

**Research Article** Volume 24 Issue 1 - April 2020 DOI: 10.19080/ARTOAJ.2020.24.556255



Agri Res & Tech: Open Access J Copyright © All rights are reserved by Maia Akhalkatsi

# Medicinal Remedies is Plant are Species of Staphylea pinnata L. and Family Staphyleaceae Lindl. in the Georgia (South Caucasus)



## Maia Akhalkatsi\*

Department of Plant Genetic Resources, Institute of Botany, Ilia State University, Georgia

Submission: March 03, 2020; Published: April 01, 2020

<sup>C</sup>Corresponding author: Maia Akhalkatsi, Head of Department of Plant Genetic Resources, Institute of Botany, Ilia State University, Faculty of Natural Sciences and Engineering K. Cholokashvili Georgia

#### Abstract

Medicinal plants of *Staphylea pinnata* L. Family Staphyleaceae Lindl. are in the genus *Staphylea* L. Species. *Staphylea pinnata* L. is an accepted name in Georgia and it is medicinal plants and it has vitamin A, B1, C, E. This plants it has gene 2n=26. Staphylea pinnata L. is an accepted name in Georgia and is are 1-Kakheti 320 m-618m. 2-Tbilisi 400m-769m. 3-Lower-Kartli Bakuriani 534m–862m and Borjomi 788m-977m. 4-Samtskhe-Javakheti Akhaltsikhe 932m-1058m. 5-Adjara 234m-519m. *Staphylea pinnata* L. is a deciduous shrub growing to 4.5m. Said to taste like pistachios, the seeds are eaten by children in village Shilda. Plants for a future can not take any responsibility for any adverse effects from the use of plants. Always seek advice from a Georgia before using a plant medicinally. It is a shrub or small tree, with 5 m tall green shoots. Leaves 5-7 elongate, toothed, 5.5-11cm long. Leaves of leaves blunt 7-10mm long, 2.5-3.5mm wide. The seeds are of great size, 1-1.2cm long and 1.1cm wide. Georgian flora has species of *Staphylea pinnata* L. and it is an accepted scientific name is for and the Kakheti and this is the village Shilda. This is the plants and where my mother Tsira Sidamon-Eristavi is apartment as medicinal plants is the village of Shilda. Habitats Rich moist thickets along streams and the borders of woods.

Keywords: Staphylea pinnata L; Medicinal plants; Vitamin A, B1, C, E; Gene 2n=26; Food

## Introduction

Medicinal plants are for Georgian as Family Staphyleaceae Lindl. are in the genus Staphylea L. Species. Staphylea pinnata L. is an accepted name in Georgia and is are 1-Kakheti, 2-Tbilisi, 3- Lower Kartli, 4-Samtskhe-Javakheti, 5-Adjara, [1]. Staphylea pinnata L. in the thick bushes, whose unopened flower buds, completely like the kaperknospen, are preserved and consumed with vinegar. Grows in forest belt Kakheti up to 300-700 m in elevated oaks and mixed oak forests. Creates a second tier on fertile soils. Occasionally found on rocky soil. Propagate by seed and by root extract Seeds in spring require stratification [2]. Staphylea colchica Steven leaf consists of 3 leaves. The gearboxes are wedge-shaped at the waist and the straps are folded aside. The seeds are small in size 6-8mm long. Shrub or small tree. Leaves alternate or opposite, stipulate, ternate, with 5-7 ovate to narrowly ovate glabrous leaflets. Staphylea colchica Steven is an Unresolved L. name in Georgia and are not medicinal plants is an unresolved name Georgia, 1-Abkhazia, 2-Svaneti, 3-Racha, 4-Samagreti, 5-Imereti, 6-Guria, 7-Adjara, [3,4]. Staphylea colchica Steven Georgia Gorga of Djonoula river. Kulbaki is Abkhazia, Svaneti and Racha 42º38'110 N-42º37'294 N are 950-2100m. Akhaltsikhe Meskheti 41º39'109 N-43º04'114 E are 1058m. Adjara and Guria west south Georgia 41°37'744 N-42°14'539 E are 519m. Family Staphyleaceae Lindl. are from Staphylea L. species traditional the anti-inflammatory activity of petrol ether extracts from leaves of Staphylea colchica Steven, Staphylea elegans Zab., Staphylea holocarpa Hemsl. and Staphylea pinnata L. medicine uses preparations from has been determined. The genus is represented by 11 species that are common in the temperate zone of South East Asia, North and Central America. The box is slightly or very rounded at the waist and the tips are close to the waist; Seeds large, 1.0-1.3 cm long. Grows in forest belt up to 1000m in elevated oaks and mixed oak forests. Creates a second tier on fertile soils. Occasionally found on rocky soil. Propagate by seed and by root extract Seeds in spring require stratification. Always seek advice from a professional before using a plant medicinally and in south of the Caucasus, east are southern the America, European, Crimea, Central Asia, Mediterranean, Iran, India, the Himalayas, Mongolia, Japan, China [5-7].

*Staphylea pinnata* L. always seek advice from a professional before using a the medicinal plants in for an Kakheti and Southi Georgia. The medicinal plants of *Staphylea pinnata* L. is for and Maia Akhalkatsi have is to the village Shilda in Kvareli city. Always seek advice from a professional before using a medicinally plant *Staphylea pinnata* L. are from is the fossil remains of seeds andpollen grains of genus for is always seek advice from a professional before using a plant medicinally from Tsira Sidamon-Eristavi is apartment in the village of Shilda. *Staphylea pinnata* L. the leaves consist of 5-7 leaves.

## **Materials and Methods**

#### **Plant material**

Staphylea pinnata L. is an accepted name. Vitamin A, B1, C, E; Gene 2n=26. W. 243-352n. A dictionary of medicinal plants is an adult, 2-to and 6-meter tall plant of the Jonjoli family. Staphylea pinnata L. is 4m tall shrub. Unlike the anthers of with 5 or rarely 7 leaves, it is like a marsh, mostly 7-10mm long, with a small foot. Galblykhia 9-12mm long. The fruit is 3-4cm long and the plant is thick. Leaflets 5-9cm long, 4-6mm wide, 3.5-4cm wide. Median Jonjoli with 1.5-2mm long petiolules. Capsules 28-55mm long, broadly obovoid, 2-3mm lobed. There are light mixed forests. Seeds 1-1.2cm long in each cell and 1.1cm wide, with flattened, glossy, brown or grayish-brown, yellowish-gray skin, 10-13mm long, 10-11mm wide, shiny, brown or grayish-brown. Leaves Odd, wingless, 5-7 leaves. The leaves are elongate elliptic, bare, striate, at the base of the lanceolate, in the rest of the trunk a serrated tooth, 5.5-11cm long, 2-7 in. It is a shrub or small tree, with 5 m tall yellowish branches and greenish shoots. Very scattered 3 + 5%. Shrubs up to 5m high or small trees, with glabrous green annotinous shoots and yellow-brown branches.

#### Methodology

Jonjoli - Staphylea L. in our forests two common Jonjoli are

found - *Staphylea pinnata* L. The former is found in the forests of the north Caucasus and Kartli in Kakheti, and the second is characteristic of Colchis. Leaves vary from one leaf to another. Colchic Jonjoli leaf consists of three leaves, ordinary Jonjoli is 5-7 leaves. