

Phragmites australis

Common reed

Introduction

The genus *Phragmites* contains 10 species worldwide. Three members of the genus have been reported from China^[123].

Species of *Phragmites* in China

Scientific Name
<i>P. australis</i> (Cav.) Trin. ex Steud.
<i>P. japonica</i> Steud.,
<i>P. karka</i> (Retz.) Trin.

Taxonomy

Order: Graminales

Suborder: Gramineae

Family: Gramineae (Poaceae)

Subfamily: Arundioideae

Tribe: Arundineae

Subtribe: Arundinae Bews

Genus: *Phragmites* Trinius

Species: *Phragmites australis* (Cav.) Trin. ex Steud. [= *Phragmites communis* Trin.]

Description

Phragmites australis is a perennial grass with stoloniferous rhizomes. The erect culm reaches a height of 8 m and a diameter of 1-4 cm. Below each node may be some white powdery substances. The leaf blade is flat, 15-45 cm long and 1-3.5 cm wide with a smooth or coarse margin. The ligule is very short, truncate or appears as a ciliate ring, while the leaf sheath is glabrous or minutely hairy. Panicles are about 10-40 cm long, slightly nodding with slightly spreading branchlets that are 12-16



mm long and mostly bear 4-7 florets, which maybe male for the first one from the base. The glumes are 3-veined, 3-7 mm long for the first glume and 5-11 mm for the second glume. The flowers appear from July to November^[58, 68, 81, 84, 87, 123].

Habitat

P. australis occurs at the edge of rivers, lakes, swamps, moist areas, and wetlands at lower elevations^[58, 84, 123].

Distribution

P. australis has a nationwide distribution in China^[123].

Economic Importance

Young plants of *P. australis* are rich in proteins and saccharides, and are

therefore favored as cattle and horse feed. As it matures, the lignified plant cannot be used as forage. However, the mature culms can be used for construction and paper making^[58, 123].

Related Species

P. karka (Retz.) Trin. has comparatively larger panicles and numerous spreading branches. It occurs in Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Taiwan and Yunnan provinces^[123].

Natural Enemies of *Phragmites*

Twenty four species of fungi and 117 species of arthropods have been recorded as associated with the genus *Phragmites*.



Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Apiosporaceae	<i>Apiospora montagnei</i> Sacc.	m	[26] ^I
	Dothideaceae	<i>Scirrha rimosa</i> (Alb. & Schwein.) Fuckel	m	[26] ^{II}
	Incertae sedis	<i>Massariothea botulispora</i> (Teng) B. Sutton	m	[26] ^{III}
	Meliolaceae	<i>Meliola arundinis</i> Pat.	p	[73]
			o	[26]
Phyllachoraceae	<i>Phyllachora arundinis</i> Sawada	mo	[26] ^{IV}	
Basidiomycota	Pucciniaceae	<i>Puccinia abei</i> Hirats.	mo	[170]
			mo	[26]
		<i>Puccinia invenusta</i> Syd.	oo	[170]
			mo	[26]
		<i>Puccinia isiacae</i> (Thüm.) G. Winter	mo	[170]
		<i>Puccinia longinqua</i> Cummins	o	[170]
			o	[26]
		<i>Puccinia magnusiana</i> Körn.	o	[170]
			p	[26]
		<i>Puccinia moriokaensis</i> S. Ito	m	[170]
			o	[26]
		<i>Puccinia okatamaensis</i> S. Ito	m	[170]
	o		[26]	
	<i>Puccinia phragmitis</i> (Schumach.) Körn.	p	[170]	
		m	[26]	
	Ustilaginaceae	<i>Puccinia sinkiangensis</i> Y.C. Wang	m	[170]
			m	[26]
			m	[64]
	Ustilago <i>grandis</i> Fr.	m	[26]	
mo		[64]		
<i>Ustilago himalensis</i> (Kakish. & Y. Ono) Vánky & Oberw.	m	[64] ^V		
	m	[26]		
Anamorphic Ascomycetes	<i>Brachysporium phragmitis</i> Miyake	m	[26]	
		m	[26] ^{VI}	
Anamorphic <i>Lewia</i>	<i>Alternaria tenuissima</i> (Kunze) Wiltshire	p	[209]	
Anamorphic <i>Mycosphaerella</i>	<i>Cladosporium arundinis</i> (Corda) Sacc.	m	[210]	
		p	[210]	
Anamorphic Uredinales	<i>Uredo phragmitis-karkae</i>	mo	[26]	
Anamorphic Xylariales	<i>Hadrotrichum phragmiticola</i> Teng	m	[26]	

^IRecorded as *Coniosporium arundinis* (Corda) Sacc.

