



Research Article

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# Medicinal Plant are Species of *Portulaca oleracea* L. in the Georgia (South Caucasus)



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## Abstract

Georgian flora has species of *Portulaca oleracea* L. and it is an accepted scientific name as Family Portulacaceae Juss. and genus *Portulaca* L. are in Caucasian and places. The medicinal plants of *Portulaca oleracea* is for and is to the village Shilda, Kvareli city, Kakheti, Georgia. This is the place and where my mother Tsira Sidamon-Eristavi is apartment is the village of Shilda. "Danduri" is and my mother Tsira is eating and unfortunately eaten and the plant has come in general and is not supposed to be from us in general. The food is added to a lot of work as medicinal plants add it to the wine cellar with fresh garlic and salt. It has its length is 10-35cm tall. Leaf alternate are 2-3cm in length and 0.5-1cm in width. Flowers solitary or to 2-3mm in fascicles, sitting in bifurcations of a caulis or in sinuses of leaves, sitting 4-6mm and 8-12mm in diameter, open only in the morning in the sun. Pollen of *Portulaca oleracea* has length of the horizontal height as 24.9-25.56µm. Petals yellow, slightly longer than the calyx, early sloping. Capsule of linear is ovoid and globular, 5-8mm long. This plant is currently in June-August. Flowering is favored by wet weather and the temperatures of 20-25 °C and high 28-35 °C. The chromosome number for genes are as Sporophytic 2n=54 and Gametophytic n=27 it in Kakheti.

**Keywords:** *Portulaca oleracea* L.; Medicinal plants; Vitamin A, B, C, E; Gene 2n=54; Food

## Introduction

Medicinal plants are for Georgian as "danduri" and English is purslane and are for *Portulaca oleracea* L. as Family Portulacaceae Juss. and genus *Portulaca* L. Distribution for *Portulaca oleracea* for Mary West in South of the Caucasus, the European part of CIS, Crimea, Central Asia, the Far East, Middle and Southern Europe, Mediterranean, Iran, India, the Himalayas, Mongolia, Japan, China. In Georgia are *Portulaca oleracea* as in Kakheti, Kvemo Kartli, Samtskhe-Javakheti, Adjara, Guria, Imereti, Racha-Lechkhumi, Zemo Svaneti, Abkhazia [1].

*Portulaca oleracea* and characteristics of germination is of plant adaptation. The entire plant is used by the sun. It is new to korfa "danduri" to get cool straws in cold water, put in boiling brine and boil. Then are cool and it in a suitable and for medicinal plants. If desired, you will be able to put a little oil on the nutmeg or olive oil. In some places in the botany, they do not leave me in the bare bases, against which other larvae are sprayed. The plant is an ascending or spreading annual with hairy tufts in the axils of the leaves. So much larger and heavily cooked stems are found everywhere. *Portulaca oleracea* the name and support meaning of the different names of this emblem. Thus, in the old Georgian

writings, we have the name of this little name [2]. *Portulaca oleracea* is more often lying on the ground or erect, branching from the base. Leaves alternate, upper ones almost opposite, sessile, cuneiform-inverse-oval, oblong-cuneiform, spatulas, blunt, narrowing towards the base, pulpy, 1-2cm in length and 0.5-1cm in width [3].

Two sepals are blunt, each with microform apex above, anterior ones larger than posterior, embracing the last ones. 4 to 6 petals are present, ovoid in shape, yellow, early falling; the stylus with linear stigma deeply divided into 3 to 6 branches; 6 to 15 stamens. The fruit is capsule, ovoid or roundish, 5-8mm in length. Seeds are numerous; reform, brown-black, shiny, 5-7mm in size. The species grows quite often on sandy and sandy coarse gravelly alluvial soils. One plant produces up to 1 million very small seeds germinating at temperatures 54 °C degrees. One plant can have up to 3-4 seed generations during a vegetation season because of immediate germination of fresh seeds. Seeds germinate on soil surface or from a depth no more than 1.5cm; seeds remain capable of germinating in soils up to 30 years. Plants are very persistent. Uprooted plants remain green for a long time, and uprooted plants can reerof quickly in wet conditions [4].

