

# *Rosa multiflora*

## Multiflora rose

### Introduction

There are 200 members of the genus *Rosa* distributed widely in subtropical to cold temperate regions of Asia, Europe, North Africa and North America. In China, 95 species have been recorded<sup>[60]</sup>.

### Taxonomy

**Order:** Rosales

**Suborder:** Rosineae

**Family:** Rosaceae

**Subfamily:** Rosoideae Focke

**Genus:** *Rosa* L.

**Subgenus:** *Rosa*

**Section:** *Synthylae* DC.

**Series:** *Multiflorae* Yü et Ku

**Species:** *Rosa multiflora* Thunb.

### Description

*Rosa multiflora* is a climbing, perennial shrub. The branchlets are glabrous and cylindrical with short curved prickles. The leaf axil, petiole and pedicel are glabrous or covered with glandular hairs. The leaves are imparipinnate,



alternate, and composed of 3-9 sharp-toothed leaflets, 5-10 cm long including leafstalk. The leaflets are obovate, oblong or ovate, 1.5-5 cm in length and 0.8-2.8 cm in width, acute or obtuse apex, suborbicular or cuneate base, with simple serrate or biserrate margins. A pair of stipules are adnate to the base of the leafstalk. The upper leaf surface is glabrous and the underside is pubescent. Flowers appear from May through June, as clusters in a corymbose inflorescence, 1.5-2 cm in diameter. Each has white, broad-obovate petals that are glabrous outside and pubescent inside. The lanceolate calyx has a retuse apex and a cuneate base. Fruits are red, glabrous, subglobular hips, with a diameter of 6-8 mm, developing from July to August<sup>[59]</sup>.

### Habitat

*R. multiflora* habitats include thickets, forest margins, and along road sides and streams in mountainous areas<sup>[9, 88]</sup>.

### Distribution

*R. multiflora* occurs in northern Anhui, Fujian, Henan, Jiangsu, Shandong, Zhejiang, and possibly Guizhou<sup>[36, 40, 59, 60, 88, 109, 175]</sup>.

### Economic Importance

The flowers of *R. multiflora* contain an essential oil used in the food and cosmetic industries. Flowers, fruits, leaves and roots are medically useful. *R. multiflora* is also cultivated as a hedge plant<sup>[9]</sup>.



### Related Species

Three varieties of *R. multiflora* are commonly cultivated in China:

- 1) *R. multiflora* var. *cathayensis* Rehd. et Wils., with simple pink flowers, occurs on hilly slopes, scrub or on riverbanks at elevations up to 1300 m. It occurs in Anhui, Fujian, Gansu, Guangdong, Hebei, Henan, Hubei, Jiangxi, Shaanxi, Shandong and Zhejiang provinces. It is planted in northern China as a hedge. The roots contain 25% tannin which is useful in tanning.
- 2) *R. multiflora* var. *carnea* Thory, with double pink petals, is planted as an ornamental and as a hedge.
- 3) *R. multiflora* var. *alboplana* Yu et Ku, with double, white petals, is

commonly cultivated in Beijing as an ornamental<sup>[59]</sup>.

Forty-eight species of fungi and 95 arthropods have been found on the members of the genus *Rosa*.

