

# *Acer ginnala*

## Amur maple

### Introduction

The genus *Acer* is comprised of approximately 200 species that are widely distributed throughout Asia, North America, and Europe. More than 100 species are recorded in China [43].

### Species of *Acer* in China†

(see next page)

### Taxonomy

**Family:** Aceraceae

**Genus:** *Acer* L.

### Description

Well-known for its brilliant red and orange fall color, Amur maple is a deciduous shrub or woody tree that can reach a height of 5 to 6 m. The bark is coarse, slightly split vertically, and grayish, rarely deep gray or grayish brown. The slender twigs are cylindroid and glabrous. The white lenticels are elliptic or nearly rounded. Winter buds are small, light brown, villous edged, and bear eight scales in an imbricate arrangement. Leaves are papery, oblong ovate to elliptic, 6-10 cm long and 4-6 cm wide, basally round, truncate or subcordate, and 3-5 lobed, with the middle lobe being acute or narrowly



Leaves of *Acer ginnala*. (Photo: Paul Wray, Iowa State University.)

acute while the lateral pair are relatively obtuse. Each lobe has a dentate margin. The upper leaf surface is dark green and glabrous; the lower surface is light green and nearly glabrous. Appearing in May, the corymb inflorescence is glabrous and approximately 6 cm in length. Bisexual and male flowers are produced on the same plant. The calyx has 5 ovate sepals that are yellowish green and villous margined. The 5 petals are longer than the sepals, white, and oblong to ovate. There are eight stamens, of which the filaments are glabrous and the anthers are yellow. The fruit is a double samara, ripening in October, yellowish green or yellowish brown, noticeably veined, about 8 mm long and 8-10 mm wide [43].

### Habitat and distribution

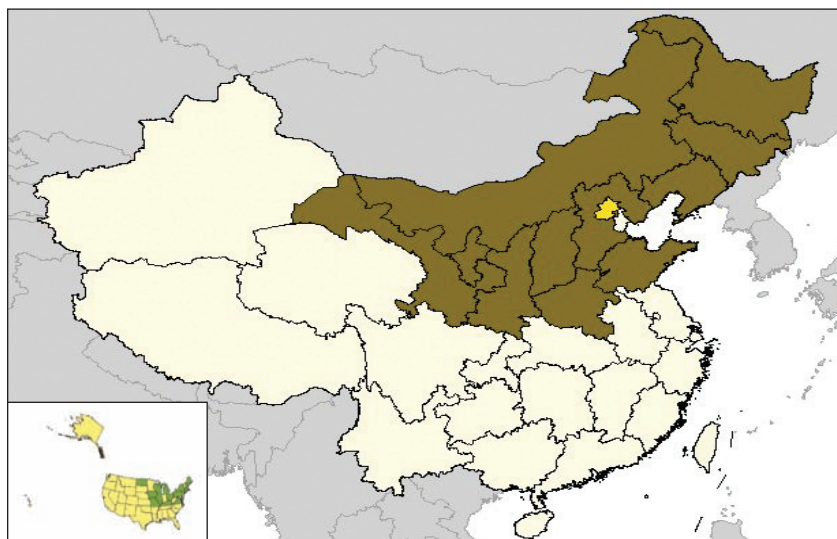
*A. ginnala* occurs in forests below 800 m in Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Inner Mongolia, Ningxia, Shaanxi, Shanxi [43][115], and Shandong provinces[8].

### Economic Importance

The young leaves can be used as a substitute for tea. Medicinally, *A. ginnala* has a variety of uses. The stems and leaves are sources of dye [81].

### Related Species

*Acer ginnala* subsp. *theiferum* (Fang) can be distinguished from the original species by its thinner papery leaves with entire margins and inconspicuous lobes. *A. ginnala* subsp. *theiferum* grows in low-elevation, sparse forests of eastern and central China [43]. Distribution data are recorded for the provinces of Anhui[30], Fujian[36], Guangdong[156], Jiangsu[81], Jiangxi[84], and Zhejiang[127]. The subspecies is also



Flowers of *Acer ginnala*. (Photo: Paul Wray, Iowa State University.)

recorded as *A. ginnala* Maxim. in some publications<sup>[81]</sup>.

**Natural Enemies of Acer**  
Thirty-seven fungi and 58 arthropod species have been reported from plants

of the genus *Acer*. Most of the fungi and eight arthropods appear to have a narrow host range.

