasa hispida</i> (Thunberg ex Murray) Cogniaux cv-group Wax Gourd Group	Wax Gourd, Chinese Winter Melon, Wax Gourd; Fak, Fang (Thai)	As above	Jircas (2010), Lim (2012b)
<i>Benincasa hispida</i> Thunb.	Hairy Melon, Hairy Wax Gourd	Flowers, fruits and leaves relished as vegetables	Ochse and Bakhuizen van den Brink (1980), Facciola (1990), Woodward (2000), Lim (2012b)
<i>Cucurbita argyrosperma</i> C. Huber.	Cushaw, Green-Stripe Cushaw, Japanese Pie Pumpkin, White Cushaw, Silver Seed Gourd,	Flowers eaten cooked	Facciola (1990)
<i>Cucurbita filitifolia</i> Bouché	Siam Pumpkin, Thin Vermicelli Pumpkin, Asian Pumpkin, Fig Leaf Gourd, Pie Melon, Malabar Gourd, Thai Marrow	Flowers are eaten	Widjaja and Sukprakam (1994), Lim (2012b)
<i>Cucurbita foetidissima</i> Kunth	Buffalo Gourd	Flowers said to be edible after preparation	Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Cucurbita maxima</i> Duchesne ex Lam.	Squash, Pumpkin, Buttercup Squash	Flowers, fruits and leaves relished as vegetables	Widjaja and Sukprakarn (1994), Newman and O'Connor (2009), Lim (2012b)
<i>Cucurbita mixta</i> Pangalo = <i>Cucurbita argyrosperma</i> Huber.	Cushaw Pumpkin, Squash	Flowers edible	Widjaja and Sukprakarn (1994)
<i>Cucurbita moschata</i> (Duchesne ex Lam.) Duchesne ex Poiret	Squash, Pumpkin, Butternut Squash, Long Island Cheese Pumpkin, Fak Thong (Thai), Kabocha (Japanese)	Young leaves unopened flower Mature fruit is commonly used as ingredient of various kinds of spicy vegetable soups. Young shoots, flowers and fruits are also eaten	Herklots (1972), Ochse and van den Brink (1980), Facciola (1990), Widjaja and Sukprakarn (1994), Newman and O'Connor (2009), Jircas (2010), Lim (2012b)
<i>Cucurbita pepo</i> L.	Squash, Gourd, Pumpkin, Vegetable Marrow, Zucchini, Calabashes, Acorn Squash, Summer Pumpkin, Autumn Pumpkin	Flowers, fruits and leaves relished as vegetables	Widjaja and Sukprakarn (1994), Barash (1997), Lauderdale and Evans (1999), Newman and O'Connor (2009), Lim (2012b)
<i>Cucurbita</i> spp.	Pumpkin, Squash, Vegetable Marrow, Zucchini, Calabashes, Acorn Squash	Flowers used in desserts and puddings	Barash (1997), Newman and O'Connor (2009), Dean (2007–2012a)
<i>Lagenaria siceraria</i> (Molina) Standley	Bottle Gourd, Calabash Gourd	Young tender fruits, young shoots, leaves and flower buds of non-bitter varieties eaten as vegetables in Asia and Africa	Lim (2012b)
<i>Luffa aegyptiaca</i> P. Miller	Bath Sponge, Smooth Luffa, Dish Cloth Gourd, Sponge Gourd	Flowers, buds, young fruits and leaves relished as vegetables	Lim (2012b)
<i>Luffa acutangula</i> (L.) Roxb.	Angled Luffa	Flowers, buds, young fruits and leaves relished as vegetables	Herklots (1972), Facciola (1990), Jansen et al. (1994), Woodward (2000), Lim (2012b)
<i>Luffa cylindrica</i> (L.) M. Roem. = <i>Luffa aegyptiaca</i> P. Miller	Bath Sponge, Smooth Luffa, Dish Cloth Gourd, Sponge Gourd	Flowers, buds, young fruits and leaves relished as vegetables	Herklots (1972), Ochse and van den Brink (1980), Facciola (1990), Jansen et al. (1994), Lim (2012b)
<i>Momordica charantia</i>	Bitter Gourd, Bitter Melon	Fragrant yellow blossoms can be used for flavouring	Reyes et al. (1994), Lim (2012a, b)
<i>Momordica cochinchinensis</i> Loureiro	Giant Spine Gourd (English), Namban Kikarasuuri (Japanese), Fak Khao (Thai), Gac (Vietnamese)	In Thailand, young fruits, shoots and flowers are ingredient of curry. After boiling, they are eaten with chilli sauces and rice. Young shoots are fried with oyster sauce with pork or shrimp	Jircas (2010), Lim (2012b)

Cycadaceae						
<i>Cycas siamensis</i> Miq.	Silver Cycas, Thai Silver Cycas; Prong (Thai)		Core of young conical flower bud eaten after prolonged cooking			Pongpangan and Poobarasert (1985)
Cyperaceae						
<i>Scirpus lacustris</i> L. = <i>Schoenoplectus lacustris</i> (L.) Palla.	Great Bulrush		Pollen mixed with meal for making bread			Harrington (1974), Facciola (1990)
<i>Scirpus paludosus</i> A. Nelson = <i>Bolboschoenus maritimus</i> subsp. <i>paludosus</i> (A. Nelson) T. Koyama	Alkali Bulrush		Pollen mixed with meal for making bread by Indian tribes			Fernand et al. (1958), Upholf (1968), Facciola (1990)
<i>Scirpus validus</i> Vahl = <i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.) Palla	Tall Bulrush, Great American Bulrush		Pollen used in soups and bread			Fernand et al. (1958), Tanaka (1976), Facciola (1990)
Dilleniaceae						
<i>Dillenia indica</i> L.	Chulta, Dillenia, Elephant-Apple, Hondapare Tree, Indian Catmon; San Plao, Matad (Thai)		In India (Deccan and Garhwal Himalayas) innermost sepals used to flavour food and eaten. A syrup is made from the flower sepals			Pongpangan and Poobrasert (1985), Watt (1908), Patiri and Borah (2007), Lim (2012b)
<i>Dillenia pentagyna</i> Roxb.	Karmal, Dog Teak, Dillenia, Nepali Elephant Apple; Agachi (Garo); Dieng Soh Karbam (Khasi)		Flowers India (Bombay Presidency): flowers especially the fleshy calyces and fruits eaten as vegetable in Assam. Flower buds have a pleasant acid flavour, eaten raw or cooked in Oudh and Central India			Gamie (1902), Seal, (2012), Patiri and Borah (2007)
<i>Dillenia philippinensis</i> Rolfe	Philippine Catmon, Philippine Dillenia		Flowers used as flavouring for sour fish soup			Lim (2012b)
<i>Dillenia serrata</i> Thunb.	Dengen, Dongi Bolusu, Songi (Borneo)		Yellow carpels eaten			Lim (2012b)
Dioscoreaceae						
<i>Dioscorea pentaphylla</i> L.	Five-Leaved Yam		Flowers eaten in the Deccan, India			Watt (1908)
Dipterocarpaceae						
<i>Dipterocarpus obtusifolius</i> Teijsm. ex Miq.	Hiang (Thai); Mai Xat (Laotian)		Flowers sour, edible raw			Pongpangan and Poobarasert (1985)
<i>Shorea talura</i> Roxb.	Lac Tree, Lac Tree Of South India; Payom (Thai)		Flowers eaten cooked			Pongpangan and Poobarasert (1985)
Doryanthaceae						
<i>Doryanthes excelsa</i> Corrêa	Gymea Lily, Flame Lily		Flower stalk, young flower heads were eaten after steaming as a traditional aboriginal food			Low (1989), Kapitany (2012)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
Ericaceae			
<i>Acrotiche attenuata</i> F. Muell.	Trailing Ground-Berry	Abundant flower nectar sucked by children	Cribb and Cribb (1987)
<i>Acrotiche prostrata</i>	Trailing Ground-Berry	Abundant flower nectar sucked by children	Cribb and Cribb (1987)
<i>Acrotiche serrulata</i> (Labill.) R.Br.	Honeypots, Heath	Tiny flowers eaten	Low (1989)
<i>Agapetes variegata</i> (Roxb.) D. Don ex G. Don	Agapetes	Flowers cooked eaten with rice in India	Altschul (1973), Facciola (1990)
<i>Arctostaphylos glauca</i> Lindl.	Bigberry Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos manzanita</i> Parry	Common Manzanita, Whiteleaf Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos nevadensis</i> A. Gray	Pinemat Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos parryana</i> Lemmon	Parry Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos patula</i> Greene	Greenleaf Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos pungens</i> Kunth	Pointleaf Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Arctostaphylos tomentosa</i> (Pursh.) Lindl.	Downy Manzanita	Blossom eaten as nibbles	Deane (2007–2012q)
<i>Azalea indica</i> L.	Pink Azalea	Flowers edible	Tanaka (1976)
<i>Azalea oldhamii</i> (Maxim.) Mast. = <i>Rhododendron</i> , <i>Azalea</i> <i>Rhododendron oldhamii</i> Maxim.		Flower petals sometimes eaten	Tanaka (1976)
<i>Calluna vulgaris</i> (L.) Hull	Common Heather, Heather	Dried flower heads made a good tea	Hedrick (1972), Facciola (1990)
<i>Erica cerinthoides</i> L.	Fire Erica, Fire Heath, Red Hairy Heath	Flowers sucked for nectar	Kunkel (1984)
<i>Gaultheria appressa</i> A. W. Hill	White Waxberry	The swollen calyx of the flower is succulent, surrounding the seed at maturity. It is somewhat bitter and has little to recommend it as a food	Harden (1992), Steenbeeke (2001)
<i>Gaultheria viridicarpa</i> I. Telford and J.B. Williams	Waxberry	As above	Harden (1992), Steenbeeke (2001)
<i>Ledum columbianum</i> Piper = <i>Rhododendron columbianum</i> (Piper) Harmaja.	Pacific Labrador Tea	Light delicate beverage made by boiling over leaves and or flowers	Schofield (2003)
<i>Ledum glandulosum</i> Nutt.	Western Labrador Tea	As above	Schofield (2003)
<i>Ledum palustre</i> ssp. <i>decumbens</i> (Aiton) Hultén = <i>Ledum palustre</i> var. <i>decumbens</i> Aiton	Labrador Tea	As above	Schofield (2003)