## Natural Enemies of *Rosa*

### Species of *Rosa* in China

Scientific Name	Scientific Name
<i>R. ×alba</i> L.†	<i>R. longicuspis</i> Bertol.
<i>R. ×fortuneana</i> Lindley†	<i>R. luciae</i> Fr. & Rochebr.‡
<i>R. acicularis</i> Lindl.	<i>R. lucidissima</i> Lévl.
<i>R. albertii</i> Regel	<i>R. ludingensis</i> T. C. Ku‡
<i>R. anemoniflora</i> Fort. ex Lindl.	<i>R. macrophylla</i> Lindl.
<i>R. baiyushanensis</i> Q. L. Wang‡	<i>R. mairei</i> Lévl.
<i>R. banksiae</i> Ait.	<i>R. maximowicziana</i> Regel.
<i>R. banksiopsis</i> Baker	<i>R. miyiensis</i> T. C. Ku‡
<i>R. beggeriana</i> Schrenk	<i>R. morrisonensis</i> Hayata
<i>R. bella</i> Rehd. et Wils.	<i>R. moyesii</i> Hemsl. et Wils.
<i>R. berberifolia</i> Pall.	<i>R. multibracteata</i> Hemsl. et Wils.
<i>R. bracteata</i> Wendl.	<b><i>R. multiflora</i> Thunb.</b>
<i>R. brunonii</i> Lindl.	<i>R. murielae</i> Rehd. et Wils.
<i>R. calyptopoda</i> Card.	<i>R. odorata</i> (Andr.) Sweet
<i>R. caudata</i> Baker	<i>R. omeiensis</i> Rolfe
<i>R. centifolia</i> L.†	<i>R. oxyacantha</i> M. Bieb.
<i>R. chengkouensis</i> Yü et Ku	<i>R. persetosa</i> Rolfe
<i>R. chinensis</i> Jacq.	<i>R. pinnatisepala</i> T. C. Ku‡
<i>R. corymbulosa</i> Rolfe	<i>R. platyacantha</i> Schrenk
<i>R. cymosa</i> Tratt.	<i>R. praelucens</i> Byhouwer
<i>R. daishanensis</i> T. C. Ku‡	<i>R. prattii</i> Hernsl.
<i>R. damascena</i> Mill.†	<i>R. pricei</i> Hayata‡
<i>R. davidii</i> Crép.	<i>R. primula</i> Bouleng.
<i>R. davurica</i> Pall.	<i>R. pseudobanksiae</i> Yü et Ku
<i>R. deqenensis</i> T. C. Ku‡	<i>R. roxburghii</i> Tratt.
<i>R. derongensis</i> T. C. Ku‡	<i>R. rubus</i> Lévl. et Vant.
<i>R. duplicata</i> Yü et Ku	<i>R. rugosa</i> Thunb.
<i>R. fargesiana</i> Boulenger‡	<i>R. sambucina</i> Koidzumi var. <i>pubescens</i> Koidzumi‡
<i>R. farreri</i> Stapf ex Cox.	<i>R. saturata</i> Baker
<i>R. fedtschenkoana</i> Regel	<i>R. sericea</i> Lindl.
<i>R. filipes</i> Rehd. et Wils.	<i>R. sertata</i> Rolfe
<i>R. foetida</i> Herrm. var. <i>persiana</i> (Lem.) Rehd.	<i>R. setipoda</i> Hemsl. et Wils.
<i>R. forrestiana</i> Bouleng.	<i>R. shangchengensis</i> T. C. Ku‡
<i>R. gallica</i> L.†	<i>R. sikangensis</i> Yü et Ku
<i>R. giraldii</i> Crép.	<i>R. sinobiflora</i> T. C. Ku‡
<i>R. glomerata</i> Rehd. et Wils.	<i>R. soulieana</i> Crép.
<i>R. graciliflora</i> Rehd. et Wils.	<i>R. spinosissima</i> L.
<i>R. helenae</i> Rehd. et Wils.	<i>R. sweginzowii</i> Koehne
<i>R. henryi</i> Bouleng.	<i>R. taiwanensis</i> Nakai‡
<i>R. hezhangensis</i> T. L. Xu‡	<i>R. taronensis</i> Yü et Ku
<i>R. hugonis</i> Hemsl.	<i>R. Tibetica</i> Yü et Ku

