Lonicera spp.
Honeysuckle

Introduction
The genus *Lonicera* contains more than 200 species worldwide and is distributed in temperate and subtropical regions of North America, Europe, North Africa, and Asia. Most of the species are small trees or shrubs. Ninety-eight species of *Lonicera* are reported from China; it is distributed nationwide with considerable species diversity in southwestern China[176].

Species of *Lonicera* in China[24]
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I. ***Lonicera fragrantissima***
fragrant honeysuckle

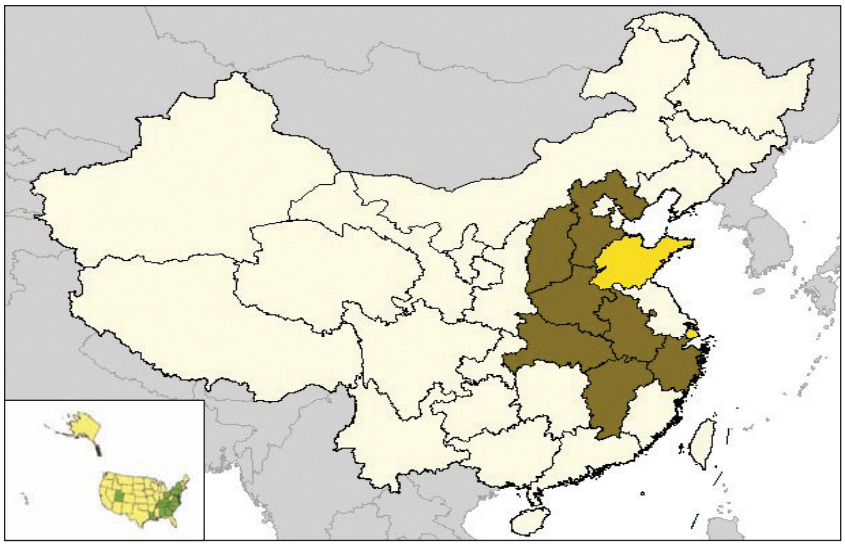
Taxonomy
Family: Caprifoliaceae
Genus: *Lonicera* L.

Description
Lonicera fragrantissima is a sub-evergreen or deciduous shrub that can grow 2 m tall. The leaves may be thick and papery or somewhat leathery, with noticeable variations in shape, ranging from obovate to elliptic, ovate, or oblong. Leaf length is 3-7 cm, with a tapered or retuse apex and a round or broadly cuneate base. Flowers with red to light-red labiate corolla are produced in the axils of young shoots appearing from mid-February to April. The oblong, showy, red fruits are about 1 cm long and appear from late April to May. The rough brown seeds are oblong and about 3.5 mm in length[176].

Growth habit of *Lonicera japonica*. (Photo by James R. Allison, GA-DNR.)

Habitat
L. fragrantissima occurs in scrub land at elevations of 200 –700 m[176].

Distribution
L. fragrantissima is indigenous to Anhui, Henan, Hubei, Jiangxi, Shanxi, and Zhejiang provinces[176], and is also cultivated in some cities, including Shanghai, Hangzhou in Zhejiang, Wuhan in Hubei, and Taian in Shandong[8].



Economic Importance
Honeysuckle is cultivated in private gardens and in cities as an ornamental because of its large, fragrant flowers and brilliant red fruits[71].