<i>Ledum palustre</i> ssp. <i>groenlandicum</i> (Oeder) Hultén = <i>Rhododendron groenlandicum</i> (Oeder) Kron and Judd.	Labrador Tea	As above	Schofield (2003)
<i>Melichrus procumbens</i> (Cav.) Druce	Honeypot, Jam-Pot Jam-Tart Heath	Small blossoms make sweet tea and have an abundant nectar	Cribb and Cribb (1987), Low (1989)
<i>Melichrus urceolatus</i> R.Br.	Urn-Heath	Abundant nectar	Cribb and Cribb (1987)
<i>Rhododendron arboreum</i> Sm	Red Rhodendron; Lali Gurans (Nepali); Burans (Garhwali); Eras (Kumaoni); Adrawal (Punjab); Billi (Tamil); Pu (Kannada); Kattupoo Varasu (Malayalam)	The fresh and dried flowers have a sweet and sour taste and are used in the preparation of squash, jams, jellies and local pleasant brew drunk daily as refreshing appetizer and also to prevent high-altitude sickness. Fresh petals are used to prepare a chutney known as 'barah ki chutney'	Gupta (1962), Hedrick (1972), Tanaka (1976), Pradhan and Lachungpa (1990), Facciola (1990), Namrata et al. (2011), Srivastava (2012)
<i>Rhododendron indicum</i> (L.) Sweet	Rhododendron, Southern Indica Hybrid Azaleas; Otakumi Tutuji (Japanese)	Flowers eaten raw or cooked	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Rhododendron kaempferi</i> Planch.	Torch Azalea, Kaempferi Azalea	Flowers eaten raw or cooked	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Rhododendron lapponicum</i> (L.) Wahlenb.	Lapland Rosebay	Flower tops used as substitute for tea	Hedrick (1972)
<i>Rhododendron mucronulatum</i> Turcz.	Korean Rhodendron; Ying Hong Du Juan (Chinese); Jindallae (Korean)	Flower petals used in Hwajeon flower glutinous rice cake	Tanaka (1976), Wikipedia (2012)
<i>Richea scoparia</i> Hooker f.	Scoparia, Alpine Richea	Flowers sucked for nectar	Schaeffer and Fletcher (2012)
<i>Styphelia</i> sp.	Five Corners	Flower sucked for nectar	Low (1989)
<i>Vaccinium myrtilloides</i> Michx.	Bilberry, Bulberry, Whortleberry, Huckleberry, Hurtleberry, Blueberry, Trackleberry, Whinberry, Bleaberry, Airelle, Fraughan	The flowers can be eaten raw or used to make preserves	Moerman (1998)
<i>Vaccinium vaciniaceum</i> (Roxb.) Steumer.	Tu Guan Xiao Lun Ye Yue Ju (Chinese)	The acid-tasting flowers are used in curries	Kunkel (1984)
<i>Epigaea repens</i> L.	Mayflower, Trailing Arbutus	Flowers have a spicy slightly acid flavour; they are eaten as a wayside nibble or are added to salads as a thirst quencher	Tanaka (1976), Kunkel (1984), Facciola (1990)
Euphorbiaceae			
<i>Chrozophora plicata</i> (Vahl) A. Juss. ex Spreng.	Giradol	Petals provide a red and blue dye used for colouring liqueurs, wine, pastries and Dutch cheeses	Uphof (1968), Facciola (1990)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Croton corymbulosus</i> Engelm. = <i>Croton pottsii</i> var. <i>pottsii</i> (Klotzsch) Müll. Arg.	Leatherweed	Infusion of flowering tops used as beverage in Texas	Yanovsky (1936)
<i>Euphorbia hirta</i> L.	Common Spurge, Asthma Weed, Hairy Spurge, Garden Spurge; Pakhang Leiton (Manipur)	Young shoots and inflorescences eaten	Yunnum and Tripathi, (2012)
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Poinsettia, Christmas Star, Christmas Flower, Painted Leaf, Lobster Plant, Mexican Flameleaf, Crown of the Andes	Young shoot, inflorescence and leaves steamed or stewed	Ochse and van den Brink (1980)
<i>Euphorbia tetragona</i> Haw.	Naboom	Flowers rich in nectar sometimes used in confectionary	Facciola (1990)
<i>Ricinus communis</i> L.	African Coffee Tree, Castor, Castor Bean, Castor Oil, Castor Oil Plant	Young inflorescences boiled	Uphof (1968), Hedrick (1972), Facciola (1990)
Fabaceae			
<i>Acacia aneura</i> F. Muell. ex Benth.	Mulga Acacia	Flowers cooked, often in fritters	Cribb and Cribb (1987)
<i>Acacia concinna</i> (Willd.) DC.	Soap Pod	Flowers used as vegetable	Hedrick (1972), Altschul (1973), Facciola (1990)
<i>Acacia coriacea</i> DC.	Wiry Wattle, Wire Wood	Flowers edible	Wikipedia (2012)
<i>Acacia cultriformis</i> A. Cunn. ex G. Don.	Knife-Leaf Wattle	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia dealbata</i> Link	Mimosa	Flowers used as above	Cribb and Cribb (1987)
<i>Acacia decurrens</i> Willd.	Acacia Bark, Early Black Wattle, Green Wattle, Sydney Wattle, Wattle Bark, Tan Wattle, Golden Teak, Brazilian Teak	Flowers used as above	Cribb and Cribb (1987)
<i>Acacia farnesiana</i> (L.) Willd.	Farnese Wattle, Mimosa Wattle, Cassie Flower	Flowers edible	Stangland (2004), McCullough (2007), Department of the Army (2009)
<i>Acacia longifolia</i> (Andrews) Willd.	Long-Leaved Wattle, Acacia Trinervis, Aroma Doble, Golden Wattle, Coast Wattle, Sallow Wattle, Sydney Golden Wattle	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia macradenia</i> Benth.	Zig-Zag Wattle	Flowers edible	King (2007)
<i>Acacia melanoxylon</i> R.Br.	Blackwood, Hickory, Sally Wattle, Tasmanian Blackwood, Mudgerabah	Flowers cooked, often used in fritters	Cribb and Cribb (1987)