^{II}Recorded as *Hadrotrichum phragmitis* Fuckel

^{III}Recorded as *Hendersonia botulispora* Teng

^{IV}Recorded as *Phyllachora phragmitis-karkae* Saw

^VRecorded as *Ustilago phragmites* Ling

^{VI}Recorded as *Napicladium arundinaceum* (Corda) Sacc.

Arthropods

Order	Family	Species	H. R.	Ref.	
Acariformes	Eriophyidae	Parategonotus phragmitae Kuang	m	[90]	
	Tetranychidae	Petrobia latens (Müller)	p	[167]	
Coleoptera	Anthribidae	Phloeobius sp.	p	[94]I	
	Cerambycidae	Dorysthenes hydropicus Pascoe	p	[94]	
	Cetoniidae	Protaetia brevitarsis (Lewis)	p	[94]II	
	Chrysomelidae	Psylliodes reitteri Weise	m	[201]	
		Sphaeroderma apicale Baly	p	[201]	
	Crioceridae	Donacia clavipes Fabricius	m	[164]	
		Donacia provosti Fairmaire	p	[75]	
		Donacia vulgaris Zschach	m	[164]	
		Oulema oryzae (Kuwayama)	p	[164]	
				p	[94]
	Curculionidae	Tanymecus circumdatus Wiedemann	p	[94]	
	Hispididae	Dicladispa armigera (Olivier)	p	[94]	
		Hispellinus moerens (Baly)	p	[94]III	
				p	[94]
	Melolonthidae	Holotrichia oblita Feldermann	p	[94]	
		Holotrichia parallela Motschulsky	p	[94]	
		Holotrichia trichophora (Fairmaire)	p	[94]IV	
	Rutelidae	Adoretus sinicus Burmeister	p	[94]	
		Adoretus tenuimaculatus Waterhouse	p	[94]	
		Anomala corpulenta Motschulsky	p	[94]	
Anomala cupripes Hope		p	[94]		
Anomala heydeni Frivaldszky		p	[94]		
Diptera	Cecidomyiidae	Giraudiella sp.	p	[94]	
Hemiptera	Coreidae	Aeschyntelus chinensis Dallas	p	[94]	
		Cletus punctiger Dallas	p	[94]	
		Leptocorisa varicornis (Fabricius)	p	[94]	
	Lygaeidae	Dimorphopterus spinolae (Signoret)	p	[94]	
	Miridae	Adelphocoris fasiaticollis Reuter	p	[94]	
		Trigonotylus ruficonis Geoffroy	p	[207]	
	Pentatomidae	Metonymia glandulosa (Wolff)	p	[207]	
		Scotinophara lurida (Burmeister)	p	[94]	
		Stollia guttiger (Thunberg)	p	[94]	
	Pyrrhocoridae	Pyrrhocoris tibialis Stål	p	[207]	
Homoptera	Acleridae	Nipponaclerda biwakoensis (Kuwana)	p	[173]	
			p	[94]	
	Aphididae		p	[94]	
		Hyalopterus amygdali Blanchard	p	[205]V	
			p	[165]	
		Macrosiphum avenae Fabricius	p	[94]	