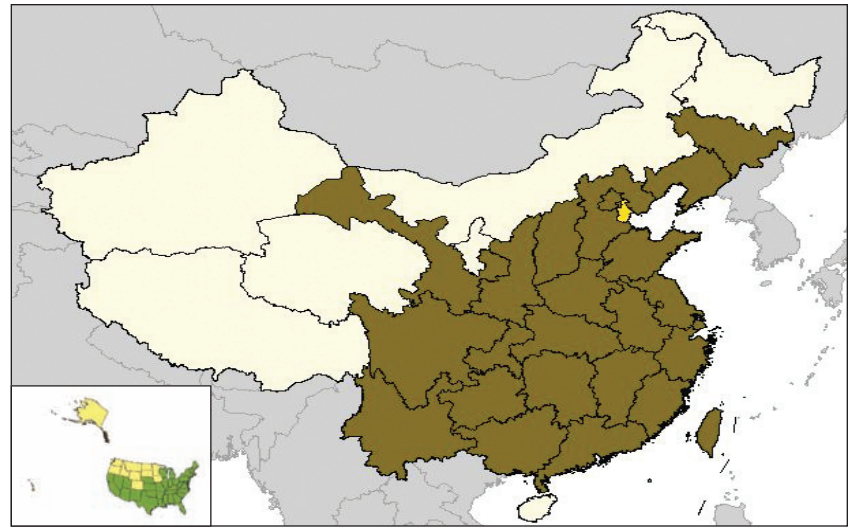
Related Species
There are two subspecies of *Lonicera fragrantissima* in China. *Lonicera fragrantissima* subsp. *standishii* (Carr.) Hsu et H.J. Wang occurs on sunny forested slopes and along ravines, in Anhui, Gansu, Guizhou, Henan, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, and Zhejiang provinces (at elevations of 100–2,000 m). The other subspecies, *L. fragrantissima* subsp. *phyllocarpa* (Maxim.) Hsu et H. J. Wang, grows on slopes, in valleys, and in riparian areas, in Anhui, Hebei, Henan, Jiangsu, Shaanxi, and Shanxi provinces (at elevations of 480–2,000 m) [176].

II. ***Lonicera japonica***
Japanese honeysuckle

Taxonomy
Family: Caprifoliaceae
Genus: *Lonicera* L.

Description
Lonicera japonica is a semi-evergreen vine with pubescent stems. The papery leaves are 3-5 cm long and covered with coarse hairs. The leaf blades are ovate, with rounded or subcordate bases, apices are acute or acuminate, and slightly notched. A distinguishing

Leaves and flowers of *Lonicera japonica*. (Photo by Jil M. Swearingen, USDI-NPS.)



feature separating *L. japonica* from related species is the upper leaf surface, which is greener than the underside. Growing in the leaf axils, the pubescent flowers, appearing from April to June, have conspicuous leaf-like bracts and white corollas, and appearing from April to June. The peduncle and leaf petiole are similar in size. The shiny, dark blue fruits are round, 6-7 mm in diameter, and mature from October to November[176].

Habitat

Lonicera japonica occurs among shrubs, along slopes, roadsides, in sparse forests, hedges, and on gravel banks at elevations up to 1500 m[176].

Distribution

L. japonica is distributed nationwide in China: however, it is not native to Hainan, Heilongjiang, Inner Mongolia, Ningxia, Qinghai, Xinjiang, or Tibet[176].

Economic Importance

Extracts of chlorogenic acid and isochlorogenic acid are used medicinally in China [176].

Related Species

Lonicera japonica var. *chinensis* (Wats.) Bak. occurs in Anhui at elevations of up to 800 m. It is also cultivated in Jiangsu, Jiangxi, Yunnan, and Zhejiang[176].

III. ***Lonicera maackii***
Amur honeysuckle

Taxonomy

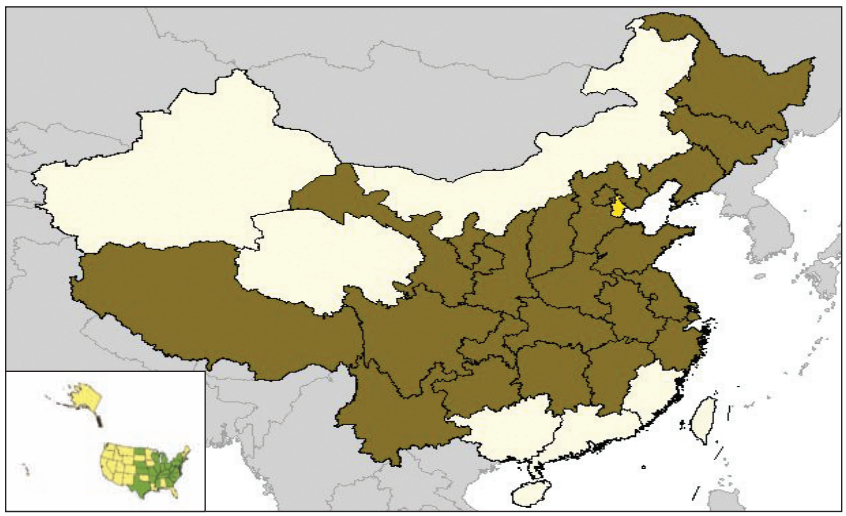
Family: Caprifoliaceae
Genus: *Lonicera* L.