<i>Acacia mucronata</i> Wendl.	Narrow-Leaf Wattle	Flowers used as above	Cribb and Cribb (1987), Fern (1992–2003)
<i>Acacia nilotica</i> (L.) Delile	Egyptian Mimosa, Egyptian Thorn	Flowers used as above	MacNicol (1967), Tanaka (1976), Facciola (1990)
<i>Acacia oshanesii</i> F. Muell. and Maiden	Irish Wattle	Wattle flowers steeped in liqueur, coated with sugar and batter before deep frying	Deane (2007–2012w)
<i>Acacia paradoxa</i> DC.	Kangaroo Thorn, Prickly Wattle, Hedge Wattle, Paradox Acacia	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia podalyriifolia</i> Cunn. ex Don	Silver Wattle, Mt Morgan Wattle	Wattle flowers steeped in liqueur, coated with sugar and batter before deep frying	Cribb and Cribb (1987), Facciola (1990), Deane (2007–2012w)
<i>Acacia pycnantha</i> Benth.	Golden Wattle Broad-Leaved Wattle, Witch	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia retinodes</i> Schldl.	Retinodes Water Wattle, Swamp Wattle, Wirrida, Ever-Blooming Wattle, Silver Wattle	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia saligna</i> (Labill.) H.L. Wendl.	Coojong, Golden-Wreath Wattle, Orange Wattle, Blue-Leafed Wattle, Port Jackson Willow	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia sophorae</i> (Labill.) R.Br.	Boobyalla, Coast Wattle, Coastal Wattle, False Boobyalla, Sallow Wattle	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Acacia spectabilis</i> A. Cunn. ex Benth.	Mudgee Wattle, Glory Wattle, Pilliga Wattle, Golden Wattle	Wattle flowers steeped in liqueur, coated with sugar and batter before deep frying or mixed into the batter of pikelets and pancakes	Cribb and Cribb (1987), Facciola (1990), Deane (2007–2012w)
<i>Acacia verticillata</i> (L'Hér.) Willd.	Prickly Moses, Prickly Mimosa	Flowers cooked, often used in fritters	Cribb and Cribb (1987)
<i>Aeschynomene aspera</i> L.	Sola, Sola Pith Plant, Pith Plant; Chigonglei (Manipur)	Flowers used extensively in cooking during Cheiraoba, the New Year of the Meitei community in Manipur, India	Hauzel (2012)
<i>Albizia julibrissin</i> Durazz	Mimosa, Persian Silk Tree, Pink Siris, Lenkortan Acacia, Bastard Tamarind	Flowers eaten as a cooked vegetable or crystallized	Kunkel (1984), Facciola (1990)
<i>Arachis pintoii</i> Krapov. and W.C. Gregory	Pinto Peanut, Perennial Peanut, Golden Glory	Yellow flowers are edible	Wallace (2009)
<i>Astragalus multiceps</i> Benth.	Kandiara	The calyx of the flower is eaten and has a sweetish flavour	Kunkel (1984)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Bauhinia acuminata</i> L.	Dwarf White Bauhinia, White Orchid-Tree, Snowy Orchid-Tree; Mati Kotora (Assamese)	Flowers eaten fried in Assam	Patri and Borah (2007)
<i>Bauhinia carronii</i> F. Muell.	Queensland Ebony, Northern Beantree	Aborigines sucked copious nectar from the white flowers	Cribb and Cribb (1987), Facciola (1990)
<i>Bauhinia hookeri</i> F. Muell.	White Bauhinia, Bauhinia, Pegunny, Mountain Ebony, Queensland Ebony, Hooker's Bauhinia	Copious nectar sucked from the flowers	Cribb and Cribb (1987), Facciola (1990)
<i>Bauhinia malabarica</i> Roxb.	Lilac Bauhinia; Malabar Bauhinia; Kotra, Tenga Kotra (Assamese)	Flowers eaten cooked in Assam	Patri and Borah (2007)
<i>Bauhinia purpurea</i> L.	Hong Kong Orchid Tree, Purple Camel's Foot, Hawaiian Orchid Tree; Kanchanam (Garhwal); Seo Dok Daeng (Thai)	Flower buds eaten as vegetables, cooked and pickled in Andhra Pradesh, India (Garhwal Himalayas). Young terminal leaves, stems and flowers eaten raw or cooked, flowers and buds cooked eaten as potherb and in curries in Asia	Gupta (1962), Martin and Ruberté (1975), Tanaka (1976), Pongpangan and Poobrasert (1985), Facciola (1990), Reddy et al. (2007), Patri and Borah (2007), Namrata et al. (2011), Deane (2007–2012h)
<i>Bauhinia racemosa</i> Lam.	Bidi Leaf Tree; Katmauli (Hindi); Bardoli (India—Deccan)	Flowers eaten in India (Deccan)	Gammie (1902), Wätt (1908)
<i>Bauhinia retusa</i> Roxb. = <i>Bauhinia semla</i> Wunderlin	Sehra (Madhya Pradesh)	Buds and flowers cooked, and pickled in India (Garhwal Himalayas)	Gupta (1962)
<i>Bauhinia variegata</i> L.	Indian Orchid Tree, Bauhinia, Butterfly Ash, Butterfly Tree, Camel's Foot, Camel's Foot Tree, Mountain Ebony, Orchid Tree, Orchidtree, Poor Man's Orchid, Pink Orchid Tree, Purple Orchid Tree, Variegated Orchid Tree, Variegated Orchid-Tree, White Bauhinia, White Camel's Foot, White Variegated Orchid Tree; Yang- Ti Jia (Chinese)	Young flower buds, young leaves and pods eaten in curries in India (Garhwal Himalayas) and salad. Young leaves, flower buds, flowers and young fruits used as vegetables in Hainan island. Flowers used for their nectar; buds and flowers cooked and pickled	Darlington and Ammal (1945), Gupta (1962), Hedrick (1972), Tanaka (1976), Kunkel (1984), Facciola (1990), Hu (2005), Patri and Borah (2007), Namrata et al. (2011), Deane (2007–2012h)
<i>Caesalpinia gillesii</i> (Hook.) D. Dietr.	Bird-of-Paradise Shrub, Yellow Bird of Paradise Tree	Flower stamens used to adulterate saffron	Facciola (1990)
<i>Caesalpinia pulcherrima</i> (L.) Sw.	Peacock Flower, Pride Of Barbados, Dwarf Poinciana, Barbados Flower-Fence, Red Bird-of-Paradise	Flowers lightly cooked and eaten	Tanaka (1976), Pongpangan and Poobrasert (1985), Facciola (1990), King (2007)
<i>Callistemon</i> spp.	Bottle Brushes	Flower spikes steeped in warm water for the nectar	Schaeffer and Fletcher (2012)

<i>Canavalia ensiformis</i> (L.) DC.	Common Jack Bean, Ensiform Bean	Young leaves, flowers eaten steamed as 'lalab'	Ochse and van den Brink (1980)
<i>Canavalia gladiata</i> (Jacq.) DC.	Sword Bean; Thua Phraa, Thua Daap, Thua Faa (Thai); Natamame (Japanese)	The young shoots, young pods and flowers of the sword bean are served blanched with nam 'phrik'. The sour-tasting leaves are put in tom yam soup or eaten blanched with vermicelli and peanut curry. The young pods can be used in curries or fried	Kooi (1994), Saidin (2000), Jircas (2010), Lim (2012b)
<i>Canavalia maritima</i> (Aubl.) Urb. = <i>Canavalia rosea</i> (Sw.) DC.	Beach Bean, Bay Bean, Seaside Jack-Bean, Coastal Jack-Bean, Mackenzie Bean, Wonder Bean	In Malaysia, flowers eaten as flavouring	Burkill (1966), Facciola (1990)
<i>Caragana ambigua</i> Stocks	Pea Shrub	Flowers eaten raw or cooked	Hedrick (1972), Tanaka (1976)
<i>Caragana sinica</i> (Buc'hoz.) Rehder.	Chinese Pea Shrub	Flowers eaten raw or cooked	Uphof (1968), Tanaka (1976), Kunkel (1984)
<i>Cassia auriculata</i> L. = <i>Senna auriculata</i> (L.) Roxb.	Avaram Senna; Ranawara, Avaram (Telugu); Tangedu (Andhra Pradesh)	Flowers eaten as vegetable in Andhra Pradesh, India. Dried flowers used as coffee substitute	Watt (1908), Facciola (1990), Rahmansyah (1992), Reddy et al. (2007)
<i>Cassia fistula</i> L.	Cascara, Golden Shower, Indian Laburnum, Pudding Pipe Tree; Raela (Andhra Pradesh); Sonaru (Assamese)	Flowers eaten in Andhra Pradesh, India; flowers eaten by Santal people; flowers and buds eaten cooked in Assam	Watt (1908), Facciola (1990) Reddy et al. (2007), Patiri and Borah (2007), Lim (2012b)
<i>Cassia garrettiana</i> Craib = <i>Senna garrettiana</i> (Craib) H.S. Irwin and Barneby	Manatapat; Khi Lek Maeng, Khi Lek San, Khi Lek Kao, Samae Sam (Thai)	Young leaves, flowers bitter cooked as food	Pongpangan and Poobarasert (1985)
<i>Cassia hookeriana</i> Hook. = <i>Senna birostris</i> var. <i>hookeriana</i> (Hook.) H.S. Irwin and Barneby	Mutuy (Quechua)	Flowers boiled and eaten in Peru (Vilcanota Valley)	Gade (1975)
<i>Cassia latopetiolata</i> Vogel = <i>Senna versicolor</i> (Vogel) H.S. Irwin and Barneby	Mutuy (Quechua)	Flowers boiled and eaten in Peru (Vilcanota Valley)	Gade (1975)
<i>Cassia occidentalis</i> = <i>Senna occidentalis</i> (L.) Link	Coffee Senna, Negro Coffee, Coffee Weed, Stinking Weed; Khi Lek Phi, Chum Het Lek (Thai)	Flowers eaten as steamed vegetables	Fernand et al. (1958), Ochse and van den Brink (1980), Facciola (1990)
<i>Cassia siamea</i> Lam. = <i>Senna siamea</i> (Lam.) H.S. Irwin and Barneby	Khi Lek Yai (Thai)	Flowers cooked as vegetables by Garos in Lower Assam; flowers cooked in curries in Thailand	Maisuthisakul et al. (2008), Maisuthisakul (2012), Kusamaran et al. (1998), Rojampo and Tepsuwan (1992, 1993), Patiri and Borah (2007), Kaisoon et al. (2011)

(continued)

Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Cassia sophora</i> (L.) Wall. = <i>Senna sophora</i> (L.) Roxb.	African Senna, Pepper Leaved Senna; Kasaunda (Hindi); Phak Wan Ban, Phak Khet, Phak Khlet (Thai)	Flowers eaten in China	Read (1946)
<i>Cassia timoriensis</i> DC = <i>Senna timoriensis</i> (DC.) H.S. Irwin and Barneby	Wild Cassia; Khi Lek Lueat, Khi Lek Pa, Khi Lek Daeng (Thai)	Young leaves, flowers bitter cooked as food	Pongpangan and Poobarasert (1985)
<i>Cassia tomentosa</i> L. f. = <i>Senna multiglandulosa</i> (Jacq.) H.S. Irwin and Bameby	Mutuy (Quechua)	Flowers boiled and eaten in Peru (Vitcanota Valley)	Gade (1975), Facciola (1990)
<i>Cercis canadensis</i> L.	Eastern Redbud, Judas Tree, Redbud Red Bud Tree	Flowers eaten raw in salad, cooked or pickled; unopened buds pickled used as caper substitute	Uphof (1968), Hedrick (1972), Usher (1974), Tanaka (1976), Facciola (1990), Roberts (2000), Newman and O'Connor (2009)
<i>Cercis occidentalis</i> A. Gray	Western Redbud, Californian Redbud	Flowers eaten raw, added to salads, buds pickled	Yanovsky (1936), Facciola (1990)
<i>Cercis siliquastrum</i> L.	Judas Tree, Love Tree	Flowers eaten raw, have a sweetish-acid taste and make a nice addition to the salad bowl	Hedrick (1972), Tanaka (1976), Facciola (1990), Roberts (2000)
<i>Clanthus puniceus</i> (G. Don.) Lindl.	Parrot's Beak, Kaka-Beak Parrot's Bill, Lobster Claw	Flowers have a crisp and leafy taste	D'Cruz (1998)
<i>Clitoria ternatea</i> L.	Butterfly Pea, Blue-Pea and Cordofan-Pea	Flowers used as a food colourant; used in salad, dessert and as vegetable	Hedrick (1972), Burkill (1966), Weitayaklung et al. (2008), Katsoon et al. (2011)
<i>Crotalaria glauca</i> Willd.	Grass-Leaved Crotalaria	Flowers eaten as potherb	Hedrick (1972)
<i>Crotalaria longirostrata</i> Hook. and Arn.	Chepil, Chepilin, Chipilin, Longbeak Rattlebox	Flowers eaten	Uphof (1968), Williams (1981), Facciola (1990)
<i>Crotalaria ochroleuca</i> G. Don	Slender Leaf Rattlebox	Flowers eaten	Kunkel (1984), Facciola (1990)
<i>Cytisus scoparius</i> (L.) Link	Scotch Broom, Broom, Hogweed	The flower buds are pickled and used as a substitute for capers. Young buds and flowering tops used in cooking, bitter buds eaten as salad, fresh or pickled, and in herbal tea	Uphof (1968), Grievé (1971), Facciola (1990), Phillips and Foy (1992), Garland (1993)
<i>Diphysa robinoides</i> Millsp. = <i>Diphysa carthagensis</i> Jacq.	Macano, Palo Amarillo	Yellow flowers becomes mucilaginous when steamed and added to beans or tortilla	Facciola (1990)
<i>Dolichos lablab</i> L. = <i>Lablab purpureus</i> (L.) Sweet	Hyacinth Bean, Lablab Bean, Field Bean, Pig-Ears, Rongai Dolichos, Lab-Lab Bean, Poor Man's Bean, Tonga Bean; Kwao-Nam (Thai)	Flowers cooked as vegetables in spicy stir-fry or eaten dipped in spicy chilli sauce	Pongpangan and Poobarasert (1985), Saidin (2000)

<i>Dolichos malosanus</i> Baker = <i>Dolichos kilimandscharicus</i> subsp. <i>kilimandscharicus</i> Taub.	Veld Lupin	Flowers consumed as vegetables by natives	Uphof (1968), Facciola (1990)
<i>Erythrina americana</i> Mill.	American Coral Tree, Naked Coral Tree, Flor De Colorin	In Mexico, the flowers and immature inflorescences are eaten especially in tamales at Easter time	Kunkel (1984), Facciola (1990)
<i>Erythrina berterioana</i> Urb.	Coral Bean, Pito Coral Tree	Flowers and immature inflorescences are eaten with meat, in stews and in egg dishes	Martin and Ruberté (1975), Tanaka (1976), Facciola (1990)
<i>Erythrina flabelliformis</i> Kearney	Coralbean, Southwestern Coral Bean	Flowers reported edible and relished in Mexico	Deane (Deane 2007c)
<i>Erythrina glauca</i> Willd. = <i>Erythrina fusca</i> Lour.	Purple Coraltree, Gallito, Bois Immortelle, Bucayo	Flowers folded into batter, cooked and eaten	Williams (1981), Facciola (1990)
<i>Erythrina herbacea</i> L.	Eastern Coral Bean, Cardinal Spear	Flowers eaten cooked	Facciola (1990), Deane (2007–2012c)
<i>Erythrina rubrinervia</i> Kunth	Gallito, Palo De Pito, Palo Santo, Perilla De Casa, Peronil	Flowers and flower buds eaten like string beans in El Savador and Guatemala	Altschul (1973), Uphof (1968), Facciola (1990)
<i>Erythrina variegata</i> L.	Variiegated Coral Tree, Indian Coral Bean, Tigers-Claw, Variiegated Coralbean, Variiegated Coraltree, Indian Coraltree, Indian Williwili	The flowers and young leaves are edible and cooked like string beans in water	Deane (2007–2012c)
<i>Gliricidia sepium</i> (Jacq.) Walp.	Madre De Cacao, Gliricidia, Mexican Lilac, Mother of Cocoa, Nicaraguan Cacao Shade, Quick Stick, St. Vincent Plum, Tree of Iron	Flowers cooked in egg batter and fried or cooked as potherbs	Williams (1981), Facciola (1990)
<i>Hardenbergia violacea</i> (Schneev.) Stearn	Native Sarsaparilla, False Sarsaparilla Vine	Purple flowers eaten raw	Haslam (2011)
<i>Indigofera pulchella</i> Roxb. = <i>Indigofera cassioides</i> DC.	Cassia Indigo	Flowers occasionally eaten as vegetables	Watt (1908), Tanaka (1976)
<i>Indigofera cassioides</i> DC.	Cassia Indigo	The flowers are occasionally eaten as a vegetable	Kunkel (1984), Facciola (1990)
<i>Indigofera dosua</i> D. Don	Kathewat, Kati, Theot (Hawaiian)	Flowers eaten as potherb in India	Watt (1908)
<i>Indigofera gerardiana</i> Baker = <i>Indigofera heterantha</i> Brandis.	Himalayan Indigo, Gerard's Indigo	Flowers eaten in India (Garhwal Himalayas)	Gupta (1962)
<i>Indigofera hebeptata</i> Baker	Fuzzy Petal Indigo	The flowers and tender immature pods are cooked as a vegetable or pickled	Manandhar (1991)
<i>Indigofera heterantha</i> Brandis	Himalayan Indigo, Indigo Bush	The flowers are boiled and pickled	Manandhar (1991)
<i>Indigofera pseudotinctoria</i> Matsum.	False Indigo	The leaves and flowers are boiled and eaten in China	Read (1946), Tanaka (1976), Kunkel (1984), Facciola (1990)

