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Back to main [Search Page](#)

Database Name:

Polygonum aviculare - L.

Keyword:

Knotweed

[Search Page](#)
[Index of Latin Names](#)
[Index of Common Name](#)
[Families](#)
[US Database](#)
[Download](#)

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[Edible Uses](#)
[Medicinal Uses](#)
[Other Uses](#)
[Top 20 Plants](#)

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[Woodland Gardening](#)
[Vegan Organics](#)
[Perennial Plants](#)
[Habitat](#)

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[New Links](#)
[Old Links Page](#)
[Plant Suppliers Databases](#)
[News Groups and mailing lists](#)
[UK Organizations](#)

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[The Book](#)
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[Cornwall Site](#)
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Author L.

Botanical references 17

Family [Polygonaceae](#)

Genus

[Polygonum](#)Synonyms *Polygonum heterophyllum* - Lindm.
Polygonum littorale - Auct. pro parte

Known Hazards



Although no specific mention has been made for this species, there have been reports that some members of this genus can cause photosensitivity in susceptible people. Many species also contain oxalic acid (the distinctive lemony flavour of sorrel) - whilst not toxic this substance can bind up other minerals making them unavailable to the body and leading to mineral deficiency. Having said that, a number of common foods such as sorrel and rhubarb contain oxalic acid and the leaves of most members of this genus are nutritious and beneficial to eat in moderate quantities. Cooking the leaves will reduce their content of oxalic acid. People with a tendency to rheumatism, arthritis, gout, kidney stones or hyperacidity should take especial caution if including this plant in their diet since it can aggravate their condition[238].

Range Throughout Europe, including Britain, to Temperate Asia.

Habitat Waste places, roadsides, railway embankments and the coast[9]. A common garden weed[1].

Edibility  2 (1-5)

Medicinal Rating



3 (1-5)

Physical Characteristics



Annual growing to 0.3m.

It is hardy to zone 5. It is in flower from June to October, and the seeds ripen from August to October. The flowers are hermaphrodite (have both male and female organs) and are pollinated by Insects. The plant is self-fertile. It is noted for attracting wildlife.

The plant prefers light (sandy), medium (loamy) and heavy (clay) soils. The plant prefers acid, neutral and basic (alkaline) soils and can grow in very acid soil. It can grow in semi-shade (light woodland) or no shade. It requires moist soil. The plant can tolerate maritime exposure.

Habitats

Edible Uses

Edible Parts: [Leaves](#); [Seed](#).Edible Uses: [Tea](#).

Young leaves and plants - raw or cooked[105, 177]. Used as a potherb[183], they are very rich in zinc[179]. A nutritional analysis is available[218]. Seed - raw or cooked. Rather small and fiddly to utilize, they can be used in all the ways that buckwheat (*Fagopyrum esculentum*) is used, either whole or dried and ground into a powder for use in pancakes, biscuits and piñole[4, 55, 106, 161, 183]. The leaves are a tea substitute[183].

Composition

Figures in grams (g) or milligrams (mg) per 100g of food.

Leaves (Fresh weight)

- 0 Calories per 100g
- Water: 81.6%
- Protein: 1.9g; Fat: 0.3g; Carbohydrate: 10.2g; Fibre: 3.5g; Ash: 3.5g;
- Minerals - Calcium: 0mg; Phosphorus: 0mg; Iron: 0mg; Magnesium: 0mg; Sodium: 0mg; Potassium: 0mg; Zinc: 0mg;
- Vitamins - A: 0mg; Thiamine (B1): 0mg; Riboflavin (B2): 0mg; Niacin: 0mg; B6: 0mg; C: 0mg;
- Reference: [218]
- Notes:

Medicinal Uses

[Anthelmintic](#); [Antiphlogistic](#); [Astringent](#); [Cardiotonic](#); [Cholagogue](#); [Diuretic](#); [Emetic](#); [Emollient](#); [Expectorant](#); [Febrifuge](#); [Haemostatic](#); [Lithontripic](#); [Purgative](#); [Vasoconstrictor](#); [Vulnerary](#).

Knotweed is a safe and effective astringent and diuretic herb that is used mainly in the treatment of complaints such as dysentery and haemorrhoids. It is also taken in the treatment of pulmonary complaints because the silicic acid it contains strengthens connective tissue in the lungs[254]. The whole plant is anthelmintic, astringent, cardiotonic, cholagogue, diuretic, febrifuge, haemostatic, lithontripic and vulnerary[4, 7, 9, 21, 53, 147, 172, 176, 178]. It was formerly widely used as an astringent both internally and externally in the treatment of wounds, bleeding, piles and diarrhoea[4]. Its diuretic properties make it useful in removing stones[4]. An alcohol-based preparation has been used with success to treat varicose veins of recent origin[7]. The plant is harvested in the summer and early autumn and is dried for later use[9]. The leaves are anthelmintic, diuretic and emollient[218]. The whole plant is anthelmintic, antiphlogistic and diuretic[218]. The juice of the plant is weakly diuretic, expectorant and vasoconstrictor[218]. Applied externally, it is an excellent remedy to stay bleeding of the nose and to treat sores[4]. The seeds are emetic and purgative[4, 240].