Description

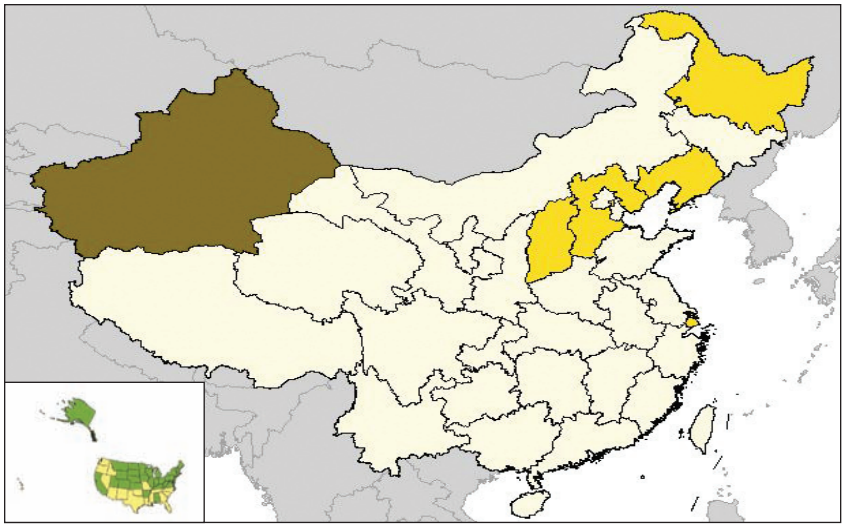
Lonicera maackii (Rupr.) Maxim is a deciduous shrub that can reach a height of 6 m and a stem diameter of 10 cm. The entire plant is covered with glandular hairs. Winter buds are small, ovoid, and covered with more than five pairs of scales. Papery leaves are ovate-elliptic to ovate-lanceolate, 5-8 cm long with acuminate to narrowly acuminate apices and a rounded or wedge-shaped leaf bases. The petiole is 2-5 mm cm long and is longer than the 1-2 mm long peduncle. White to yellow, fragrant, axillary flowers with labiate corollas and a linear to lanceolate bracts appear from May to June. Fruits are globular, dark-red, 5-6 mm in diameter, and mature from August to October[176].

Habitat

L. maackii occurs in riparian areas at the edge of forests at elevations of 1,800 m (3,000 m in some areas of Yunnan and Tibet)[176].



Fruits of *Lonicera maackii.* (Photo by Chuck Bargeron, UGA.)



Distribution

L. maackii is distributed throughout Anhui, Gansu, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi[84], Jilin, Liaoning, Ningxia[116], Shaanxi, Shandong, Shanxi, Sichuan, Yunnan, and Zhejiang[176], and recorded as *L. maackii podocarpa* Franch. ex Rehd in Tibet.

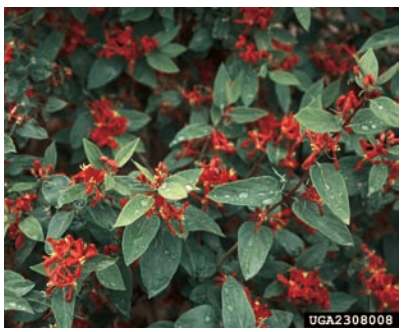
Economic Importance

Essential oil of honeysuckle is extracted from the flower of Amur honeysuckle. The stem is a source of artificial cotton[176].