Scientific Name	Scientific Name
<i>R. kokanica</i> Regel ex Juzep.	<i>R. transmorrisonensis</i> Hayata
<i>R. koreana</i> Kom.	<i>R. tsinglingensis</i> Pax. et Hoffm.
<i>R. kunmingensis</i> T. C. Ku‡	<i>R. uniflorella</i> Buzunova*
<i>R. kwangtungensis</i> Yü et Tsai	<i>R. webbiana</i> Wall. ex Royle
<i>R. kweichowensis</i> Yü et Ku	<i>R. weisiensis</i> Yü et Ku
<i>R. laevigata</i> Michk.	<i>R. wichuraiana</i> Crép.†
<i>R. langyashanica</i> D. C. Zhang et J. Z. Shao‡	<i>R. willmottiae</i> Hemel.
<i>R. lasiosepala</i> Metc.	<i>R. xanthina</i> Lindl.
<i>R. laxa</i> Retz.	<i>R. zhongdianensis</i> T. C. Ku‡
<i>R. lichiangensis</i> Yü et Ku	

†Cultivated

‡not listed in *FRPS*<sup>[59]</sup>

\*Recorded as *R. uniflora* Yü et Ku in *FRPS*<sup>[59]</sup>

## Fungi

Phylum	Family	Species	H. R.	Ref.	
Ascomycota	Botryosphaeriaceae	<i>Guignardia rosae</i> (Auersw.) Petr.	mo	[26]	
	Capnodiaceae	<i>Caldariomyces fumago</i> Woron.	p	[26]I	
	Dermateaceae	<i>Diplocarpon rosae</i> F.A. Wolf	mo	[26]II	
	Elsinoaceae	<i>Elsinoë rosarum</i> Jenkins & Bitanc.	oo	[26]III	
	Erysiphaceae		<i>Medusosphaera rosae</i> Golovin & Gamalitzk.	oo	[24]
			<i>Sphaerotheca fuliginea</i> (Schltld.) Pollacci	po	[26]
			<i>Sphaerotheca humuli</i> (DC.) Burrill	po	[26]
			<i>Sphaerotheca pannosa</i> (Wallr.) Lév.	po	[24]
			<i>Sphaerotheca rosae</i> (Jacz.) Z.Y. Zhao	po	[26]IV
			<i>Sphaerotheca rosae</i> (Jacz.) Z.Y. Zhao	oo	[24]
			<i>Uncinula simulans</i> E.S. Salmon	oo	[26]
		<i>Uncinuliella simulans</i> var. <i>rosae-rubi</i> R.Y. Zheng & G.Q. Chen	oo	[24]	
	Incertae sedis	<i>Hendersonia sarmentorum</i> Westend.	mo	[26]	
	Meliolaceae		<i>Appendiculella calostroma</i> (Desm.) Höhn.	po	[72]
			<i>Asteridiella rosae</i> (Hansf.) Hansf.	po	[72]
			<i>Irenina rosae</i> Hansf.	mo	[26]
	Mycosphaerellaceae		<i>Mycosphaerella rosigena</i> (Ellis & Everh.) Lindau ex McMurrin	oo	[26]
<i>Sphaerulina rehmiana</i> Jaap			po	[26]V	
			p	[1]VI	
Rhytismataceae	<i>Colpoma rosae</i> (Teng) Teng	oo	[26]		
Valsaceae	<i>Valsa ceratosperma</i> (Tode) Maire	po	[26]VII		
Basidiomycota	Phragmidiaceae	<i>Gerwasia rosae</i> F.L. Tai	o	[26]	
		<i>Kuehneola japonica</i> Diet.	o	[26]	
		<i>Phragmidium handelii</i> Petr.	mo	[26]	
		<i>Phragmidium hashiokai</i> Hirats. f.	mo	[26]	
		<i>Phragmidium montivagum</i> Arthur	oo	[26]	
		<i>Phragmidium mucronatum</i> (Pers.) Schltld.	o	[26]	
		<i>Phragmidium rosae-davuricae</i> Miura	oo	[26]	

