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PUNICACEAE

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PUNICACEAE

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Shrubs or small trees, sometimes spiny; branches terete; young twigs usually 4-winged. Leaves opposite or subopposite, simple, entire, exstipulate. Flowers large, showy, solitary or fascicled, axillary, regular, perigynous with a well developed, thick-walled hypanthium, hermaphrodite. Sepals 5-8, thick and fleshy, segmented at the top, valvate, persistent. Petals 5-8, free, imbricate, usually bright scarlet red. Stamens numerous with slender filaments and versatile introrse anthers, persistent. Gynoecium adnate to the receptacle, polycarpellary, syncarpous, multilocular, loculi superposed, ovules numerous, anatropous; placentation axile in the lower ones and parietal in the upper loculi; style long, basally thickened; stigma capitate. Fruit berry-like about the size of an apple, with numerous large, angular seeds, embedded in a juicy pulp. The hypanthium and the calyx-segments persist in the fruit as a thick, fleshy, star-shaped crown.

A unigeneric family, sometimes included in **Lythraceae** from which it differs in its ebracteate flowers and multilocular ovary with superposed loculi.

PUNICA

L., Sp. Pl. 472. 1753; Gen. Pl. ed. 5: 212. 1754.

Characters same as that of the family.

A genus with 2 species, one of these (**P. *protopunica*** Balf. f.) is endemic to Socotra and the other is widely distributed in S. Europe, Mediterranean region, eastwards to the Himalayas; is also represented here in cultivation.

1. **Punica granatum** L., Sp. Pl. 472. 1753; Durand & Barratte, Fl. Lib. Prodr. 97. 1910; Pamp., Pl. Trip. 159. 1914; Keith, Prelim. Check List Lib. Fl. 810. 1965. (Fig. 1)

PUNICACEAE

A shrub or small tree, 1.5-5 m tall; glabrous, with opposite cylindrical branches and tapering, 4-angled, spinescent branchlets. Leaves opposite or alternate-fascicled, glabrous, glossy, 1-8 x 0.6-1.7 cm, oblong, oblong-lanceolate or lanceolate, elliptic to obovate, subsessile, subobtusate to obtuse, sometimes cuspidate, coriaceous, entire and deciduous. Flowers scarlet red or white or both, large and showy, 3-5 x 2-4.5 cm in diam. Calyx 1-2 (3.5) cm long, reddish, coriaceous, thickish, broadly segmented, segments 5-8 mm long. Petals and stamens inserted at the throat of the calyx. Petals 3.5-5 x 1.5-2 cm, broadly obovate, wrinkled, bright red, imbricate, alternating with the sepals. Stamens numerous, multiseriate, filaments 6-8 mm long, persistent. Ovary subglobose, multilocular, loculi superposed, the lower ones with axile, the upper ones with parietal-placentation, and numerous anatropous ovules. Style thick c. 1 cm long, reddish; stigma simple, slightly bilobed. Fruit globose berry-like, 2-8 (10) cm in diam., pale-bright red or brownish, partitioned by thin leathery yellow septa, the rind coriaceous. Seeds red or pink, 8-10 (14) x 5-8 mm, angular, testa thick, fleshy, juicy, sweet or sour, depending on the sugar and citric acid contents. The fruit sometimes persistent on branches dehiscing and exposing succulent seeds, through longitudinal fissures.

Type: Described from Europe, Herb. Linn. 638.1, 638.2 (LINN).

A-3 Tripoli, El-Maghoubia, flower red, 25.5.1978, *El-Hadi M. El-Meghrabi* 49 (ULT); **A-7** 13 km from Ras El-Hilal towards Gubba, 15.4.1979, *Hania A. El-Zeletni* 88 (ULT); **A-8** Wadi Derna, small tree, flower red, cultivated, 15.4.1979, *Nagat El Gariani* 88 (ULT).

Distribution: Mediterranean countries of N. Africa, Balkan, Asia Minor, Armenia-Kurdistan, Iran, Afghanistan, Pakistan & India (Himalayas), Japan, China, S. Africa & S. America.

An ornamental fruit bearing plant. Pomegranate juice is rich in vitamin C and is suitable for making syrup and wines. The coriaceous rind contains a high percentage of tannin. The dried flowers, fruit rinds and the roots are used for dyeing woolen and silken clothes, as well as for tanning leather.

Fl. Apr.-July *Fr.* End of Sept. *Vern.* Rumman

P. granatum L. var. **florepleno** Balf. f. with double red flowers is widely cultivated in Sidi Mesri, Tripoli and probably throughout Libya.

PUNICACEAE



Fig. 1 ***Punica granatum***: A, flowering branch x 0.5; B, v. s. flower x 0.5; C, fruit x 0.5; D, v. s. fruit x 0.5

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