Online Gardening Courses

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hosts.cce.cornell.edu

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Recent research has shown that the plant is a useful medicine for bacterial dysentery. Of 108 people with this disease, 104 recovered within 5 days when treated internally with a paste of knotweed[254].

Other Uses

Dye.

Yields a blue dye that is not much inferior to indigo[115]. The part used is not specified, but it is likely to be the leaves. Yellow and green dyes are obtained from the whole plant[168]. The roots contain tannins, but the quantity was not given[223].

Cultivation details

Succeeds in an ordinary garden soil[1] but prefers a moisture retentive not too fertile soil in sun or part shade[200]. Repays generous treatment, in good soils the plant will cover an area up to a metre in diameter[1, 4]. Prefers an acid soil[20]. Dislikes shade. Knotweed is a common and invasive weed of cultivated ground[7]. It is an important food plant for the caterpillars of many species of butterflies[30]. It also produces an abundance of seeds and these are a favourite food for many species of birds[4]. Plants seem to be immune to the predations of rabbits[233]. The flowers have little or no scent or honey and are rarely visited by pollinating insects. Self-fertilization is the usual method of reproduction, though cross-fertilization by insects does sometimes occur[4]. The plant also produces cleistogamous flowers - these never open and therefore are always self-fertilized[4]. The plant is very variable and is seen by most botanists as an aggregate species of 4 very variable species, viz. - *P. aviculare*. L.; *P. boreale*. (Lange.)Small.; *P. rurivacum*. Jord. ex Box.; and *P. arenastrum*. Box[17].

Propagation

Seed - sow spring in a cold frame. Germination is usually free and easy. When they are large enough to handle, prick the seedlings out into individual pots and plant them out in the summer if they have reached sufficient size. If not, overwinter them in a cold frame and plant them out the following spring after the last expected frosts. Division in spring or autumn. Very easy, larger divisions can be planted out direct into their permanent positions. We have found that it is better to pot up the smaller divisions and grow them on in light shade in a cold frame until they are well established before planting them out in late spring or early summer.

Links

References

- [1] **F. Chittendon.** *RHS Dictionary of Plants plus Supplement.* 1956 Oxford University Press 1951
Comprehensive listing of species and how to grow them. Somewhat outdated, it has been replaced in 1992 by a new dictionary (see [200]).
- [4] **Grieve.** *A Modern Herbal.* Penguin 1984 ISBN 0-14-046-440-9
Not so modern (1930's?) but lots of information, mainly temperate plants.
- [7] **Chiej. R.** *Encyclopaedia of Medicinal Plants.* MacDonald 1984 ISBN 0-356-10541-5
Covers plants growing in Europe. Also gives other interesting information on the plants. Good photographs.
- [9] **Lauert. E.** *Edible and Medicinal Plants.* Hamlyn 1981 ISBN 0-600-37216-2
Covers plants in Europe. a drawing of each plant, quite a bit of interesting information.
- [17] **Clapham, Tootin and Warburg.** *Flora of the British Isles.* Cambridge University Press 1962
A very comprehensive flora, the standard reference book but it has no pictures.
- [20] **Riotte. L.** *Companion Planting for Successful Gardening.* Garden Way, Vermont, USA. 1978 ISBN 0-88266-064-0
Fairly good.
- [21] **Lust. J.** *The Herb Book.* Bantam books 1983 ISBN 0-553-23827-2
Lots of information tightly crammed into a fairly small book.
- [30] **Carter D.** *Butterflies and Moths in Britain and Europe.* Pan 1982 ISBN 0-330-26642-x
An excellent book on Lepidoptera, it also lists their favourite food plants.
- [53] **De. Bray. L.** *The Wild Garden.* 0
Interesting reading.
- [55] **Harris. B. C.** *Eat the Weeds.* Pivot Health 1973
Interesting reading.
- [105] **Tanaka. T.** *Tanaka's Cyclopaedia of Edible Plants of the World.* Keigaku Publishing 1976
The most comprehensive guide to edible plants I've come across. Only the briefest entry for each species, though, and some of the entries are more than a little dubious. Not for the casual reader.
- [106] **Coon. N.** *The Dictionary of Useful Plants.* Rodale Press 1975 ISBN 0-87857-090-x
Interesting reading but short on detail.
- [115] **Johnson. C. P.** *The Useful Plants of Great Britain.* 0
Written about a hundred years ago, but still a very good guide to the useful plants of Britain.
- [147] ? *A Barefoot Doctors Manual.* Running Press 0 ISBN 0-914294-92-X
A very readable herbal from China, combining some modern methods with traditional chinese methods.
- [161] **Yanovsky. E.** *Food Plants of the N. American Indians.* Publication no. 237. U.S. Depf of Agriculture. 0
A comprehensive but very terse guide. Not for the casual reader.
- [168] **Grae. I.** *Nature's Colors - Dyes from Plants.* MacMillan Publishing Co. New York. 1974 ISBN 0-02-544950-8
A very good and readable book on dyeing.
- [172] **Schofield. J. J.** *Discovering Wild Plants - Alaska, W. Canada and the Northwest.* 0
A nice guide to some useful plants in that area.
- [176] **Yeung. Him-Che.** *Handbook of Chinese Herbs and Formulas.* Institute of Chinese Medicine, Los Angeles 1985
An excellent Chinese herbal giving information on over 500 species. Rather technical and probably best suited to the more accomplished user of herbs.
- [177] **Kunkel. G.** *Plants for Human Consumption.* Koeltz Scientific Books 1984 ISBN 3874292169
An excellent book for the dedicated. A comprehensive listing of latin names with a brief list of edible parts.