Phylum	Family	Species	H. R.	Ref.
		<i>Phragmidium rosae-multiflorae</i> Dietel	o	[26]
		<i>Phragmidium rosae-rugosae</i> Kasai	oo	[26]
		<i>Phragmidium tuberculatum</i> Jul. Müll.	oo	[26]
		<i>Teloconia kamtschatkae</i> (H.W. Anderson) Hirats. f.	oo	[26]
Anamorphic Ascomycetes		<i>Monochaetia concentrica</i> (Berk. & Broome) Sacc. & D. Sacc.	mo	[26]
		<i>Monochaetia seiridioides</i> (Sacc.) Sacc. & D. Sacc.	oo	[26]
		<i>Myxosporium rosae</i> Fuckelel	oo	[26]
Anamorphic <i>Botryotinia</i>		<i>Botrytis cinerea</i> Pers.	po	[26]
Anamorphic <i>Lewia</i>		<i>Alternaria alternata</i> (Fr.) Keissl.	po	[209]
		<i>Alternaria rosicola</i> (V.G. Rao) T.Y. Zhang & Y.L. Guo	mo	[209]
		<i>Alternaria tamijiana</i> Rajd.	mo	[209]
		<i>Alternaria tenuissima</i> (Kunze) Wiltshire	po	[209]
Anamorphic <i>Mycosphaerella</i>		<i>Cercospora puderii</i> B.H. Davis	o	[26]
		<i>Cercospora rosae</i> (Fuckelel) Höhn.	o	[26]
		<i>Cercospora rosicola</i> Pass.	o	[26]
			oo	[65]VIII
		<i>Cladosporium cladosporioides</i> (Fresen.) G.A. de Vries	po	[210]
		<i>Cladosporium oxysporum</i> Berk. & M.A. Curtis	po	[210]
		<i>Cladosporium tenuissimum</i> Cooke	po	[210]
<i>Pseudocercospora puderi</i> B.H. Davis ex Deighton	oo	[129]		
Anamorphic Mycosphaerellaceae		<i>Ascochyta rosicola</i> Sacc.	mo	[1]
Anamorphic <i>Pseudovalsa</i>		<i>Coryneum rosicola</i> Miura	oo	[26]
Anamorphic Uredinales		<i>Caecoma warburgianum</i> Henn.	oo	[26]IX

<sup>I</sup>Recorded as *Fumago vagans* Pers

<sup>II</sup>Recorded as *Actinonema rosae* (Lib.) Fr.

<sup>III</sup>Recorded as *Phyllosticta rosarum* Pass.

<sup>IV</sup>Recorded as *Oidium leucoconium* Desm.

<sup>V</sup>Recorded as *Septoria rosae* Desm.

<sup>VI</sup>Recorded as *Septoria rosae* (Libert) Desm.

<sup>VII</sup>Recorded as *Valsa coronata* (Hoffm.) Fr.

<sup>VIII</sup>Recorded as *Passalora rosicola* (Pass.) U. Braun

<sup>IX</sup>Possibly the synonym of *Caecoma warburgiana* Henn.

## Arthropods

Order	Family	Species	H. R.	Ref.
Acariformes	Eriophyidae	<i>Panonychus citri</i> (McGregor)	p	[166]
		<i>Phyllocoptes rosarum</i> (Liro)	mo	[90]
	Tetranychidae	<i>Eotetranychus kankitus</i> Ehara	p	[166]
			p	[166]
		<i>Eotetranychus smithi</i> Pritchard & Baker	po	[167]
		<i>Oligonychus biharensis</i> (Hirst)	po	[167]
		<i>Panonychus ulmi</i> (Koch)	po	[167]