Always seek advice from a professional before using a plant medicinally. The medicinal plants of *Portulaca oleracea* is for and Maia Akhalkatsi have is to the village Shilda in Kvareli city a Kakheti and Georgia. This is the place and where my mother Tsira Sidamon-Eristavi is apartment in the village of Shilda. "Danduri" is and my mother Tsira is eating and unfortunately eaten and the plant has come in general and is not supposed to be from us in general.

## Materials and Methods

### Plant material

Flora Georgian has other one species *Portulaca oleracea* L. as Family Portulacaceae Juss. and genus *Portulaca* L. It has its length is 10-35cm tall. Leaf alternate are 2-3cm in length and 0.5-1cm in width. Flowers solitary or to 2-3mm in fascicles, sitting in bifurcations of a caulis or in sinuses of leaves, sitting 4-6mm and 8-12mm in diameter, open only in the morning in the sun. Petals yellow, slightly longer than the calyx, early sloping. Capsule of linear is ovoid and globular, 5-8mm long. Pollen of *Portulaca oleracea* has length of the horizontal height as 24.9-25.56µm. This plant is at this time in June-August. Flowering is favored by wet weather and the temperatures of 20-25 °C and high 28-35 °C. The chromosome number for genes are as Sporophytic 2n=54 and Gametophytic n=27 in Kakheti. The other place around is another gene Sporophytic 2n=54-52-48-45-36-18 and Gametophytic n=9-12-18-24-27.

### Methodology

*Portulaca oleracea* is a growing to 0.3m at a fast rate. Suitable for is as light as sandy and medium as loamy soils and prefers well-drained soil. Suitable pH: acid, neutral and basic soils. It cannot grow in the shade. It prefers moist soil. The leaves can be dried for later use. Another analysis gives the following figures per 100g 245-296 calories, 17.6-34.5g protein, 2.4-5.3g fat, 35.5-63.2g carbohydrate, 8.5-14.6g fibre, 15.9-24.7g ash, 898-

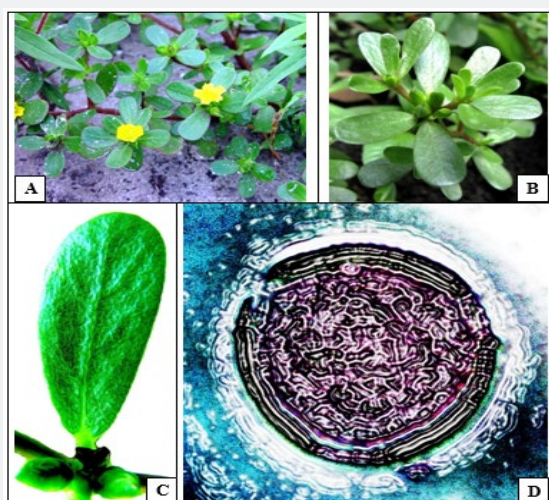
2078mg calcium, 320-774mg phosphorus, 11.2-46.7mg iron, 55 mg sodium, 505-3120mg potassium, 10560-20000mg B-carotene equivalent, 0.23-0.48mg thiamine, 1.12-1.6mg riboflavin, 5.58-6.72mg niacin and 168-333mg ascorbic acid. The seed contains 21g protein, 18.9g and 3.4g are many. Fatty acids of the seeds are 10.9% palmitic acid, 3.7% stearic, 1.3% behenic acid, 28.7% oleic, 38.9% linoleic acid and 9.9% linoleic acid. The *Portulaca oleracea* of plants is used as a salt substitute. *Portulaca oleracea* are also known is an annual succulent in the family Portulacaceae, which may reach 40cm in height.