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Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Kennedia prostrata</i> R.Br.	Running Postman, Scarlet Runner	Flowers eaten for sweet source of nectar and tea. Flowers can be used as colourful garnish for salad	SERCUL (2011), Schaeffer and Fletcher (2012)
<i>Kraunhia floribunda</i> (Willd.) Taub. = <i>Wisteria floribunda</i> (Willd.) DC.	Japanese Wisteria	Flowers thoroughly boiled, washed and eaten with oil and salt in China	Read (1946), Deane (2007–2012)
<i>Lablab purpureus</i> (L.) Sweet	Hyacinth Bean, Lablab Bean, Field Bean, Pig-Ears, Rongai Dolichos, Lab-Lab Bean, Poor Man's Bean, Tonga Bean; K'wao-Nam (Thai)	Flowers eaten raw or steamed, or added to soups and stews	Fernald et al. (1958), Hedrick (1972), Pongpangan and Poobrasert (1985), Facciola (1990), Tanaka and Nguyen (2007)
<i>Lathyrus davidii</i> Hance	Chin Yin Hua, Da Shan Li Dou, Jiang Mang Shan Li Dou, Jiang Mang Xiang Wan Dou, Shan Jiang Dou, Shan Chiang Tou (Chinese); Itachi Sasage (Japanese)	Young plant, including the inflorescence is cooked and used as a potherb or added to soups	Tanaka (1976), Kunkel (1984), Facciola (1990)
<i>Lespedeza bicolor</i> Trucz.	Tartary Bush Clover; Hu Zhi Zi (Chinese); Yama-Hagi (Japanese),	Young leafy shoot and flower buds used as tea in China. Flowers eaten boiled or fried in Japan	Tanaka (1976), Kunkel (1984), Hu (2005)
<i>Lespedeza davurica</i> (Laxm.) Schindl.	Ox-Bush Clover, Mongolian Lespedeza; Niu Zhi Zi (Chinese); Daguur Khoshoonbut (Mongolian)	Flowers and leaves used for tea in China	Hu (2005)
<i>Leucaena leucocephala</i> (Lam.) de Wit	White Leadtree, Lead Tree, Koa Haole, Ekoa, Leucaena, Horse Tamarind, Jumbie Bean, White Popinac, Jumbay	Flowers eaten in Thailand	Kaisoon et al. (2011)
<i>Leucaena glauca</i> (Willd.) Benth. = <i>Leucana leucocephala</i> (Lam.) de Wit	White Leadtree, Lead Tree, Koa Haole, Ekoa, Leucaena, Horse Tamarind, Jumbie Bean, White Popinac, Jumbay	Flower buds eaten in salad and cooked as vegetable	Ochse and van den Brink (1980)
<i>Lysiphylum carronii</i> (F. Muell.) Pedley	Red Bauhinia, Queensland Ebony, Northern Beantree, Carrons Bauhinia	Nectar sucked from flowers	Cribb and Cribb (1987)
<i>Lysiphylum gilvum</i> (Bailey) Pedley	Bauhinia Tree, Queensland Bean Tree, Bohemia	Flower pounded, mixed with honey and fermented to make an intoxicating drink. Nectar sucked from flowers or soaked in water to make drinks	Low (1991)
<i>Lysiphylum hookeri</i> (F. Muell.) Pedley	Bauhinia, White; Bauhinia; Pegunny; Ebony, Mountain; Ebony, Queensland; Hooker's Bauhinia; Mountain Ebony; White Bauhinia; Queensland Ebony; Bauhinia	Nectar sucked from flowers	Cribb and Cribb (1987)

<i>Medicago polymorpha</i> L.	California Burclover, Toothed Bur Clover, Toothed Medick, Burr Medic	Flowers eaten raw in salad or cooked as potherb, stir-fried or used in soups	Tanaka (1976), Facciola (1990)
<i>Medicago sativa</i> L.	Alfalfa, Spanish Clover, California Clover, Buffalo Herb, Lucerne, Purple Medic	Flower heads blended with red clover and spearmint or peppermint and brewed into tea	Clarke (1977), Facciola (1990)
<i>Melilotus alba</i> Ledeb. = <i>Melilotus officinalis</i> subsp. <i>alba</i> (Medik.) H. Ohashi and Tateishi	White Melilot, White Sweet Clover	Flowers eaten raw or cooked and used as a vanilla-like flavouring	Kunkel (1984), Facciola (1990)
<i>Melilotus officinalis</i> (L.) Pall.	Melilot, Yellow Sweet Clover, Yellow Melilot, Ribbed Melilot, Common Melilot	Flowers eaten raw or cooked. The flowers and seeds are used as a flavouring. Flower tops are dried and used to scent and flavour sausages and stuffings like rabbit, marinades and beers	Hedrick (1972), Schofield (2003), Garland (1993)
<i>Mimosa pudica</i> L.	Sensitive Plant, Touch-Me-Not, Humble Plant, Shameful Plant; Sleeping Grass, Ant Plant	Flowers crystallized or used for the preparation of distilled flower water	Crowhurst (1972), Facciola (1990)
<i>Macuna pruriens</i> (L.) DC.	Velvet Bean, Cowitch, Cowhage, Kapikachu		King (2007)
<i>Ononis spinosa</i> L.	Spiny Rest Harrow, Rest Harrow	Flowers eaten raw and used as a decoration on salads	Chiej (1984)
<i>Parkia timoriana</i> (DC.) Merr.	Tree Bean; Yongchak (Manipur)	Young inflorescences and pods eaten	Yunnum and Tripathi (2012)
<i>Phaseolus coccineus</i> L.	Scarlet Runner Bean, Runner Bean, Dutch Runner Bean, Case Knife Bean, Seven Year Bean	Flowers can be eaten raw in salads, adding a mild bean flavour with a hint of nectar, or added to cooked runner bean dishes for decoration	Kunkel (1984), Facciola (1990), Lauderdale and Evans (1999), Newman and O'Connor (2009), Anonymous (2012a), Deane (2007–2012)
<i>Phaseolus vulgaris</i> L.	Green Beans, Common Bean, Kidney Bean, String Bean, Garden Bean, Field Bean, Haricot	Flowers are edible	King (2007)
<i>Pisum sativum</i> L.	Garden Pea, English Pea, Green Pea, Snap Pea, Sweet Pea, Snow Pea	Flowers are edible raw in salad and have a fresh pea taste	Newman and O'Connor (2009), Deane (2007–2012m)
<i>Psophocarpus tetragonolobus</i> (L.) DC.	Four-Angled Bean, Goa Bean Winged Bean, Princess Bean	Flowers and buds eaten in salads, steamed or batter-fried like tempura, spicy stir-fry or dip in a sambal (spicy chili) paste	Ochse and van den Brink (1980), Facciola (1990), Khan (1994), Woodward (2000), Saidin (2000)
<i>Pterocarpus indicus</i> Willd.	Rosewood, Angsana, Sena, Narra, New Guine Rosewood	Flowers used in salad and other dishes	King (2007)
<i>Pterocarpus marsupium</i> Roxb.	Indian Kino Tree, Malabar Kino, Kino	Seeds and flowers eaten in India (Deccan)	Watt (1908)

