Cannuccia di palude

PHRAGMITES AUSTRALIS

Phragmites australis, the Common Reed (see Reed (plant) for other species also called 'reed'), is a large grass native to wetland sites throughout temperate and tropical regions of the world. It is generally regarded as the sole species of the genus *Phragmites*, though some botanists divide the genus into three or four species.
It commonly forms extensive stands, up to a square kilometre or more (known as reedbeds); where conditions are suitable, it can spread at up to 5 m or more per year by horizontal 'runner' stems, which put down roots at regular intervals. The erect stems grow to 2–6 m tall, with the taller plants growing in areas with hot summers and fertile growing conditions. The leaves are broad for a grass, 20–50 cm long and 2–3 cm broad. The flowers are produced in a dense, dark purple panicle 20–50 cm long.
The Common Reed is a very important plant for wildlife and conservation, particularly in Europe and Asia, where several species of birds are strongly tied to large *Phragmites* stands, notably:-

- Bearded Tit *Panurus biarmicus*
- Reed Warbler *Acrocephalus scirpaceus*
- Great Bittern *Botaurus stellaris*

In North America, the species' status was misunderstood. It was commonly considered to be an exotic species, not native but introduced from Europe; however, there is clear evidence of the existence of *Phragmites* native in North America long before human colonisation of the continent. It is now known that the North American native forms of *Phragmites* are markedly less vigorous than European forms, and that the recent marked increase in *Phragmites* in North America is due to a vigorous, but otherwise almost indistinguishable European form of the species, best detectable by genetic analysis. This is causing serious problems for many other North American wetland plants, including the local form of the species.

Recent studies have characterised morphological variation among the introduced and native stands of *Phragmites* in North America. The Eurasian genotype can be distinguished from the North American genotype by its shorter ligules (up to 0.9 mm vs. over 1.0 mm), shorter glumes (under 3.2 mm vs. over 3.2 mm, although there is some overlap in this character), and culm characteristics. Recently, the North American genotype has been described as a distinct subspecies, *Phragmites australis* subsp. *americanus* Saltonstall, Peterson, and Soreng; the Eurasian genotype is referred to as *Phragmites australis* subsp. *australis*.
Rhizome of the plant is rich in N,N-DMT alkaloids (Wassel et al. 1985).
Synonyms include *Arundo phragmites* L. (the basionym), *Phragmites altissimus, P. berlandieri, P. communis, P. dioicus, P. maximus, P. vulgaris*.

Lisca lacustre
SCHOENOPLECTUS LACUSTRIS

Bereits in der Steinzeit flochten Menschen aus der Binse Matten und Körbe. Die Verwendung dieser Pflanzen findet ihre Fortsetzung bis in die Neuzeit. So befanden sich zum Beispiel in den Kathedralen in England und Frankreich kunstvoll geflochtene Binsenstühle. Matten werden noch heute aus diesen Pflanzen hergestellt. Binsen werden außerdem in biologischen Kläranlagen eingesetzt.

Mestola, Mestolaccia
ALISMA PLANTAGO-AQUATICA

The Common Water-plantain (*Alisma plantago-aquatica*), also known as Mad-dog weed, is a flowering plant native to most of the Northern Hemisphere, in Europe, northern Asia, and North America. It grows in shallow water, and consists of a fibrous root, several basal leaves 15-30 cm long, and a triangular stem up to 1 m tall, with a branched inflorescence bearing numerous small flowers with three round or slightly jagged, white or pale purple, petals.
The word *alisma* is said to be a word of Celtic origin meaning "water", a reference to the habitat in which it grows. Early botanists named it after the *plantago* because of the similarity of their leaves.

The dried leaves of the water plantain can be used as both a diuretic and a diaphoretic. They have been used to help treat renal calculus, cystitis, dysentery and epilepsy.
The roots have formerly been used to cure hydrophobia, and have a reputation in America of curing rattlesnake bites.

Giaggiolo giallo
IRIS PSEUDACORUS

Iris pseudacorus is a species of *Iris*, native to Europe, western Asia and northwest Africa. Common names include yellow iris and yellow flag.