Order	Family	Species	H. R.	Ref.
		Melanaphis sacchari (Zehntner)	p	[94]VI
			p	[113]
		Rhopalosiphum padi (L.)	p	[94]
		Rhopalosiphum rufiabdominalis (Sasaki)	p	[205]
	Cercopidae	Callitettix versicolor Fabricius	p	[94]
	Cicadellidae	Cicadula fasciifrons Stål	p	[94]
		Deltocephalus dorsalis (Motschulsky)	p	[94]VII
		Deltocephalus oryzae Matsumura	p	[94]
		Erythroneura limbata (Matsumura)	p	[94]
		Erythroneura maculifrons (Motschulsky)	p	[94]
		Erythroneura subrufa (Motschulsky)	p	[94]
		Nephotettix cincticeps Uhler	p	[94]
		Nephotettix virescens Distant	p	[94]
		Tettigoniella viridis (L.)	p	[94]VIII
	Cixiidae	Oliarus apicalis (Uhler)	p	[94]
	Delphacidae	Chloriona tateyamana Matsumura	p	[94]
		Dicranotropis nagaragawana Matsumura	p	[94]
		Laodelphax striatellus (Fallén)	p	[94]
		Perkinsiella saccharicida Kirkaldy	p	[94]
		Saccharosydne procerus (Matsumura)	p	[94]
		Sogatella furcifera (Horváth)	p	[94]
		Toya propingua neopropingua (Muir)	p	[94]
		Unkanodes sapporona Matsumura	p	[94]
	Dictyopharidae	Dictyophara sinica Walker	p	[94]
	Eriococcidae	Rhizococcus trispinatus (Wang)	m	[172]IX
			p	[94]X
	Pseudococcidae	Cannococcus ostiolata (Borchsenius)	o	[172]XI
Liucoccus ehrhornioides Borchsenius		p	[172]	
Hymenoptera	Tenthredinidae	Dolerus tritici Chu	p	[94]
Lepidoptera	Arctiidae	Aloa lactinea (Cramer)	p	[94]XII
		Cretonotos tranciens (Walker)	p	[94]XIII
		Spilosoma lubricipedum (L.)	p	[94]XIV
	Cossidae	Phragmataecia castaneae Hübner	p	[178]XV
			p	[94]
			m	[25]
	Crambidae	Calamochrous acutellus Eversmann	m	[169]
			p	[94]
		Chilo hyrax Bleszynski	p	[94]
		Chilo luteellus (Motschulsky)	m	[169]
			p	[94]
			m	[25]
	Chilo phragmitellus Hübner	p	[94]	

Order	Family	Species	H. R.	Ref.
		<i>Chilo suppressalis</i> (Walker)	p	[169]
		<i>Ostrinia nubilalis</i> (Hübner)	p	[169]
		<i>Schoenobius gigantellus</i> Denis & Schiffermüller	m	[169]
	Hesperiidae	<i>Parnara ganga</i> Evansman	p	[178]
		<i>Parnara guttata</i> Bremer & Grey	p	[94]
		<i>Polytremis zina</i> (Eversman)	p	[178]
	Lymantriidae	<i>Cifuna locuples</i> Walker	p	[212]
			p	[94]
			p	[75]
			p	[166]
		<i>Laelia coenosa candioda</i> Leech	p	[94]XVI
	Noctuidae	<i>Agrotis ipsilon</i> (Hüfnagel)	p	[94]XVII
		<i>Aletia pudorina</i> (Denis & Schiffermüller)	p	[25]XVIII
		<i>Archanara neurica</i> (Hübner)	m	[15]
		<i>Archanara phragmiticola</i> Staudinger	p	[94]XIX
		<i>Leucania insecuta</i> Walker	p	[94]
		<i>Leucania loreyi</i> (Duponchel)	p	[94]
		<i>Leucania venalba</i> Moore	p	[94]
		<i>Rhizedra lutosa</i> (Hübner)	m	[15]
		<i>Senta flammea</i> (Curtis)	p	[15]
		<i>Sesamia inferens</i> (Walker)	p	[224]
			p	[94]
			p	[178]
		<i>Sesamia vuteria</i> (Stoll)	p	[224]XX
		<i>Spodoptera depravata</i> Butler	p	[75]XXI
			p	[166]XXII
	<i>Spodoptera litura</i> (Fabricius)	p	[94]	
	Psychidae	<i>Clania minuscula</i> Butler	p	[78]XXIII
	Pyralidae	<i>Proceras venosatum</i> (Walker)	p	[94]XXIV
	Satyridae	<i>Coenonympha oedippus</i> (Fabricius)	p	[219]
	Orthoptera	Acrididae	<i>Acrida cinerea</i> (Thunberg)	p
			p	[94]
Catantopidae		<i>Chondracris rasea</i> De Geer	p	[94]
		<i>Hieroglyphus annulicornis</i> (Shiraki)	p	[94]
		<i>Oxya chinensis</i> (Thunberg)	p	[94]
		<i>Patanga japonica</i> (I. Bolivar)	p	[94]
		<i>Shirakiacris shirakii</i> (I. Bolivar)	p	[94]XXVI
Conocephalidae		<i>Conocephalus gladius</i> Redtenbacher	p	[94]
		<i>Homorocoryphus lineosus</i> Walker	p	[94]
Gryllidae		<i>Teleogryllus mitratus</i> Burmeister	p	[94]XXVII
Oedipodidae		<i>Aiolopus tamulus</i> (Fabricius)	p	[94]
		<i>Gastrimargus marmoratus</i> (Thunberg)	p	[94]