**Species of Acer in China†**

Scientific Name	Scientific Name	Scientific Name
<i>A. acutu</i> Fang	<i>A. albo-purpurascens</i> Hayata	<i>A. amplum</i> Rehd.
<i>A. anhweiense</i> Fang et Fang f.	<i>A. barbinerve</i> Maxim.	<i>A. bicolor</i> F. Chun
<i>A. buergerianum</i> Miq.	<i>A. caesium</i> Wall. ex Brandis	<i>A. campbellii</i> Hook. f. et Thoms. ex Hiern
<i>A. cappadocicum</i> Gled.	<i>A. catalpifolium</i> Rehd.	<i>A. caudatifolium</i> Hayata
<i>A. caudatum</i> Wall.	<i>A. ceriferum</i> Rehd.	<i>A. changhuaense</i> (Fang et Fang f.) Fang et P. L. Chiu
<i>A. chienii</i> Hu et Cheng	<i>A. chingii</i> Hu	<i>A. chunii</i> Fang
<i>A. cinnamomifolium</i> Hayata	<i>A. confertifolium</i> Merr. et Metc.	<i>A. cordatum</i> Pax
<i>A. coriaceifolium</i> Lévl	<i>A. crassum</i> Hu et Cheng	<i>A. davidii</i> Franch.
<i>A. decandrum</i> Merr.	<i>A. discolor</i> Maxim.	<i>A. duplicato-serratum</i> Hayata
<i>A. elegantulum</i> Fang et P. L. Chiu	<i>A. erianthum</i> Schwer.	<i>A. eucalyptoides</i> Fang et Wu
<i>A. fabri</i> Hance	<i>A. fenzelianum</i> Hand.-Mazz.	<i>A. firmianoides</i> Cheng
<i>A. flabellatum</i> Rehd.	<i>A. forrestii</i> Diels	<i>A. franchetii</i> Pax
<i>A. fulvescens</i> Rehd.	<b><i>A. ginnala</i> Maxim.</b>	<i>A. griseum</i> (Franch.) Pax
<i>A. grosseri</i> Pax	<i>A. hainanense</i> Chun et Fang	<i>A. henryi</i> Pax
<i>A. heptalobum</i> Diels	<i>A. hilaense</i> Hu et Cheng	<i>A. hookeri</i> Miq.
<i>A. huianum</i> Fang et Hsieh	<i>A. hypoleucum</i> Hayata	<i>A. japonicum</i> Thunb.
<i>A. kiangsiense</i> Fang et Fang f.	<i>A. kiukiangense</i> Hu et Cheng	<i>A. komarovii</i> Pojark.
<i>A. kungshanense</i> Fang et C. Y. Chang	<i>A. kuomeii</i> Fang et Fang f.	<i>A. kwangnanense</i> Hu et Cheng
<i>A. kweilinense</i> Fang et Fang f.	<i>A. laevigatum</i> Wall.	<i>A. laikuanii</i> Ling
<i>A. laisuense</i> Fang et W. K. Hu	<i>A. lanceolatum</i> Moll.	<i>A. lanpingense</i> Fang et Fang f.
<i>A. laxiflorum</i> Pax	<i>A. leiopodum</i> (Hand.-Mazz.) Fang et Chow	<i>A. leipoense</i> Fang et Soong
<i>A. leptophyllum</i> Fang	<i>A. linganense</i> Fang et P. L. Chiu	<i>A. lingii</i> Fang
<i>A. liiseaeifolium</i> Hayata	<i>A. longicarpum</i> Hu et Cheng	<i>A. longipes</i> Franch. ex Rehd.