Order	Family	Species	H. R.	Ref.
Coleoptera	Attelabidae	<i>Apoderus praecellens</i> Sharp	mo	[75]
	Cerambycidae	<i>Molorchus liui</i> Gressitt	mo	[86]
	Chrysomelidae	<i>Luperomorpha Xanthodera</i> Fairmaire	p	[201]
		<i>Nonarthra postfasciata</i> (Fairmaire)	m	[165]
		<i>Nonarthra variabilis</i> Baly	m	[165]
		<i>Tuomueria tibialis</i> Chen et Jiang	oo	[201]
	Crioceridae	<i>Lilioceris egena</i> (Weise)	po	[75]
		<i>Temnaspis pulchra</i> Baly	oo	[164]
	Eumolpidae	<i>Cleoporus variabilis</i> (Baly)	po	[165]
			po	[164]
Hemiptera	Acanthosomatidae	<i>Platacantha forfex</i> (Dallas)	po	[208]
		<i>Sastragala edessoides</i> Distant	po	[208]
Homoptera	Aphididae	<i>Acyrtosiphon dirhodum</i> (Walker)	po	[165]
		<i>Longicaudus trirhodus</i> (Walker)	po	[113]
			po	[205]
		<i>Macrosiphum rosae</i> L.	oo	[178]
		<i>Macrosiphum rosivorum</i> Zhang	oo	[205]
			oo	[75]
		<i>Matsumuraja formosana</i> Takahashi	oo	[75]
		<i>Myzaphis rosarum</i> (Kaltenbach)	oo	[165]
	<i>Rhodobium porosum</i> (Sanderson)	po	[113]	
	Asterolecaniidae	<i>Russellaspis pustulans</i> (Cockerell)	po	[173]
	Cerococcidae	<i>Asterococcus yunnanensis</i> Borchsenius	po	[173]
	Cicadellidae	<i>Aguriahana triangularis</i> (Matsumura)	po	[178]
		<i>Erythroneura sudra</i> (Distant)	po	[57]
		<i>Eutettix disciguttus</i> (Walker)	po	[57]
		<i>Tettigoniella albomarginata</i> (Signoret)	po	[57]
		<i>Typhlocyba rosae</i> (Linnaeus)	po	[57]
	Coccidae	<i>Ceroplastes rubens</i> Maskell	po	[75]
		<i>Coccus hesperidum</i> (L.)	po	[75]
			po	[173]
		<i>Metaceronema japonica</i> (Maskell)	po	[75]
		<i>Pulvinaria vitis</i> (L.)	po	[173]
	<i>Saissetia oleae</i> (Bernard)	po	[173]	
	Diaspididae	<i>Aonidiella citrina</i> (Coquillett)	po	[165]
			po	[75]
		<i>Chrysomphalus aonidum</i> (L.)	po	[75]
		<i>Pseudaonidia duplex</i> (Cockerell)	po	[165]
	po		[75]	
	Margarodidae	<i>Icerya purchasi</i> Maskell	po	[165]
			po	[165]
	Pseudococcidae	<i>Phenacoccus prunicola</i> . Borchsenius	mo	[172]

Order	Family	Species	H. R.	Ref.
	Ricaniidae	<i>Ricania speculum</i> (Walker)	po	[220]
Hymenoptera	Argidae	<i>Arge pagana</i> (Panzer)	mo	[75]
Lepidoptera	Geometridae	<i>Cidaria fulvata</i> (Forster)	mo	[195]
			o	[25]
		<i>Hypomecis punctinalis conferenda</i> (Butler)	po	[178]
			po	[75]
			po	[78]
		<i>Ourapteryx sambucaria</i> L.	po	[161]
		<i>Plemyria rubiginata</i> (Denis et Schiffermüller)	po	[195]
		<i>Sauris hirudinata</i> (Guenée)	po	[195]
	<i>Xanthorhoe saturata</i> (Guenée)	po	[195]	
	Limacodidae	<i>Scopelodes venosa kwangtungensis</i> Hering	po	[75]
			po	[78]
	Lycaenidae	<i>Acytolepis puspa</i> (Horsfield)	p	[219]
		<i>Rapala caerulea</i> (Bremer et Grey)	p	[178]
			p	[219]
	<i>Rapala nissa</i> (Kollar)	po	[219]	
	Lymantriidae	<i>Dasychira horsfieldi</i> Saunders	po	[213]
			po	[212]
			po	[212]
		<i>Euproctis chrysorrhoea</i> (L.)	po	[75]
			po	[75]
		<i>Euproctis flavata</i> (Bremer)	po	[178]
			po	[212]
		<i>Euproctis fraterna</i> (Moore)	po	[166]
			po	[178]
			po	[75]
		<i>Euproctis nipponis</i> (Butler)	po	[75]
		<i>Porthesia similis</i> (Fueszly)	po	[178]
			po	[212]
			po	[75]
		<i>Teia ericae</i> Germar	po	[212]I
	po		[213]	
	po		[212]	
	<i>Teia gonostigma</i> (L.)	po	[213]	
		po	[213]	
		po	[75]	
	Noctuidae	<i>Acronicta psi</i> (L.)	po	[25]
		<i>Dysgonia arctotaenia</i> (Guenée)	mo	[166]II
			mo	[224]III
			mo	[75]II
	Notodontidae	<i>Stauropus alternus</i> Walker	po	[4]