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Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Pueraria lobata</i> (Willd.) Ohwi = <i>Pueraria montana</i> (Lour.) Merr. var. <i>lobata</i> (Willd.) Maesen and S.M. Almeida	Kudzu, Kudzu Vine; Ge Gen (Chinese)	Flower and buds used as ingredient in five-flower tea 'wu-hua cha'. Flowers used as vegetables cooked or made into jellies or pickles	Hu (2005), Groen et al. (1996, Fernald et al. (1958), Facciola (1990), Deane (2007–2012k, z)
<i>Robinia hispida</i> L.	Rose Acacia, Britsly Locust, Rose Locust	Flowers edible	McVicar (2003)
<i>Robinia luxurians</i> (Dieck.) Schneid.		Flowers edible raw	Tanaka (1976)
<i>Robinia neomexicana</i> A. Gray	New Mexican Locust	Pink flowers eaten raw without preparation or cooked	Yanovsky (1936), Tanaka (1976), Facciola (1990), Moerman (1998)
<i>Robinia pseudoacacia</i> L.	Black Locust, Foreign Pagoda Tree; Yang Huat (Chinese)	Washed flower mixed with flour, steamed, seasoned and eaten in northern China. Flowers dipped into egg batter and fried, added to pancake batter or made into a pleasant drink	Fernald et al. (1958), Crowhurst (1972), Facciola (1990), Hu (2005)
<i>Saraca bijuga</i> Prain = <i>Saraca</i> <i>indica</i> L.	Ashoka Tree; Sok Nam (Thai); Gapis, Tengalan (Malay)	Flowers are sour and used as potherb	Burkill (1966), Tanaka (1976), Pongpangan and Poobarasert (1985), Facciola (1990), Wessapan et al. (2007)
<i>Saraca indica</i> L.	Ashoka Tree; Sok Nam (Thai); Gapis, Tengalan (Malay)	Flowers eaten in Thailand	Van den Bergh (1994b), Wetitayaklung et al. (2008)
<i>Sarothamnus scoparius</i> (L.) W.D.J. Koch = <i>Cytisus scoparius</i> (L.) Link	Broom, Genista, Irish Broom, Scotch Broom	Flower buds are added to salads, made into wine or pickled in vinegar and used like capers	Grieve (1971), Hedrick (1972), Facciola (1990)
<i>Schoelia capitata</i> Bolle	Dwarf Boer-Bean	Flower nectar sucked	Facciola (1990)
<i>Senna siamea</i> (Lam.) Irwin and Barneby	Bombay Blackwood, Kassod Tree	Flowers eaten as food	Wetitayaklung et al. (2008)
<i>Sesbania aegyptiaca</i> Poir. = <i>Sesbania sesban</i> (L.) Merr.	Common Sesban, Egyptian Rattle Pod, Frother, River Bean, Sesban, Sesbania, Egyptian Sesban	Flowers of a wild and sometimes cultivated species eaten in West Africa. Flowers eaten fried with pounded rice or gram	Irvine (1952), Patri and Borah (2007)
<i>Sesbania bispinosa</i> (Jacq.) W. Wright	Prickly Sesban, Spiny Sesbania	Flowers edible	Burkill (1966), Tanaka (1976), Facciola (1990)

<i>Sesbania grandiflora</i> (L.) Pers.	Scarlet Wisteria Tree, Vegetable Humming Bird Vegetable Hummingbird (English), Shiro Gocho (Japanese)	Flowers, young fruits, young leaves and pods cooked as vegetables. Pistil removed first In Thailand, the shoots and young leaves are blanched and eaten with 'nam phrik', as are the flowers after the removal of the bitter stamens. The flowers can also be used in 'kaeng som' (sweet and sour curry), fried with pork or prawns or mixed with flour and fried. In Assam, flowers are fried and eaten with pounded rice or gram	Ochse and van den Brink (1980), Pongpangan and Poobarasert (1985), Facciola (1990), Rojampo and Tepsuwan (1992), Kusamaran et al. (1998), Woodward (2000), Weitayaklung et al. (2008), Hu (2005), Tanaka and Nguyen (2007), Patiri and Borah (2007), Jircas (2010)
<i>Sesbania javanica</i> Miq.	Sesbania-Pea; Sano Kin Dok, Phak Hong Haeng, Si Pree Laa, Sano Hin (Thai)	The young shoots are cooked and eaten with 'nam phrik'. The flowers are eaten either raw, blanched, fried with egg or fermented and are served with nam 'phrik kapi'. Because the flowers contain a carotenoid substance, they are used to give a yellow colour to various desserts such as 'kanom bua loi', which are coloured balls of sticky rice flour cooked in sweetened coconut milk	Tanaka and Nguyen (2007), Weitayaklung et al. (2008), Jircas (2010)
<i>Sesbania roxburghii</i> Merr. = <i>Sesbania javanica</i> (Miq.)	Sesbania-Pea; Sano Kin Dok, Phak Hong Haeng, Si Pree Laa, Sano Hin, Sa No (Thai)	Flowers eaten raw or cooked	Pongpangan and Poobarasert (1985)
<i>Sesbania sesban</i> (L.) Merr.	Common Sesban, Egyptian Rattle Pod, Frother, River Bean, Sesban, Sesbania, Egyptian Sesban	In Nigeria (northern Kano State), flowers and fruits eaten. In Assam, flowers fried and eaten with pounded rice or gram	Dalziel (1937), Tanaka (1976), Mortimore (1989), Facciola (1990), Patiri and Borah (2007)
<i>Sophora vicifolia</i> Hance = <i>Sophora davidii</i> (Franch.) Pavol. <i>Sophora davidii</i> (Franch.) Pavol.	Shrub Pagoda Tree, David's Mountain Laurel; Lang Ya Ci (Chinese) Shrub Pagoda Tree, David's Mountain Laurel	Flowers eaten in China Flowers eaten in China	Hu (2005)
<i>Sophora japonica</i> L. = <i>Styphnolobium japonicum</i> (L.) Schott.	Japanese Pagoda Tree, Pagoda Tree, Chinese Scholar Tree Yellow Berry, Pagoda Tree	Flowers eaten in China	Altschul (1973), Tanaka (1976), Facciola (1990)
<i>Tamarindus indica</i> L.	Tamarind	Flower and buds used as ingredient in five-flower tea called 'wu-hua cha' in China and also eaten as food Tree usually grown for its fruit. Young shoots and flowers are eaten as vegetable. The sour taste enhances the taste of many kinds of curries. In western Rajasthan, the leaves, fruits and flowers are eaten. In Nigeria (Kano State, northern), the pods, leaves, fruits, seeds and flowers eaten raw in salads or cooked	Read (1946), Altschul (1973), Tanaka (1976), Facciola (1990), Hu (2005) Gammie (1902), Tanaka (1976), Ochse and van den Brink (1980), Morton (1987), Mortimore (1989), Facciola (1990), Woodward (2000), Jircas (2010), Lim (2012b)

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Table 1 (continued)