<i>A. lucidum</i> Metc.	<i>A. lungshengense</i> Fang et L. C. Hu	<i>A. machilifolium</i> Hu et Cheng
<i>A. mandshuricum</i> Maxim.	<i>A. mapienense</i> Fang	<i>A. maximowiczii</i> Pax.
<i>A. megalodum</i> Fang et Su	<i>A. metcalfii</i> Rehd.	<i>A. miaoshanicum</i> Fang
<i>A. miaotaiense</i> P. C. Tsoong	<i>A. mono</i> Maxim.	<i>A. nayongense</i> Fang
<i>A. negundo</i> Linn.	<i>A. nikoense</i> Maxim.	<i>A. oblongum</i> Wall. ex DC.
<i>A. oligocarpum</i> Fang et L. C. Hu	<i>A. olivaceum</i> Fang et P. L. Chiu	<i>A. oliverianum</i> Pax
<i>A. paihengii</i> Fang	<i>A. palmatam</i> Thunb.	<i>A. pashanicum</i> Fang et Soong
<i>A. pauciflorum</i> Fang	<i>A. paxii</i> Franch.	<i>A. pectinatum</i> Wall. ex Nichols.
<i>A. pehpeiense</i> Fang et Su	<i>A. pentaphyllum</i> Diels	<i>A. pilosum</i> Maxim.
<i>A. poliophyllum</i> Fang et Wu	<i>A. prolificum</i> Fang et Fang f.	<i>A. pseudo-sieboldianum</i> (Pax) Komarov
<i>A. pubinerve</i> Rehd.	<i>A. pubipalmatum</i> Fang	<i>A. pubipetiolatum</i> Hu et Cheng
<i>A. reticulatum</i> Champ.	<i>A. robustum</i> Pax	<i>A. rubescens</i> Hayata
<i>A. Schneiderianum</i> Pax et Hoffm.	<i>A. semenovii</i> Regel et Herder.	<i>A. shangszeense</i> Fang et Soong
<i>A. shensiense</i> Fang et L. C. Hu	<i>A. shihweii</i> Chun et Fang	<i>A. sichourense</i> (Fang et Fang f.) Fang
<i>A. sikkimense</i> Miq.	<i>A. sinense</i> Pax	<i>A. sino-oblongum</i> Metc.
<i>A. sinopurpurascens</i> Cheng	<i>A. stachyophyllum</i> Hiern	<i>A. stenolobum</i> Rehd.
<i>A. sterculiaceum</i> Wall.	<i>A. sunyiense</i> Fang	<i>A. sutchuenense</i> Franch.
<i>A. sycopseoides</i> Chun	<i>A. taipuense</i> Fang	<i>A. taronense</i> Hand.-Mazz.
<i>A. tegmentosum</i> Maxim.	<i>A. tenellum</i> Pax	<i>A. tetramerum</i> Pax
<i>A. thomsonii</i> Miq.	<i>A. tibetense</i> Fang	<i>A. tonkinense</i> H. Lec.
<i>A. triflorum</i> Komarov	<i>A. truncatum</i> Bunge	<i>A. tsinglingense</i> Fang et Hsieh
<i>A. tutcheri</i> Duthie	<i>A. ukurunduense</i> Trautv. et Mey.	<i>A. wangchii</i> Fang
<i>A. wardii</i> W. W. Smith	<i>A. wilsonii</i> Rehd.	<i>A. wuyishanicum</i> Fang et Tan
<i>A. wuyuanense</i> Fang et Wu	<i>A. yanjuechi</i> Fang et P. L. Chiu	<i>A. yaoshanicum</i> Fang
<i>A. yinkunii</i> Fang	<i>A. yui</i> Fang	