Order	Family	Species	H. R.	Ref.
		<i>Locusta migratoria manilensis</i> (Mayen)	p	[94]
		<i>Oedaleus infernalis</i> Saussure	p	[94]
	Phaneropteridae	<i>Ducetia japonica</i> (Thunberg)	p	[94]
	Pyrgomorphidae	<i>Atractomorpha lata</i> (Motschulsky)	p	[94]
		<i>Atractomorpha sinensis</i> I. Bolivar	p	[94]
Thysanoptera	Phlaeothripidae	<i>Haplothrips aculeatus</i> (Fabricius)	p	[66]
			p	[94]
		<i>Haplothrips tritici</i> (Kurdjumov)	p	[66]
	Thripidae	<i>Frankliniella intonsa</i> (Trybom)	p	[94]
		<i>Scirtothrips dorsalis</i> Hood	p	[66]
		<i>Stenchaetothrips bambusae</i> (Shumsher Singh)	p	[66]
		<i>Stenchaetothrips biformis</i> (Bagnall)	p	[66]
			p	[75]
	p	[94]		

ⁱProbably *Phloeobius triarrhenus* Zhang

ⁱⁱRecorded as *Potosia brevitarsis* Lewis

ⁱⁱⁱAlso recorded as *Hispa armigera* Olivier

^{iv}Recorded as *Pledina trichophora* Fairmaire

^vRecorded as *Hyaloptera amygdali* Blanchard

^{vi}Recorded as *Longiunguis sacchari* Zehntner

^{vii}Recorded as *Inazuma dorsalis* Motschulsky

^{viii}Recorded as *Tettigella viridis* Linné

^{ix, x}Recorded as *Eriococcus trispinatus* Wang

^{xi}Recorded as *Kiritshenkella ostiolata* (Borchs)

^{xii}Recorded as *Amsacta lactinea* Cramer

^{xiii}Recorded as *Cretonotus tranciens* Walker

^{xiv}Recorded as *Spilosoma menthastris* Esper

^{xv}Recorded as *Phragmataecia castanea* Hübner

^{xvi}Probably *Laelia coenosa* (Hübner)

^{xvii}Recorded as *Agrotis ypsilon* Rottemberg

^{xviii}Recorded as *Leucania pudorina* Schiffermuller

^{xix}Recorded as *Agrotis phragmiticola* Staudinger

^{xx}Probably *Sesamia uniformis* (Dudgeon)

^{xxi, xxii}Recorded as *Sidemia depravata* (Butler)

^{xxiii}Recorded as *Clania minuscular* Snellen

^{xxiv}Recorded as *Procera venosatum* Walker

^{xxv}Also recorded as *Acrida chinensis* Westwood

^{xxv}Recorded as *Eupreocnemis shirakii* Bolivar

^{xxvii}Recorded as *Gryllus testaceus* Walker