Scientific name	English/common vernacular name	Flower edible uses	References
<i>Trifolium agrarium</i> L. = <i>Trifolium aureum</i> Pollich	Large Hop Trefoil, Large Trefoil Large Hop Clover, Golden Clover, R Hop Clover, Yellow Clover	Dried flower heads used as substitute for tea	Peterson (1977), Facciola (1990)
<i>Trifolium cymatiferum</i> Lindl.	Cup Clover, Bowl Clover	Flowers eaten as food	Moerman (1998)
<i>Trifolium fucatum</i> Lindl.	Sour Clover, Bull Clover, Puff Clover	Flowers and young seedpods eaten raw or cooked	Moerman (1998)
<i>Trifolium hybridum</i> L.	Alsike Clover, Hybrid Clover	Flowers sucked for nectar, added to soup, dip in batter and fry as fritters. Flower heads dried make into tea	Peterson (1977), Facciola (1990), Schofield (2003)
<i>Trifolium incarnatum</i> L.	Crimson Clover, Italian Clover, French Clover	Flower heads steep for brew and tea	Peterson (1977), Facciola (1990)
<i>Trifolium involucratum</i> Ortega. = <i>Trifolium mucronatum</i> subsp. <i>mucronatum</i> Willd. ex Spreng.	Cusp Clover	Flowers eaten in California	Yanovsky (1936)
<i>Trifolium pratense</i> L.	Red Clover, Beebread, Cow Clover, Cow Grass, Meadow Clover, Purple Clover, Wild Clover.	Flower heads steep for brew, wines and pickles; young flowers used as sandwich filling; flowers sucked for nectar, added to soup, dip in batter and fry as fritters; flower head dried, powdered and sprinkled on boiled rice	Tanaka (1976), Cribb and Cribb (1987), Low (1989), Barash (1997), Lauderdale and Evans (1999), Facciola (1990), Roberts (2000), Schofield (2003), Newman and O'Connor (2009)
<i>Trifolium repens</i> L.	White Clover, Dutch White Clover	Flower heads steeped for brew, wines and pickles; young flowers used as sandwich filling; flowers sucked for nectar	Fernald et al. (1958), Hedrick (1972), Cribb and Cribb (1987), Low (1989), Facciola (1990), Schofield (2003)
<i>Trifolium variegatum</i> Nutt.	Whitetail Clover	Flowers eaten raw and have a sweet flavour	Moerman (1998)
<i>Trifolium virescens</i> Greene = <i>Trifolium fucatum</i> Lindl.	Sour Clover, Bull Clover, Puff Clover	Flowers eaten in California	Yanovsky (1936)
<i>Ulex europaeus</i> L.	Furze, Gorse, Common Gorse	Buds pickled in vinegar and eaten in salads Flowers are a trailside nibble. They can be added to salads, made into tea or used to flavour wine. Oddly, the blossoms smell slightly of coconut but taste like almonds. The bright flowers have also been used for dye, Easter eggs to clothes	Low (1989), Deane (2007–2012y), Grieve (1971), Facciola (1990)
<i>Vicia cracca</i> L.	Tufted Vetch, Cow Vetch, Bird Vetch, Boreal Vetch, Shao Cai (Chinese)	Young shoot including flower buds cooked fresh or dried for winter use in China	Hu (2005)
<i>Vigna luteola</i> (Jacq.) Benth.	Hairy Cowpea, Hairy-pod Cowpea, Dalrymple Vigna, Deer Pea	Flowers edible cooked	Deane (2007–2012r)

<i>Vigna umbellata</i> (Thumb.) Ohwi and H. Ohashi	Rice Bean, Red Rice Bean	Flowers eaten	King (2007)
<i>Vigna unguiculata</i> subsp. <i>sesquipedalis</i> (L.) Verdc.	Snake Bean, Long Bean Yardlong Bean	Flowers used in spicy stir-fry or cooked in creamy coconut	Saidin (2000)
<i>Wisteria floribunda</i> (Willd.) DC.	Japanese Wisteria	Flowers cooked as food in parts of China	Tanka (1976), Kunkel (1984), Facciola (1990), Deane (2007–2012)
<i>Wisteria frutescens</i> (L.) Poir	American Wisteria	The fresh flowers are eaten in tossed green salads. Flowers also excellent when dipped in batter and fried in oil as fritters	Fernand et al. (1958), Peterson (1977), Facciola (1990)
<i>Wisteria sinensis</i> (Sims) Sweet	Wisteria, Chinese Wisteria; Zi Teng Hua (Chinese)	Flowers and buds washed, mixed with flour, steamed, seasoned and eaten in northern China. Flowers also thoroughly boiled and eaten with oil and salt. The flowers are a common addition to cakes around Peking. Flowers folded into egg batter and made into fritters. Flowers also used for preserves or brewed into wine	Read (1946), MacNicol (1967), Tanaka (1976), Facciola (1990), Hu (2005), Deane (2007–2012)
<i>Wisteria villosa</i> Rehder	Wooly Wisteria	Flowers edible	Tanaka (1976), Kunkel (1984)
Fagaceae			
<i>Castanopsis hystrix</i> Miquel = <i>Castanopsis purpurella</i> subsp. <i>purpurella</i>	Hong Zhui (Chinese)	Catkins eaten	Kunkel (1984)
<i>Fagus grandifolia</i> Ehrh.	American Beech, Beech, Carolina Beech, Gray Beech, Red Beech, Ridge Beech, Stone Beech, White Beech, Winter Beech	Swelling flower buds used for food	Yanovsky (1936)

species dealt with in this volume include both lesser-known, wild and underutilized plants and also common and widely grown ornamentals.

As in the preceding 6 volumes, topics covered include the following: taxonomy (botanical name and synonyms), common English and vernacular names, origin and distribution, agroecological requirements, edible plant part and uses, plant botany, nutritive and medicinal/pharmacological properties with up-to-date research findings and traditional medicinal uses, other nonedible uses and selected/cited references for further reading.

Use of Edible Flowers

Since antiquity right through the Middle Ages and the seventeenth century, flowers have been featured as an integral part of human nutrition in Europe—ancient Rome, medieval France, Victorian England, Middle East—and in Asia particularly in China, India, Thailand and Japan. Flowers have long been used as decorations in food prepared for the nobility. Today, consumption of edible flowers is increasing worldwide (Mlcek and Rop 2011; Rop et al. 2012). Edible flowers are becoming more popular as evidenced by the profusion of edible flower cookbooks, culinary magazine articles, scientific papers on edible flowers and television shows. Flowers are consumed in various forms, colours and flavours to enhance the nutritional and sensory qualities of foods. Its qualities, freshness and safety depend on the care taken in its harvesting and storage. Many of the lesser-known edible flowers are harvested in the wild from plants in the forest, wasteland, disturbed sites, near waterways and roadside often occurring as weeds (*Limncharis*, milkweeds, beggarticks, dandelion, *Acacia* spp.). In contrast many of the commonly known edible flowers (e.g. roses, chrysanthemums, carnations, marigolds, daylilies, cornflower) are harvested from cultivated garden ornamentals or culinary herb garden (e.g. chives, *Mentha* spp. borage, rosemary, chamomile).

Edible flowers can be used raw or fresh as a garnish or as an integral part of a dish, such as a vegetable or fruit salad. Today, many restaurant

chefs and innovative home cooks garnish their entrees with flower blossoms for a touch of elegance. Many flowers can be fried in light batter or cornmeal, e.g. squash, zucchini flowers or in fritters (e.g. *Acacia* blossoms). Some flowers can be steamed, boiled, grilled or used in soups and curries. Some flowers can be stuffed or used in stir-fry dishes. Edible flowers can be crystallized, candied; frozen in ice cubes and added to beverages; made into jellies and jams; used to make teas or wines; to flavour liquors, vinegar, oil, honey and scented sugars; added to punch, cocktail and other beverages; and minced and added to cheese spreads, herbal butters, pancakes, crepes and waffles. Many flowers can be used to make vinegars for cooking, marinades or dressings for salads.

Some important rules on the use of edible flowers:

- Flowers have to be accurately identified before eating.
- Do not eat flowers from florists, nurseries, garden centres, fruit orchards or flowers from plants found on the side of the road and in murky waterways because of possible contamination from pesticide sprays, vehicle carbon emissions and industrial and effluent run-off.
- Harvest/pick flowers that are free from diseases, insects, insect damage and soil particles.
- Pick young fresh flowers and buds on dry mornings, before the sun becomes too strong, to retain the bright colours and intense flavours.
- Use flowers immediately for best results or refrigerate in a plastic bag for a few days. Dried, frozen or freeze-dried flowers are best used in infusions or cooked.
- For medium and large flowers like hollyhocks, roses, lilies, calendula, chrysanthemum, lavender, rose, tulip, yucca, hibiscus, lavender, tulip and marigolds, use only the petals and discard stamens, pistil and calyx. The bitter ‘heel’ at the base of the petal should be removed.
- Eat edible flowers in moderation.
- People with hay fever, asthma or allergies should best avoid eating flowers since many allergies are due to sensitivity to pollen of specific plants.