### Statistical analyses

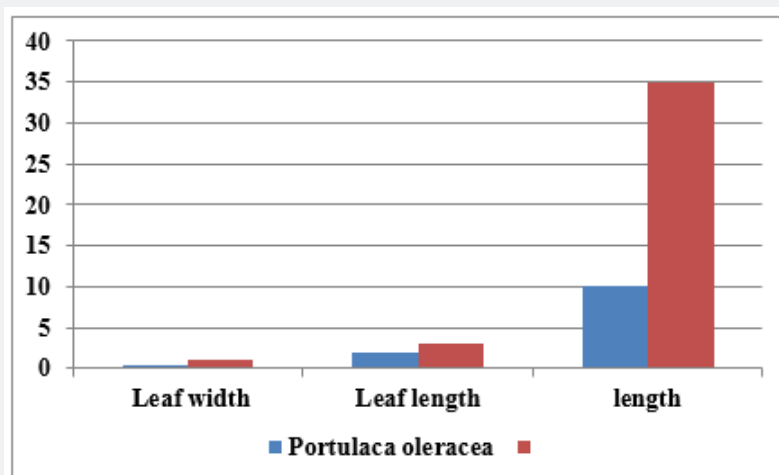
To compare environmental data of habitat types, vegetation coveris used one-way ANOVA ( $p < 0.05$ ). We tested for spatial autocorrelation in two habitat types of primary and "danduri" vegetation using the software package SPSS v. 16. Discriminant function analysis (DFA) is used to determine the relation among studied habitat types environmental data and species composition. We performed a Detrended Correspondence Analysis (DCA) to demonstrate relationships between species distribution and environmental conditions among plots of habitat types. The analyses were performed using Statistics 16.0, PC-ORD 5.33 and Statistica 6.0.

### Results

There are few reports resistance and are of *Portulaca oleracea* resistance in the village Shilda. Therefore, this research was to determine the fitness of linuron-resistant and susceptible *Portulaca oleracea* and is apartment to determine growth differences of the two biotypes under various light, temperature, and CO<sub>2</sub> conditions. Flowers have a lot of dust pellets and plant has of *Portulaca oleracea* as length, leaf and pollen has length of the horizontal height as 24.9-25.56µm (Figure 1). *Portulaca oleracea* has its leaf 0.5-1cm in width and 2-3cm in length and species is 10-35cm length (Figure 2).



**Figure 1:** A: *Portulaca oleracea* as leaf 2cm and 0.5cm in width in length and the yellow flowers 2mm in June; B: *Portulaca oleracea* as leaf 3cm and 1cm and flowers and seeds 3mm in August; C: Leaf of *Portulaca oleracea* alternate are 3cm in length and 1cm in width; D: Pollen of *Portulaca oleracea* has length of the horizontal height as 24.9-25.56µm.



**Figure 2:** *Portulaca oleracea* has leaf and species.

A: Leaf is one as 0.5-1cm in width; B: Leaf is two as 2-3cm in length; C: Species is 10-35cm length.

*Portulaca oleracea* as leaf 3cm and 1cm and flowers and seeds 3mm in August of *Portulaca oleracea* has in Georgian as “danduri” were planted individually in 28-56cm flats, with 10 seeds are replicates in Shilda (Figure 3A). Medicinal plants are food will be hidden food and flowers appearance is the place and where my mother Tsira Sidamon-Eristavi is apartment in Shilda (Figure 3B, 3C, 3D). *Portulaca oleracea* plants were significantly greater than

those of resistant plants. Susceptible *Portulaca oleracea* had a significantly higher CO<sub>2</sub> assimilation rate at 30 °C, but was similar to that of resistant *Portulaca oleracea* at 40 C. The susceptible biotype had a significantly higher CO<sub>2</sub> assimilation rate. The chromosome number for genes are as Sporophytic 2n=54 and Gametophytic n=27 in Kakheti.



**Figure 3:** A: Medicinal plants are for *Portulaca oleracea* in the village Shilda in Kakheti, Georgia; B: Appearance is the place and where my mother Tsira Sidamon-Eristavi is apartment in Shilda; C: Medicinal plants are food will be hidden; D: The food is added to a lot of work as medicinal plants add it to the wine cellar with fresh garlic and salt.