Related Species

One variety of Amur honeysuckle, *L. maackii* var. *erubescens* Rhed., grows on hillside slopes in Anhui, Gansu, Jiangsu, and Henan[176].

IV. ***Lonicera tatarica***
Tartarian honeysuckle



Colorful flowers of *Lonicera tatarica*. (Photo by Patrick Breen, Oregon State University.)

Taxonomy

Family: Caprifoliaceae
Genus: *Lonicera* L.

Description

Lonicera tatarica is a deciduous shrub that grows 3 m in height. The whole plant is nearly glabrous. The winter buds have approximately four pairs of scales. Leaves are papery, ovate, oblong or ovate-oblong, 2-5 cm in length, with a tapering apices and rounded to subcordate bases. Leaf margins are covered with coarse hairs. Flowers are produced from May to June. Bracts are linear lanceolate or linear oblanceolate, equal to or longer than the length of the calyx tube. Corollas are pink or white, 1.5 cm long, and labiate. Fruits are red, globular, 5-6 mm in diameter and mature from July to August[176].

Habitat

L. tatarica occurs on rocky slopes, forest edges, and scrubland in ravines at elevations of 900–1,600 m.

Distribution

Lonicera tatarica is native to northern Xinjiang. It is cultivated in Hebei[18], Heilongjiang, Liaoning[176], and Shanxi .

Related Species

L. tatarica L. var. *micrantha* Trautv. occurs in Xinjiang, on riverbanks at 700-800 m elevation[176].

Natural Enemies of *Lonicera*

Twenty-one fungi have been reported to damage *Lonicera*. Six species are found on *L. japonica*; four on *Lonicera maackii*, and one on fragrant honeysuckle. *Microsphaera lonicerae* can damage both Japanese and fragrant honeysuckle. *Puccinia festucae* Plowright is found on both Japanese and amur honeysuckle. Forty-four arthropod species have been found on *Lonicera* spp., of which 23 species attack Japanese honeysuckle and four damage amur honeysuckle. Approximately 20 insect species have a narrow H. R. within the genus *Lonicera*.

Species of *Lonicera* in China[24]