Order	Family	Species	H. R.	Ref.
	Psychidae	<i>Clania minuscula</i> Butler	po	[78]
		<i>Clania variegata</i> Snellen	po	[166]III
		<i>Dappula tertia</i> Templeton	po	[75]
	Saturniidae	<i>Eriogyna pyretorum</i> (Westwood)	p	[226]
		<i>Eudia pavonia</i> L.	po	[226]
	Tortricidae	<i>Acleris cristana</i> (Denis & Schiffermüller)	po	[133]
			po	[78]
		<i>Adoxophyes cyrtosema</i> Meyrick	po	[78]
		<i>Adoxophyes orana</i> Fischer von Röslerstamm	po	[133]
			po	[75]
		<i>Ancylics comptana</i> (Frölich)	po	[133]
		<i>Celyphoides cespitana</i> (Hübner)	p	[133]IV
		<i>Choristoneura luticostana</i> (Christoph)	po	[133]
		<i>Clepsis rurinana</i> (L.)	po	[133]V
			po	[75]
		<i>Epiblema (Notocelia) tetragonana</i> (Stephens)	po	[133]
		<i>Epiblema rosaecolana</i> (Doubleday)	oo	[133]
		<i>Eulia ministrana</i> (L.)	po	[133]
		<i>Hedya ochroleucana</i> (Frölich)	oo	[133]
		<i>Homona magnanima</i> Diakonoff	po	[75]
po	[78]			
Thysanoptera	Aeolothripidae	<i>Aeolothrips fasciatus</i> (L.)	po	[66]
	Phlaeothripidae	<i>Haplothrips chinensis</i> Priesner	po	[66]
			po	[75]
		<i>Haplothrips subtilissimus</i> Haliday	po	[66]
	Thripidae	<i>Ernothrips lobatus</i> (Bhatti)	po	[66]
		<i>Frankliniella intonsa</i> (Trybom)	po	[66]
		<i>Megalurothrips distalis</i> (Karny)	po	[66]
		<i>Thrips flavidulus</i> Bagnall	po	[66]
			po	[75]
		<i>Thrips flavus</i> Schrank	po	[66]
			po	[75]
		<i>Thrips hawaiiensis</i> (Morgan)	po	[66]
		<i>Thrips palmi</i> Karny	po	[75]
	<i>Thrips tabaci</i> Lindemann	po	[66]	
	<i>Thrips vulgatissimus</i> Haliday	p	[165]	
p		[66]		

<sup>I</sup>Recorded as *Orgyia ericae* Germar

<sup>II</sup>Recorded as *Parallelia arctotaenia* (Guenée)

<sup>III</sup>Recorded as *Eumeta variegata* Snellen

<sup>IV</sup>Recorded as *Celyphoides cespitanus* (Hübner)

<sup>V</sup>Recorded as *Clepsis (Siclobola) semialbana* (Guenée)