† 147 species are recorded in FRPS<sup>[43]</sup>; 107 are recorded in the revised Flora of China<sup>[169]</sup>

## Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Erysiphaceae	<i>Sawadaea bicornis</i> (Wallr.) Miyabe	oo	22 <sup>I</sup>
			oo	23 <sup>II</sup>
		<i>Sawadaea bomiensis</i> R.Y. Zheng & G.Q. Chen	oo	22 <sup>III</sup>
		<i>Sawadaea negundinis</i> Homma	o	22 <sup>IV</sup>
		<i>Sawadaea polyfida</i> (C.T. Wei) R.Y. Zheng & G.Q. Chen	oo	22 <sup>V</sup>
			mo	23 <sup>VI</sup>
		<i>Sawadaea tulasnei</i> (Fuckel) Homma	oo	22 <sup>VII</sup>
		<i>Uncinula aceris</i> var. <i>tulasnei</i> (Fuckel) E.S. Salmon	oo	23
		<i>Uncinula circinata</i> Cooke & Peck	oo	22
		<i>Uncinula ljubarskii</i> var. <i>aduncoides</i> (R.Y. Zheng & G.Q. Chen) R.Y. Zheng & G.Q. Chen	oo	22
		<i>Uncinula nankinensis</i> F.L. Tai	oo	22
			mo	23
	<i>Uncinula negundinis</i> (Homma) Tai	mo	23	
	<i>Uncinula sinensis</i> F.L. Tai & C.T. Wei	po	23	
	Meliolaceae	<i>Meliola aceris</i> W. Yamam.	mo	23
			oo	62
Rhytismataceae	<i>Rhytisma acerinum</i> (Pers.) Fr.	oo	23 <sup>VIII</sup>	
		<i>Rhytisma punctatum</i> (Pers.) Fr.	o	23
		<i>Vladracula annuliformis</i> (Syd., P. Syd. & E.J. Butler) P.F. Cannon, Minter & Kamal	mo	23 <sup>IX</sup>
Basidiomycota	Boletaceae	<i>Phellinus igniarius</i> (L.) Quél.	po	23
	Ganodermataceae	<i>Ganoderma applanatum</i> (Pers.) Pat.	po	23
	Hymenochaetaceae	<i>Inonotus radiatus</i> var. <i>licentii</i> Pilát	po	23
	Polyporaceae	<i>Aurantiporus fissilis</i> (Berk. & M.A. Curtis) H. Jahn	po	23 <sup>X</sup>
		<i>Poria lurida</i> Bres.	po	23
		<i>Trametes versicolor</i> (L.) Lloyd	po	23 <sup>XI</sup>
	Pucciniastraceae	<i>Melampsorium aceris</i> Jørst.	mo	23
		<i>Pucciniastrum hikosanense</i> Hirats. f.	mo	23
Steccherinaceae	<i>Steccherinum septentrionale</i> (Fr.) Banker	po	23	
Anamorphic Ascomycetes		<i>Dinemasporium acerinum</i> Peck	oo	23
		<i>Mycocentrospora acerina</i> (R. Hartig) Deighton	oo	23 <sup>XII</sup>
Anamorphic <i>Didymosphaeria</i>		<i>Asteromella platanoidis</i> (Sacc.) Petr.	mo	23
Anamorphic <i>Guignardia</i>		<i>Phyllosticta arida</i> Earle	mo	23
		<i>Phyllosticta minima</i> (Berk. & M.A. Curtis) Underw. & Earle	mo	23 <sup>XIII</sup>
		<i>Phyllosticta negundicola</i> Sacc.	mo	23
		<i>Phyllosticta negundinis</i> Sacc. & Speg.	mo	23
		<i>Phyllosticta platanoidis</i> Sacc.	mo	23

Anamorphic <i>Hypomyces</i>	<i>Verticillium albo-atrum</i> Reinke & Berthold	po	23
Anamorphic <i>Lewia</i>	<i>Alternaria negundinicola</i> (Ellis & Barthol.) P. Joly	oo	23
Anamorphic <i>Mycosphaerella</i>	<i>Pseudocercospora acericola</i> (Woron.) Y.L. Guo & X.J. Liu	mo	110
	<i>Septoria negundinis</i> Ellis & Everh.	mo	23
Anamorphic <i>Rhytisma</i>	<i>Melasmia punctata</i> Sacc. & Roum.	oo	23

- Recorded as *Sawadaia bicornis* (Wallr.: Fr.) Homma
- II Recorded as *Uncinula aceris* (DC.) Sacc.
- III Recorded as *Sawadaia bomiensis* Zheng et Chen
- IV Recorded as *Sawadaia negundinis* Homma
- V Recorded as *Sawadaia polyfida* (Wei) Zheng et Chen
- VI Recorded as *Uncinula polyfida* C.T. Wei
- VII Recorded as *Sawadaia tulasnei* (Fuckel) Homma
- VIII *Melasmia acerina* Lev., of which *Rhytisma acerinum* (Pers.) Fr. is the current name recorded as a separate entry in reference 23.
- IX Recorded as *Schizothyrium annuliforme* Syd. et Butl.
- X Recorded as *Tyromyces fissilis* (Berk. et Curt.) Donk
- XI Recorded as *Coriulus versicolor* (L. ex Fr.) Quél.
- XII Recorded as *Cercospora acerina* Hart.
- XIII Recorded as *Phyllosticta minima* (Berk. et Curt.) Ell. et Ev.

