

***Plantago afra* L.**
Plantaginaceae



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■ Morphological Description

Annual herb, erect stem, simple or thyrsoid-branched. Leaves grow opposite, linear-lanceolate, entire or with a few teeth, narrowed at both ends, glabrescent. Inflorescence arises from upper axils, scapes 1-5 cm long; spikes are ovate-spherical, glandular hairy. Bracts are ovate-lanceolate to lanceolate, acute or acuminate with wide scarious margin below. Sepals, hairy and glandular, are equal, oblanceolate. Corolla is cream to yellow, lobes narrow ovate, acute. Seeds are narrow-elliptic, reddish-brown, shining.

■ Geographical Distribution

Local: It is rare in the Mediterranean, Arabian Desert, Red Sea, Gebal Elba and Sinai regions.

Regional: North Africa.

Global: Western Asia, Southern Europe, France, Spain and Cuba.

■ Ecology

The plant is rare and grows in particularly sandy habitats.

Plantago afra L., sp. Pl., ed. 2, 168 (1762).
Plantago psyllium L., sp. Pl., ed. 2, 167 (1762),
Non L., sp. Pl., 1, 115 (1753)
Plantago parviflora Desf., Fl. Atlant. 1: 141 (1798).

Names

Arabic: Qatoona قطونة ,
Hashishet el-brageeth حشيشة البراغيت ,
Asludj عسلوج , Merwash مرواش ,
Harmola حرمولة , Umm rwis أم رويس .

English: Flea wort.

French: Herbe aux puces, Puciere, Psyllium.

■ Status

This rare plant is considered endangered, and in need of conservation ex situ, as a result of the threatening of its habitats. It is cultivated and sometimes becomes a weed in fields of cumin in Upper Egypt. It is known by farmers as kammoun dakar (dakara being the Arabic word denoting male).

■ Part(s) Used

Ripe seeds

■ Collection

The plants are cut during the growing season and used fresh, as juice or dried for decoctions. Leaves are cut before flowering and dried.

■ Preparations

Decoction, infusion, liquid extract, tincture, powder.

■ Uses

Oral external.

■ Constituents

Mucilages (only in the epidermis of the seed coat) mainly arabinoxylans.

■ Pharmacological Action and Toxicity

Emolient; in chronic constipation; demulcent and decrease serum cholesterol, LDL cholesterol, and LDL:HDL ratios, and triglycerides, by binding bile

acids, hence increasing faecal excretion while increasing bile salt synthesis from cholesterol. Psyllium seed has laxative properties due to the swelling of its husk in water to form a gelatinous mass, thus keeping the faeces hydrated and soft. The resulting bulk promotes peristalsis and laxation. Adequate fluid should be taken with the seed to ensure that it swells effectively in the stomach. Psyllium husk strongly reduced the colon tumors in rats. An uncontrolled study reported that the use of the fresh leaves prevented itching and the spread of dermatitis in poison ivy-induced dermatitis. Also, it is commonly taken to reduce autotoxicity.

Modern studies on humans have investigated psyllium for treating irritable bowel syndrome and chronic constipation.

Plantago afra is used to treat sluggish or irritable bowels. Its non-irritant nature means that it is safe to use in such conditions as Crohn's disease. It may be applied topically for infections and furunculosis. A preparation of psyllium is also used to assist the production of smooth, solid faecal mass after a colostomy. Ground seeds or husk are used in various dietary supplement formulations for increased fibre, cholesterol reduction and laxative activity e.g., weight loss products.

■ Pharmacopoeias

Egyptian Pharmacopoeia (1984)

Indian Pharmacopoeia (1985)

British Pharmacopoeia (1993)

US Pharmacopoeia (1995)

■ Pharmaceutical Products

Metamucil (Searle)

■ Traditional Medicine and Indigenous Knowledge

History: Decoction of seeds with water overnight is used as a cure for dysentery, gastroduodenal ulcers, diarrhoea, chronic constipation, (especially when the condition is resulting from an over-relaxed bowel), internal haemorrhoids; it is also used as an emollient, and demulcent.

Seeds are crushed and applied in a poultice for furunculosis.

An infusion of the seeds is given for urethritis. Psyllium husks are soaked in an infusion of calendula making an effective poultice for external use,

drawing out infections for boils, abscesses, and whitlows.

In China, both the seeds and whole herbs of related plantago species are used as a diuretic and to treat diarrhoea, gonorrhoea, urethritis, hemorrhoids, and kidney and bladder problems. Seeds are used to treat hematuria (bloody urine), coughing, high blood pressure (with ca. 50% success in clinical trials) and are often specially treated by frying with saltwater before drying.

The husk mucilage is used as a thickener or stabilizer in certain frozen dairy desserts.

■ Traditional Medicinal Uses

- Blood disorders (high cholesterol, diabetes and high blood pressure).
- Cancer (colon).
- Cough (symptom).
- Crohn's disease.
- Gastro intestinal tract disorders (gastro-duodenal ulcers, dysentery ulcerative colitis, to maintain remission, juvenile ulcerative colitis, constipation, diarrhoea, irritable bowel syndrome).
- Oesophageal varices (internal haemorrhoids).
- Skin disease (furunculosis).
- Urinary tract disorders (kidney, bladder, urethra, hematuria [bloody urine]).
- Venereal disease (gonorrhoea).
- Weight loss and obesity.

Other uses of the plant (Ethnobotany): Fresh leaves are applied topically for poison ivy, insect bites and stings.

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