Scientific Name	Scientific Name	Scientific Name
L. acuminata Wall.	*L. nervosa* Maxim.	*L. altmannii* Regel et Schmalh.
L. nigra L.	*L. angustilfolia* Wall. ex DC.	*L. nubium* (Hand.-Mazz.) Hand.-Mazz.
L. anisocalyx Rehd.	*L. oreodoxa* H. Smith ex Rehd.	*L. bourtnei* Hemsl.
L. pampaninii Lévl.	*L. brevisepala* Hsu et H. J. Wang	*L. pileata* Oliv.
L. buchananii Lace	*L. praeflorens* Batal.	*L. buddleioides* Hsu et S. C. Cheng
L. prostrata Rehd.	*L. caerulea* L.	*L. retusa* Franch.
L. calcarata Hemsl.	*L. rhytidophylla* Hand.-Mazz.	*L. calvescens* (Chun et How) Hsu et H. J. Wang
L. rupicola Hook. f. et Thoms.	*L. carnosifolia* C. Y. Wu ex Hsu et H. J. Wang	*L. ruprechtiana* Regel
L. chrysantha Turcz.	*L. semenovii* Regel	*L. ciliosissima* C. Y. Wu ex Hsu et H. J. Wang
L. sempervirens L.	*L. cinerea* Pojark.	*L. setifera* Franch.
L. confusa (Sweet) DC.	*L. similis* Hemsl.	*L. crassifolia* Batal.
L. stephanocarpa Franch.	*L. cyanocarpa* Franch.	*L. subaequalis* Rehd.
L. dasystyla Rehd.	*L. subhispida* Nakai	*L. elisae* Franch.
L. sublabiata Hsu et H. J. Wang	*L. fargesii* Franch.	***L. tatarica*** L.
L. ferdinandii Franch.	*L. tatarinowii* Maxim.	*L. ferruginea* Rehd.
L. tragophylla Hemsl.	*L. fragilis* Lévl.	*L. trichosantha* Bur. et Franch.
L. fragrantissima Lindl. et Paxt.	*L. trichosepala* (Rehd.) Hsu	*L. fulvotomentösa* Hsu et S.C. Cheng
L. tubliflora Rehd.	*L. graebneri* Rehd.	*L. virgultorum* W. W. Smith
L. gynochlamydea Hemsl.	*L. yunnanensis* Franch.	*L. hildebrandiana* Coil. et Hemsl.
L. alberti Regel	*L. hispida* Pall. ex Roem. et Schult.	*L. codonantha* Rehd.
L. humilis Kar. et Kir.	*L. hemsleyana* (O. Ktze.) Rehd.	*L. hypoglauca* Miq.
L. heterophylla Decne.	*L. hypoleuca* Decne.	*L. jilongensis* Hsu et H.J. Wang
L. inconspicua Batal.	*L. litangensis* Batal.	*L. inodora* W. W. Smith
L. minuta Batal.	***L. japonica*** Thunb.	*L. minutifolia* Kitam.
L. kansuensis (Batal. ex Rehd.) Pojark.	*L. modesta* Rehd.	*L. kawakamii* (Hayata) Masam.
L. oblata Hao ex Hsu et H.J. Wang	*L. lanceolata* Wall.	*L. oiwakensis* Hayata
L. ligustrina Wall.	*L. saccata* Rehd.	*L. longilflora* (Lindl.) DC.
L. schneideriana Rehd.	*L. longituba* H. T. Chang ex Hsu et H. J. Wang	*L. serreana* Hand.-Mazz.
L. maackii (Rupr.) Maxim.	*L. spinosa* Jacq. ex Walp.	*L. macrantha* (D. Don) Spreng.
L. szechuanica Batal.	*L. macranthoides* Hand.-Mazz.	*L. alpeiensis* Hsu et H.J.Wang
L. maximowiczii (Rupr.) Regel	*L. tangutica* Maxlm.	*L. microphylla* Wllld. ex Roem. et Schult.
L. tomentella Hook.f. et Thoms.	*L. mucronata* Rehd.	*L. trichogyne* Rehd.
L. myrtilllus Hook. f. et Thoms.	*L. webbiana* Wall. ex DC.	

Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Erysiphaceae	*Microsphaera dipeltae* Y.N. Yu & Y.Q. Lai	oo	22
		Microsphaera erlangshanensis Y.N. Yu	mo	22
		Microsphaera lonicerae (DC.) G. Winter	o*‡	22
		Microsphaera vanbruntiana W.R. Gerard	po	22
	Meliolaceae	*Asteridiella lonicerae* (W. Yamam.) Hosag.	o*	62
			oo	23[I]
	Phyllachoraceae	*Phyllachora xylostei* (Fr.) Fuckel	mo	23
	Rhytismataceae	*Rhytisma lonicericola* Henn.	o†	23
Basidiomycota	Hymenochaetaceae	*Phellinus setulosus* (Lloyd) Imazeki	po	23
	Polyporaceae	*Fomes calcitratus* (Berk. & M.A. Curtis) Cooke	oo	23
	Pucciniaceae	*Puccinia festucae* Plowr.	*	22
			p*†	23
		Puccinia longirostris Kom.	oo	23
Anamorphic Ascomycetes		*Rhabdospora decipiens* (Berk. & M.A. Curtis) Sacc.	mo	23
Anamorphic *Discosphaerina*		*Kabatia latemarensis* Bubák	oo	23
Anamorphic *Guignardia*		*Phyllosticta caprifolii* (Opiz) Sacc.	mo	23
Anamorphic *Lophodermium*		*Leptostroma lonicericola* Rabenh.	oo	23[II]
Anamorphic *Mycosphaerella*		*Cercospora lonicericola* W. Yamam.	m*	23
		Cercospora periclymeni G. Winter	o*	23
		Septoria lonicerae-maackii Miura	m†	23
Anamorphic Mycosphaerellaceae		*Ascochyta tenerrima* Sacc. & Roum.	m*	23
Anamorphic *Rhytisma*		*Melasmia lonicerae* Jacz.	o†	23

* attacks *Lonicera japonica*
† attacks *Lonicera maackii*
‡ attacks *Lonicera tartarica*
[I] Recorded as *Irenina lonicerae* Yamam
[II] Recorded as *Leptostroma lonicericolum* Rabenh.

