Abutilon theophrasti
Velvetleaf, China jute

Abutilon theophrasti buds and flower. (Photo courtesy of LBJWC.)

Introduction
The genus *Abutilon* contains approximately 160 species worldwide, primarily in tropical and subtropical areas. In China, ten species and three varieties occur throughout the country. *Abutilon* species are cultivated for medicinal and ornamental purposes as well as a fiber source[44].

Species of *Abutilon* in China

Scientific Name	Scientific Name
A. crispum (Linn.) Medicus	*A. paniculatum* Hand.-Mazz.
A. gebauerianum Hand.-Mazz.	*A. roseum* Hand.-Mazz.
A. guineens (Schumacher)†	*A. sinense* Oliv.
A. hirtum (Lamk.) Sweet	*A. striatum* Dickson.
A. indicum (Linn.) Sweet	***A. theophrasti* Medicus**

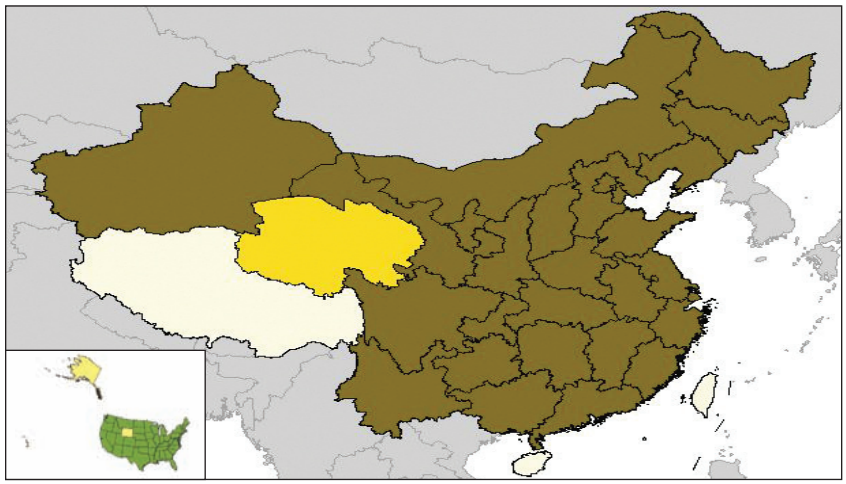
† from the revised *Flora of China* (FOC)[170]; others from *Flora Reipublicae Popularis Sinicae* (Flora of People's Republic of China, FRPS)[44]

Taxonomy
Family: Malvaceae
Genus: *Abutilon* Miller

Description
Abutilon theophrasti is an annual subshrub-like herb that can reach a height of 1-2 m. The stem and twigs are covered with fine hairs. The velvety, heart-shaped leaves are alternate, about 5-10 cm long, densely stellate pubescent on both surfaces, with minutely crenate margin, long acuminate apex and cordate base. Petiole is 3-12 cm long with stellate hairs. The stipule is shed early. Blooming from July to August, yellow flowers are produced solitarily in leaf axils. The pedicel is pubescent, 1-3 cm long, with a knot near the apex. The calyx is cup-shaped, densely puberulous, with five ovate lobes about 6 mm long.

Abutilon theophrasti. (LBJWC)

Petals are yellow, obovate, and about 1 cm in length. Fruits are semi-globose capsules, about 2 cm in diameter and 1.2 cm in length, with 15-20 scabrous mericarps bearing two long awns at the apex. Seeds are brown, stellately puberulous and reniform[44].



Habitat and Distribution
Abutilon theophrasti occurs throughout mainland China with the exception of Qinghai and Tibet[44]. *Abutilon theophrasti* occurs along roadsides, ditches, hillside slopes, riverbanks, disturbed areas, and crop fields.[44][70][201]

Economic Importance
Abutilon theophrasti has a variety of medicinal uses.[44] It is cultivated as a source of fiber and oil, however, it has escaped from cultivation to become an invasive species of orchards, cotton,

maize, soybean, and vegetable fields, causing serious damage [34][96].

Natural Enemies of *Abutilon*

At least 16 records of fungi have been found on plants of the genus *Abutilon*. Most of them can infect *Abutilon theophrasti* and among them, ten fungal species are only reported on this plant [23]. Six out of eight arthropods are reported to injure *A. theophrasti*, but none is host-specific.

Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Dothioraceae	*Pleosphaerulina abutilonis* Miura	m	23
	Mycosphaerellaceae	*Mycosphaerella abutilonis* Nakata & Takim.	m	23
		Mycosphaerella abutilontidicola Miura	m	23
Basidiomycota	Ceratobasidiaceae	*Thanatephorus cucumeris* (A.B. Frank) Donk	p	23
	Pucciniaceae	*Puccinia abutili* Berk. & Broome	oo	23
		Puccinia heterospora Berk. & M.A. Curtis	p	23
Oomycota	Peronosporaceae	*Plasmopara skvortzovii* Miura	m	23
			oo	188
Anamorphic Ascomycetes		*Macrophoma abutilonis* Nakata & Takim.	m	23
Anamorphic *Glomerella*		*Colletotrichum pekinensis* Kats.	m	23
Anamorphic *Guignardia*		*Phyllosticta abutilonis* Henn.	m	23
Anamorphic Hypocreales		*Myrothecium roridum* Tode	p	23
Anamorphic *Hypomyces*		*Verticillium albo-atrum* Reinke & Berthold	p	23
Anamorphic *Lewia*		*Alternaria abutilonis* (Speg.) P. Joly [= *Macrosporium abutilonis* Speg.]	o	23†
Anamorphic *Mycosphaerella*		*Cercospora avicennae* Chupp	m	23
Anamorphic Mycosphaerellaceae		*Ascochyta abutilonis* Hollós	m	23
Anamorphic *Nectria*		*Tubercularia abutilonis* Katsura	m	23

†*Macrosporium abutilonis* Speg., and its synonym, *Alternaria abutilonis* (Speg.) P. Joly, are recorded as different accounts. Only one host is recorded for *M. abutilonis* and several host species in one genus for *A. abutilonis*, therefore "o" is the accepted H. R. entry.

Arthropods

Order	Family	Species	H. R.	Ref.
Hemiptera	Coreidae	*Liorhyssus hyalinus* (Fabricius)	p	192
	Pyrrhocoridae	*Dysdercus cingulatus* (Fabricius)	p	192
Homoptera	Pseudococcidae	*Pseudococcus maritimus* Ehrhorn	po	150
Lepidoptera	Noctuidae	*Acontia malvae* Esper	p	205
		Anomis flava (Fabricius)	p	158
			p	205
		Heliothis armigera (Hübner)	p	205
	Nymphalidae	*Hypolimnas missipus* (Linnaeus)	p	203
Thysanoptera	Thripidae	*Tusothrips aureus* (Mouleon)	po	140