It is a herbaceous perennial plant growing to 1-1.5 m (rearely 2 m) tall, with erect leaves up to 90 cm long and 3 cm broad. The flowers are bright yellow, 7-10 cm across, with the typical iris form. The fruit is a dry capsule 4-7 cm long, containing numerous pale brown seeds.
Iris pseudacorus grows best in very wet conditions, and can be common in wetlands, where it tolerates submersion, low pH, and anoxic soils. The plant spreads quickly, by both rhizome and water-dispersed seed. It fills a similar niche to that of *Typha* and often grows with it, though usually in less deep water. While it is primarily an aquatic plant, the rhizomes can survive prolonged dry conditions. Yellow iris has been used as a form of water treatment since it has the ability to take up heavy metals through its roots.
Large iris stands in western Scotland form a very important feeding and breeding habitat for the endangered Corn Crake.
Cultivation and uses
The rhizome has historically been used as a herbal remedy, most often as an emetic. When applied to the skin or inhaled, the tannin-rich juices can be acrid and irritating.
It has been planted nearly worldwide as an ornamental plant, with several cultivars selected for bog garden planting.
In some regions it has escaped from cultivation to establish itself as an invasive aquatic plant which can create dense, monotypic stands that outcompete other plants in the ecosystem. Where it is invasive, it is tough to remove on a large scale. Even ploughing the rhizomes is often ineffective, and its eradication is highly unlikely. It has been banned in some areas but is still widely sold in others for use in gardens, and it will continue to be planted by gardeners unaware of or unconcerned with its invasive potential.

Menta d'acqua
MENTHA AQUATICA

Water mint (*Mentha aquatica*) is a perennial plant in the mentha genus common throughout Europe, except for the extreme North.
It grows about 90 cm tall, although it may reach heights of 150 cm when supported by taller vegetation and has a distinctly minty smell. It has ovate to ovate-lanceolate, green (sometimes purplish), opposite, toothed, veined leaves which can be either hairy or hairless. The stems are often purple. Flowers are tiny, densely crowded, purple, tubular, pinkish to lilac in colour and bloom from July to September. Water mint is pollinated by insects, but can easily be propagated through root cuttings, like other species of mint.
As the name suggests, water mint occurs in the shallow margins and channels of streams, rivers, pools, dykes, ditches, canals, wet meadows, marshes and fens. If the plant grows in the water itself, it rises above the surface of the water. It generally occurs on mildly acid to calcareous (it is common on soft limestone) mineral or peaty soils.
It is crossed with spearmint to produce peppermint, a sterile hybrid.

Nannufero o Ninfea gialla
NUPHAR LUTEUM

Nuphar lutea, the spatterdock, yellow water-lily, or yellow pond-lily, is an aquatic plant of the family Nymphaeaceae, native to Eurasia. It grows in eutrophic freshwater beds, with its roots fixed into the ground and its leaves floating on the water's surface.
The plant's inflorescence is a solitary, terminal hermaphrodite flower, pollinated by insects, which blooms from June to September in the Northern Hemisphere. The flower is followed by achenes which are distributed by the water current.
Possible botanical synonyms include *Nuphar luteum* (L.) Sibthorp & Sm. and *Nuphar advena*

Ninfea
NYMPHAEA ALBA

Nymphaea alba, the European White Waterlily or White Lotus, is an aquatic flowering plant of the family Nymphaeaceae.
The red variety which is in cultivation came from lake *Fagertärn* (Fair tarn) in the forest of Tiveden, where they were discovered in the early 19th century. The discovery led to a large scale exploitation which nearly made it extinct in the wild before it was protected.
It is found all over Europe and in parts of North Africa and the Middle East in freshwater.

Salice bianco
SALIX ALBA

The White Willow is a willow native to Europe, and western and central Asia. It is a large deciduous tree up to 20-30 m tall. The name derives from the leaves, which are paler than most other willows, due to a covering of very fine silky white hairs, particularly on the underside. The leaves are typically 5-10 cm long and 1-1.5 cm wide. The shoots in the typical species are grey-brown to green-brown. The flowers are catkins, produced in early spring.
A number of cultivars and hybrids of White Willow have been selected for forestry and horticulture use:

- The Cricket-bat Willow (*Salix alba* 'Caerulea') is grown as a specialist timber crop in Britain, mainly for the production of cricket bats, but also for other uses where a tough, lightweight wood that does not splinter easily, is required. It is distinguished mainly by its growth form, very fast growing with a single straight stem, and also

by its slightly larger leaves (10-11 cm long, 1.5-2 cm wide) with a more blue-green colour. Its origin is unknown, but it may be a hybrid between White Willow and Crack Willow (*Salix fragilis*).