Arthropods

Order	Family	Species	H. R.	Ref.
Acariformes	Rhyncaphytoptidae	*Rhyncaphytoptus lonicerae* Kuang et Zhuo	m†	83
Coleoptera	Cerambycidae	*Asias halodendri* (Pallas)	p*	65
		Xylotrechus grayii (White)	m*	85
			p*	140
	Chrysomelidae	*Liroetis loniceris* Jiang	oo	140
		Pseudoliroetis fulvipennis (Jacoby)	p*	85
		Trachyaphthona obscura (Jacoby)	oo	140
			oo	158
			oo	185
		Zangia signata Jiang	po	140
Hemiptera	Acanthosomatidae	*Platacantha forfex* (Dallas)	po	193
	Pentatomidae	*Piezodorus lituratus* (Fabricius)	p*	193

Homoptera	Aphididae	*Amphicercidus sinilonicericola* Zhang	m*	85
			m*	189
		Microlophium carnosa (Buckton)	po	140
		Neorhopalomyzus lonicericola (Takahashi)	m*	158
		Neotoxoptera oliveri (Essig)	m*	100
		Semiaphis heraclei (Takahashi)	p†	100
			p†*	158
			p†*	189
		Trichosiphonaphis lonicerae (Uye)	o†*	65
			oo	85
			m†	100
		Tuberocephalus sp.	m*	85
	Membracidae	*Telingana scutellata* China	po	140
	Pemphigidae	*Prociphilus ligustrifoliae* (Tseng et Tao)	mo	189
Hymenoptera	Argidae	*Arge similis* (Vollenhoven)	p*	65
Lepidoptera	Arctiidae	*Hyphantria cunea* (Drury)	p†	41
		Pericallia matronula (Linnaeus)	p*	40
			p*	41
	Geometridae	*Angerona glandinaria* Motschulsky	po	138
		Ourapteryx sambucaria Linnaeus	p*	138
		Somatina indicataria Walker	m*	85
			p*	138
		Trichopteryx polycommata (Denis et Schiffermüller)	p*	177
	Lymantriidae	*Porthesia similis* (Fueszly)	p*	65
			p*	198
	Noctuidae	*Conistra ligula* (Esper)	po	12
		Crino satura (Schiffermüller)	po	209
		Polia thalathina (Rottemberg)	po	12
	Nymphalidae	*Limenitis camilla* (Linnaeus)	p*	203
		Limenitis moltrechti Kardakoff	p*	203
		Limenitis sulpitia (Cramer)	p*	158
			po	203
		Parasarpa dudu (Westwood)	p*	203
			po	203
	Saturniidae	*Antheraea yamamai* Guerin-Meneville	po	207
	Sphingidae	*Haemorrhagia staudingeri staudingeri* (Leech)	p*	65
			m*	206
			m*	206
			m*	208
	Tortricidae	*Adoxophyes orana* Fischer von Röslerstamm	p*	65
			p*	113
		Archips xylosteana (Linnaeus)	p*	113
		Choristoneura diversana (Hübner)	p*	113
		Clepsis rurinana (Linnaeus)	p*	65
		Clepsis semialbana (Guenée)	p*	113
		Lozotaenia forsterana (Fabricius)	p*	113
		Pandemis dumetana Treitshke	po	141
Thysanoptera	Thripidae	*Frankliniella intonsa* (Trybom)	po	56

* attacks *Lonicera japonica*
† attacks *Lonicera maackii*