## Arthropods

Order	Family	Species	H. R.	Ref.
Acariformes	Eriophyidae	<i>Aculops longispinosus</i> Kuang et Hong	oo	83
Coleoptera	Cerambycidae	<i>Gracilia minuta</i> Fabricius	po	9
		<i>Palimna liturata</i> (Bates)	po	9
	Eumolpidae	<i>Cryptocephalus mannerheimi</i> Gebler	p	139
		<i>Xanthonia foveata</i> T'an	oo	140
Hemiptera	Acanthosomatidae	<i>Elasmostethus humeralis</i> Jakovlev	p	192
	Pentatomidae	<i>Amyntor obscurus</i> (Dallas)	po	192
		<i>Lelia decempunctata</i> Motschulsky	po	192
		<i>Rhaphigaster nebulosa</i> Poda	po	192
Homoptera	Chaitophoridae	<i>Periphyllus acerihabitans</i> Zhang	mo	189
		<i>Periphyllus diacerivorus</i> Zhang	mo	189
	Cicadellidae	<i>Erythroneura apicalis</i> (Nawa)	po	48
		<i>Typhlocyba tenerrima</i> Herrich-Schäffer	po	48
	Coccidae	<i>Ceroplastes rubens</i> Maskell	po	151
		<i>Eulecanium kuwanai</i> Kanda	po	151
	Pseudococcidae	<i>Eriococcus tokaedae</i> Kuwana	po	150
	Psyllidae	<i>Cacopsylla lineaticeps</i> (Kwon)	m	137
<i>Cacopsylla</i> sp.		m	137	
Lepidoptera	Arctiidae	<i>Hyphantria cunea</i> (Drury)	po	41
	Cochylidae	<i>Eupoecilia ambiguella</i> Hübner	po	66
	Drepanidae	<i>Cyclidia substigmata</i> (Hübner)	po	65
		<i>Mimozethes argentilinearia</i> (Leech)	oo	66
	Gelechiidae	<i>Anacamptis populella</i> Clerck	po	66
		<i>Apocheima cinerarius</i> Erschoff	po	66
	Geometridae	<i>Asthena octomaculata</i> Leech	mo	177
		<i>Culcula panterinaria</i> (Bremer et Grey)	po	66
		<i>Eupithecia gigantea</i> Staudinger	po	138
<i>Hydrelia nisaria</i> (Christoph)		po	177	



Lepidoptera		<i>Operophtera brumata</i> (Linnaeus)	po	177	
		<i>Operophtera relegata</i> Prout	po	177	
		<i>Phthonosema invenustaria</i> Leech	po	66	
			po	138	
			<i>Trichopteryx hemana</i> (Butler)	po	177
	Hepialidae		<i>Phassus nodus</i> Chu et Wang	po	65
	Limacodidae		<i>Cnidocampa flavescens</i> (Walker)	po	66±
			<i>Latoia hilarata</i> (Staudinger)	po	65
				po	66
			<i>Monema flavescens</i> Walker	po	65
			<i>Norosoideus flavidorsalis</i> (Staudinger)	po	65
				po	66
			<i>Parasa consocia</i> Walker	po	66
		<i>Parasa sinica</i> Moore	po	66	
	Lymantriidae		<i>Arctornis l-nigrum</i> (Müller)	po	141
	Noctuidae		<i>Amphipyra pyramidea</i> (Linnaeus)	po	205
			<i>Catocala fraxini</i> (Linnaeus)	po	205
	Notodontidae		<i>Dudusa sphingiformis</i> Moore	po	1
				po	65
			<i>Phalera bucephala</i> (Linnaeus)	po	1
			<i>Shaka atrovittata</i> (Bremer)	oo	141
			<i>Tarsolepis japonica</i> Wileman et South	oo	1
				oo	65
		<i>Togepteryx velutina</i> (Oberthür)	oo	65	
	Nymphalidae		<i>Neptis philyra splendens</i> Murayama	po	203
	Sphingidae		<i>Oxyambulyx japonica</i> Rothschild	oo	206
				po	208
			<i>Oxyambulyx ochracea</i> (Butler)	po	141
				oo	206
				po	208
	Tortricidae		<i>Archips capsigerana</i> Kennel	po	66
			<i>Cerace xanthocosma</i> Diakonoff	po	65
		po		66	
		<i>Choristoneura diversana</i> (Hübner)	po	66	
			po	113	
		<i>Pandemis cinnamomeana</i> (Treitschke)	po	65	
			po	66	
			po	141	
		<i>Pandemis ribeana</i> (Hübner)	po	66	
			po	113	
	<i>Ptycholoma lecheana</i> (Linnaeus)	po	65		
		po	113		
	<i>Ptycholomoides aeriferanus</i> (Herrich-Schäffer)	po	113		
Parasitiformes	Phytoseiidae	<i>Amblyseius oguroi</i> Ehara	po	65	

† Recorded as *Parata hilarata* (Staudinger)