[178] **Stuart. Rev. G. A.** *Chinese Materia Medica*. Taipei. Southern Materials Centre 0
A translation of an ancient Chinese herbal. Fascinating.

[179] **Reid. B. E.** *Famine Foods of the Chiu-Huang Pen-ts'ao*. Taipei. Southern Materials Centre 1977
A translation of an ancient Chinese book on edible wild foods. Fascinating.

[183] **Facciola. S.** *Cornucopia - A Source Book of Edible Plants*. Kampong Publications 1990 ISBN
0-9628087-0-9

Excellent. Contains a very wide range of conventional and unconventional food plants (including tropical) and where they can be obtained (mainly N. American nurseries but also research institutes and a lot of other nurseries from around the world).

[200] **Huxley. A.** *The New RHS Dictionary of Gardening*. 1992. MacMillan Press 1992 ISBN 0-333-47494-5
Excellent and very comprehensive, though it contains a number of silly mistakes. Readable yet also very detailed.

[218] **Duke. J. A. and Ayensu. E. S.** *Medicinal Plants of China* Reference Publications, Inc. 1985 ISBN
0-917256-20-4

Details of over 1,200 medicinal plants of China and brief details of their uses. Often includes an analysis, or at least a list of constituents. Heavy going if you are not into the subject.

[223] **Rottsieper. E.H.W.** *Vegetable Tannins* The Forestal Land, Timber and Railways Co. Ltd. 1946
A fairly detailed treatise on the major sources of vegetable tannins.

[233] **Thomas. G. S.** *Perennial Garden Plants* J. M. Dent & Sons, London. 1990 ISBN 0 460 86048 8
A concise guide to a wide range of perennials. Lots of cultivation guides, very little on plant uses.

[238] **Bown. D.** *Encyclopaedia of Herbs and their Uses*. Dorling Kindersley, London. 1995 ISBN
0-7513-020-31

A very well presented and informative book on herbs from around the globe. Plenty in it for both the casual reader and the serious student. Just one main quibble is the silly way of having two separate entries for each plant.

[240] **Chopra. R. N., Nayar. S. L. and Chopra. I. C.** *Glossary of Indian Medicinal Plants (Including the Supplement)*. Council of Scientific and Industrial Research, New Delhi. 1986

Very terse details of medicinal uses of plants with a wide range of references and details of research into the plants chemistry. Not for the casual reader.

[254] **Chevallier. A.** *The Encyclopedia of Medicinal Plants* Dorling Kindersley. London 1996 ISBN
9-780751-303148

An excellent guide to over 500 of the more well known medicinal herbs from around the world.

Readers Comments

Polygonum aviculare

J V Cooper Fri Jul 21 2006

I have read all this information and still have no idea what the plant looks like. A picture would be very good.

Polygonum aviculare

Ginger good Tue Aug 1 2006

Where can I purchase a small amount of Polygonum aviculare to use in a tea?

Polygonum aviculare

Jean-Pierre Fri Dec 29 2006

Very good information. Is it possible to add on your site where we could buy seeds or even the plant for medicinal purpose? Many thanks.

Add a comment/link:

Enter your comment about this page here.

Note: please don't expect a quick reply to comments/questions posted here? We don't have the resources to answer questions ourselves. You can ask questions on our [mailing list](#).

Subject: Polygonum aviculare

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