Nutrients and Bioactive Phytochemicals in Flowers

Nutrients and phytochemicals contained in flowers are not markedly different from those found in other plant organs (leaves, stem fruit). Several thousands of compounds have been identified in flowers including nutrients (proteins, carbohydrates, lipids, fibre, minerals, fatty acids, vitamins and essential amino acids), flavonoids, carotenoids, anthocyanins and other phenolic compounds, waxes, resins in the floral parts (petals, sepals, pollens, etc.), in the floral nectar, as fragrance volatiles, and essential oil components monoterpenes, sesquiterpenes esters, alcohols (monoterpene and sesquiterpene alcohols), aldehydes, ketones, phenols, alkanes, esters, lactones, coumarins, ether, oxides, fatty acids, fatty acid derivatives, benzenoids, phenylpropanoids, isoprenoids and nitrogen- and sulphur-containing compounds (Mookherjee et al. 1990; Knudsen et al. 1993; Dobson et al. 1997; Kim et al. 2000; Falzari and Menary 2003; Kaisoon et al. 2011; Mlcek and Rop 2011; Rop et al. 2012; Diraz et al. 2012). The concentrations of these compounds vary throughout the development and maturation of the flower and also during storage after harvesting. Health benefits attributable to antioxidant capacity have been shown to be highly correlated with phenolic compounds (Kaisoon et al. 2011; Rop et al. 2012).

Flower Pollen

The composition of pollen changes from floral species to species, variation in absolute amounts of the different compounds can be very high. The major components of pollens are proteins and amino acid, lipids (fats, oils or their derivatives) (Manning 2001), and sugars (Crane 1990); the nutrient profile in dried bee-collected pollen and dried hand-collected pollen are as follows: water, 11 %, 10 %; crude protein, 21 %, 20 %; ash, 3 %, 4 %; crude fats, 5 %, 5 %; reducing sugars, 26 %, 3 %; nonreducing sugars, 3 %, 8 %; starch, 3 %, 8 %; and undetermined components, 29 %, 43 %, respectively. The minor components of bee-

collected pollens are more diverse (Crane 1990): flavonoids at least 8; carotenoids (at least 11); vitamins C, E B complex (including, niacin, biotin, pantothenic acid, riboflavin (B₂) and pyridoxine (B₆)); minerals—macro-elements (K, Na, Ca, Mg, P, S) and micro-elements (Al, B, Cl, Cu, I, Fe, Mn, Ni, Si, Ti and Zn); all free amino acids; terpenes; nucleic acids DNA, RNA and others; enzymes >100; growth regulators auxins, brassins, gibberellins and kinins; and growth inhibitors. All amino acids essential to humans (phenylalanine, leucine, valine, isoleucine, arginine, histidine, lysine, methionine, threonine and tryptophan) can be found in pollen and most others as well, with proline being the most abundant. Most simple sugars in pollen comprise fructose, glucose and sucrose come from the nectar or honey of the field forager. The polysaccharides like callose, pectin, cellulose, lignin, sporopollenin and others are predominantly pollen components. Protein contents of above 40 % have been reported, but the typical range is 7.5–35 %: typical sugar content ranges from 15 to 50 %, and starch content is very high (up to 18 %) in some wind-pollinated grasses (Schmidt and Buchmann 1992). Low lipid levels (0.6–1.9 % dry mass) are found in bee-collected pollen of eucalypts (Bell et al. 1983; Manning and Harvey 2002), whereas a high level of 32 % dry mass is found for canola pollen by Evans et al. 1987. Pollen has been added to diets for domestic animals and laboratory insects resulting in improvements of health, growth and food conversion rates (Crane 1990; Schmidt and Buchmann 1992).

Floral Nectar

The nectar is a liquid with a sweet taste, comprising sugars, amino acids, nonprotein amino acids, proteins, minerals, lipids, organic acids, phenolic compounds, alkaloids, coumarins, saponins, terpenoids, etc. (Nicolson and Thornburg 2007). The major sugars in nectar are the disaccharide sucrose and the hexose monosaccharides glucose and fructose (Baker 1975; Baker and Baker 1983). Bernadello et al. (1999) found that the floral nectar of 29 species native to Argentinian Patagonia to be hexose dominant (72.41 %) or

hexose rich (17.24 %); a few were sucrose dominant (10.34 %). Though a large majority of floral nectars is dominated by sucrose, glucose and fructose, the pentose sugar xylose is a major nectar sugar in *Protea* and *Faurea*, two related genera of the Proteaceae (Nicolson and van Wyk 1998). Other minor sugars present in trace amounts in nectar include monosaccharides (e.g. mannose, arabinose, xylose), disaccharides (maltose, melibiose) or, more rarely, oligosaccharides (raffinose, melezitose, stachyose) (Baker and Baker 1982a, 1983; Nicolson and Thornburg 2007). Sorbitol is also a frequent constituent of Mediterranean nectars (Petanidou 2005). Minerals have been found in floral nectar (Hiebert and Calder 1983; Heinrich 1989). Potassium was found to be the dominant ion with 35–74 % in nectars; the other cations can be listed up according to their decreasing amounts: Na, Ca, Mg, Al, Fe and Mn (Heinrich 1989). Although all ten essential amino acids are commonly present in floral nectars as free amino acids, some nonessential amino acids such as asparagine and glutamine can occur in much higher concentrations (Nicolson and Thornburg 2007). The presence of amino acids in floral nectars was first reported by Ziegler (1956), later by Lüttge (1961, 1962) and Baker and Baker (1973, 1977, 1986) In *Erythrina* species pollinated by passerine birds, the total amino acid concentrations are far higher than in hummingbird-pollinated species (Baker and Baker 1982b). Few of the nontoxic nonprotein amino acids, including β -alanine, ornithine, homoserine and γ -aminobutyric acid (GABA), are known to accumulate in nectar (Nicolson and Thornburg 2007). The existence of proteins in nectar has been reported long ago (Pryce-Jones 1944; Lüttge 1961). The first enzymatic activity to be identified in nectar was invertase, found in the floral nectar of *Tilia* sp. (Beutler 1935). Other proteins identified in various floral nectars included the following: *trans*-glucosidase in *Robinia pseudoacacia* (Zimmerman 1953); *trans*-fructosidase in *Impatiens holstii* (Zimmerman 1954); phosphatase (Cotti 1962); tyrosinase in *Lathraea clandestina* (Lüttge 1961); mannose-binding lectin and alliinase in *Allium porrum*

(Peumans et al. 1997); and nectarin IV (Naqvi et al. 2005) and nectarin I, II, III and V in *Nicotiana* sp. (Carter and Thornburg 2000; 2004a, b).

The presence of lipids has been reported in numerous floral nectars (Vogel 1971; Baker and Baker 1975; Bernardello et al. 1999). Some major lipids found in floral nectars of *Calceolaria* species (Scrophulariaceae) and in the rhamnans (*Krameria* species, Zygophyllaceae) included β -acetoxy fatty acids of varying chain length between C16 and C20 (Vogel 1971; Seigler et al. 1978). Ascorbic acid (vitamin C) is well known as an antioxidant in floral nectar (Baker and Baker 1975). Phenolic substances are quite widespread in nectars (Baker and Baker 1982a; Gil et al. 1995; Ferreres et al. 1996). European *Eucalyptus* honeys were found to have the following flavonoids: myricetin, quercetin, tricetin, luteolin and kaempferol (Martos et al. 2000) and *Robinia pseudoacacia* flowers to have nectar flavonol rhamnosides as floral markers (Truchado et al. 2008). Alkaloids and allelochemicals have been detected in the nectar of a large number of plants (Hazslinsky 1956; Baker and Baker 1975; Galetto and Bernardello 1992; Detzel and Wink 1993; Adler and Wink 2001). Recently, Singaravelan et al. (2005) reported four secondary alkaloid compounds occurring naturally in floral nectar: nicotine, anabasine, caffeine and amygdalin in many plants including *Nicotiana* spp. and *Tilia cordata* (Singaravelan et al. 2006). While terpenoids do occur in plant nectars (Detzel and Wink 1993), most are produced by cells with specialized metabolic potential that are dispersed throughout the flower (Bergström et al. 1995; Dudareva et al. 1998; McTavish et al. 2000).

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