



ḲORFA

ḲORFA (*Portulaca oleracea* L.), English “common purslane,” of the *Portulacaceae* family (purslane family), a pharmaceutical plant ([PLATE I](#)). The genus name is *Portulaca*, from *portula*, diminutive of L. *porta* ‘little gate’, referring to the small opening of the fruit, or from *porto* ‘to carry’ and *lac* ‘milk’, ‘milk-carrier’ (Gledhill, p. 31). The species name *oleracea*, also from the Latin, means “pot herb.”



PLATE I. Common purslane (korfā). Photograph from North Carolina State University (plants.ces.ncsu.edu/plants/portulaca-oleracea/). Licensed under CC BY-NC 2.0.

Purslane has an extensive distribution worldwide and is regarded as a common weed affecting field crops in many countries (Holm et al; Miyanishi and Cavers). Abu Rayḥān Biruni (q.v.; d. ca. 422/1050) in the *Ṣaydana* (tr. Kāsāni, pp. 137, 781) refers to two types of *korfā*, wild and cultivated. He also mentions the Arabic name, *al-baq̄la al-ḥamqā'*, and its medicinal properties. Today, purslane is sold at local markets in Iran and other Middle Eastern countries and under the name *verdolaga* in Mexico and South America.

This annual plant has a thick taproot; smooth, reddish, prostrate stems; and succulent, toothless, spatulate to obovate leaves clustered at the stem ends. The prostrate growth of purslane, in contrast to the erect growth of cypress, is a metaphor for an incompetent person versus a capable person in a verse by Ebn Yamin (q.v.; d. 769/1368): *bar kanda-and sarv-e sahi-r ā z juybār / bar jāy-e sarv baqla ḥamqā nešānda-and* 'They have uprooted the tall cypress from the riverbank; they have planted purslane in place of the

cypress' (p. 367, l. 7615). Purslane has the ability to reproduce vegetatively by developing adventitious roots from the cut end of the stem (Proctor, p. 4). Small yellow-petaled flowers occur singly or in terminal clusters. Each flower turns into a spherical seedpod that opens with a circular lid to release numerous tiny black seeds (Miyanishi and Cavers; [PLATE II](#)).

The entire purslane plant, including leaves, stem, flowers, and seeds, is edible as a leaf vegetable. It has a sour and salty taste, and a bite into its smooth, fat leaves gives a burst of tangy, sour juice, and thus makes an interesting addition to the palate. The plant juice is cooling and refreshing and causes polyuria. In southern Iran, purslane seed is used for decorating pastries.

In contrast to about 97 percent of all plants species that perform the C₃ carbon fixation photosynthetic process, purslane is among the remaining 3 percent that perform the C₄ metabolism. Such C₄ plants, under droughty conditions, switch to a third process known as the CAM pathway. Through this pathway, malic acid is synthesized and stored in leaves during the night and converted into glucose during the day. This explains why the purslane leaves harvested in the early morning contain several times more malic acid and are thus significantly more sour and tangier than the sweetish tasting leaves harvested in late afternoon (Proctor, pp. 56-59).

Purslane contains more omega-3 fatty acids, alpha-linolenic acid in particular, than any other leafy vegetable, a characteristic that makes it highly desirable for nutrition (Simopoulos et al., 1992). It is rich in the antioxidants alpha-tocopherol and beta-carotene, and it is a good source of dietary minerals such as magnesium, calcium, potassium and iron (Simopoulos et al., 2005). The nutritional value and beneficial properties of purslane make it a prospective source of nutrition (Hosayni et al.). Some people have listed purslane as one of the world economic plants and named it "Global Panacea" (Sultana and Rahman). With this rediscovery of its properties, purslane is now sold extensively at local markets in Iran and other Middle Eastern countries.

The medicinal properties of *k orfa* have been mentioned in Persian poetry: *kasi rā ku to bini dard sorfa / befarmāyaš to āb-e duḡ o korfa* 'When you see someone coughing / offer him diluted yogurt and *k orfa*' (Ṭayyān Margāzi [early 11th century CE] in Modabberi, ed., p. 319). *Korfa* is also called *parpahan* in Persian, often in poetry. The white mucilage from the black *parpahan* seed is a metaphor for rain drops and tears, respectively, in



the two following verses: *ze miḡhā ke sia h-tar ze toḡm-e parpahanand / čo toḡm-e parpahan ārad borun sepid la'āb* 'From clouds darker than parpahan seed / a white mucilage comes out as if from parpahan seed' (Kāqāni, in Sajjādi, p. 216), and *la'āb-e parpahan yārab čerā az čašm-e man kizad / gar ān kāl-e siah nesbat be toḡm-e parpahan dārad* 'If that black mole has a kinship with the parpahan seed / then why do my tears look like parpahan mucilage?' (Qā'āni, p. 144). In another verse, Qā'āni (p. 488) refers to the tiny seed of purslane: *ākar na in ze toḡma-ye šāhi ke Buqobays / gardad ze zaḡm-e gorzaš čon toḡm-e parpahan* 'This is the sign of a king's lineage that the rocky mountain [Abu Qobays] / is smashed into parpahan seeds by its mace.'

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