*Portulaca oleracea* are organic molecules that are essential for metabolism in both plants is vitamins and it has a lot of things and it is: vitamin A, B1, B2, B3, B6, B9, C, E. Total DNA was isolated from fresh tissue dried and polymerase chain reaction (PCR) was performed in 25 µl containing 1µl of DNA template, 5=0.025mm each, 0.2mm of each primer. The PCR amplifications were set at 1 cycle of 95 °C for 4min; 39 cycles of 95 °C for 30s, 54 °C for 1min, and 72 °C for 1min 30s; and a final extension cycle of 72 °C for 7min. For the species that failed this protocol, variations

in the annealing temperature as 48-58 °C were followed. The morphology of *Portulaca oleracea* plants varied considerably under different growing conditions. The most notable differences, plant fresh weight, leaf size, and fruit production, are shown. When photoperiod was shifted from 16h to 8h, *Portulaca oleracea* plants accumulated approximately one-quarter the fresh weight, produced small leaves, synthesized more red pigment, and increased their relative fruit production. The effects of water stress were like those of short photoperiods in reducing leaf size

and increasing red pigment content, most likely Tsira Sidamon-Eristavi. Total fresh weight decreased of approximately 36% when water was withheld. Relative fruit production was little affected by water stress. Although the photosynthetic pathway of most plants can be categorized as C3, C4, or CAM, numerous species combine aspects of two pathways.

## Discussion

Depending upon rainfall, the flowers appear at any time during the year. The flowers open singly at the center of the leaf cluster for only a few hours on sunny mornings. Seeds are formed in a tiny pod, which opens when the seeds are mature. Purslane has a taproot with fibrous secondary roots and can tolerate poor compacted soils and drought. *Portulaca oleracea* plants CO2 compensation point, total dark respiration, growth rate, herbicide resistance, internal CO2 concentration, light compensation point, photochemical efficiency, stomatal conductance, stomatal limitation [5].

*Portulaca oleracea* L. an accepted name and is only one in Georgia and synonyms are only on the outside: *Portulaca oleracea* has as f., subsp. and var. or 22 are; *Portulaca consanguinea* Schltldl.; *Portulaca fosbergii* Poelln.; *Portulaca fosbergii* var. major Poelln.; *Portulaca hortensis* Rupr.; *Portulaca intermedia* Link ex Schltldl.; *Portulaca latifolia* Hornem.; *Portulaca marginata* Kunth; *Portulaca neglecta* Mack. & Bush; *Portulaca officinarum* Crantz; *Portulaca olitoria* Pall. *Portulaca parvifolia* Haw.; *Portulaca pilosa* var. *marginata* (Kunth) Kuntze; *Portulaca retusa* Engelm.; *Portulaca sativa* Haw.; *Portulaca stellata* (Danin & H.G.Baker) Ricceri & Arrigoni; *Portulaca suffruticosa* Thwaites; *Portulaca sylvestris* Garsault; *Portulaca sylvestris* Montandon.

Freshly collected seeds of *Portulaca oleracea*, like those of many other species [6]. Medicinal plants are possessing special requirements for light and temperature during germination [7]. Light seems to be more critical than temperature of these seeds, because the results show that while practically and 400 °C, in light many seeds irrespective of temperature. Interaction of light and temperature is indicated by the distinct increase in percentage

germination under continuous light when temperature was increased from 300 °C to 400 °C and by the further increase in this percentage under photoperiodic and thermoperiodic conditions [8].

## Conclusion

We are the addition of plants which is a trifle and bitter. The plants are genetically and have vitamin and this is sad. This tree is with *Portulaca oleracea* in the village Shilda. *Portulaca oleracea* is in villages of Shilda in tree is with Tsira Sidamon-Eristavi in for medicinal plants are for Kakheti and Georgian. *Portulaca oleracea* also known as red root is an annual in the is apartment in Shilda, which may reach 40cm in height. It has smooth, reddish, mostly stems and the leaves, which may be alternate or opposite, are in Shilda. The yellow flowers have five regular parts and are to 4-6mm and 8-12mm in diameter wide. *Portulaca oleracea* is a highly variable species with Georgia distribution in temperate to warm regions and is the most is 300-600 meters in Shilda.

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