- The Weeping Willow (*Salix × sepulcralis* 'Chrysocoma', syn. *Salix* 'Tristis') is a hybrid between White Willow and Peking Willow (*Salix babylonica*, syn. *Salix matsudana*).
- The Golden Willow (*Salix alba* 'Vitellina') is a cultivar grown in gardens for its shoots, which are golden yellow for 1-2 years before turning brown. It is particularly decorative in winter; the best effect is achieved by coppicing it every 2-3 years to stimulate the production of longer young shoots with better colour. Two other similar cultivars, 'Britzensis' and 'Cardinal', have orange-red shoots.
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White Willows are fast-growing, but short-lived, being susceptible to several diseases, including watermark disease caused by the bacterium *Erwinia salicis* (named because of the characteristic 'watermark' staining in the wood) and willow anthracnose, caused by the fungus *Marssonina salicicola*. These diseases can be a serious problem on trees grown for timber or ornament.

Medicinal Uses

Hippocrates, a Greek physician for whom the Hippocratic Oath is named, wrote in the 5th century BC about a bitter powder extracted from willow bark that could ease aches and pains and reduce fevers. This remedy is also mentioned in texts from ancient Sumeria, Egypt and Assyria. Native American Indians used it for headaches, fever, sore muscles, rheumatism, and chills.[citation needed] The Reverend Edward Stone, a vicar from Chipping Norton in Oxfordshire England, noted in 1763 that the bark of the willow was effective in reducing a fever.

The active extract of the bark, called salicin, after the Latin name for the White willow (Salix alba), was isolated to its crystaline form in 1828 by Henri Leroux, a French pharmacist, and Raffaele Piria, an Italian chemist, who then succeeded in separating out the acid in its pure state. Salicin is highly acidic when in a saturated solution with water (pH = 2.4), and is called salicylic acid for that reason. This is the precursor to modern aspirin (acetylsalicylic acid).

Coltellaccio maggiore
SPARGANIUM ERECTUM

Sparganium (Bur-reed) is a genus of flowering plants, containing about 20 species in temperate regions of both the Northern and Southern Hemispheres. It is the only genus in the family Sparganiaceae. The plants are perennial marsh plants that can grow to anything between 0.2-3.5 m (depending on the species), with epicene flowers.
Sparganiaceae is closely related to Typhaceae and some classification include *Sparganium* in that family.

Brasca increspata
POTAMOGETON CRISPUS

Potamogeton, commonly pondweed, is a genus of aquatic, mostly freshwater, plants of the family Potamogetonaceae. Plants are mostly perennial and typically produce rhizomes which are the common over-wintering form. Many species also produced specialised overwintering buds called Turions which may be borne on the rhizome, on the stem or on stolons from the rhizome. The leaves are usually opposite escept in the flowering region of the stem. This contrasts with the closely related genus *Groenlandia* where the leaves are opposite or whorled.

In many species all the leaves are submerged and in these cases the leaves are typically thin and translucent. Some species, especially in ponds and very slow moving waters, have floating leaves which tend to be more leathery.

Diagnostic of most species of *Potamogeton* is the presence of a delicate membranous sheathing scale at the leaf axil. This may be wholly attached, partly attached or free of the leaf and it may have inrolled margins or appear as a tube. The flowers, which are often overlooked are composed of 4 rounded segments borne in a spike.

Potamogeton species are found throughout the world where there is standing or running water. There are estimated to be around 90 species but hybridisation provides an added complexity to the taxonomy

Not all plants called pondweed are in the genus *Potamogeton*. "Canadian pondweed", *Elodea canadensis*, which shares some characteristics, is , for example not a *Potamogeton*.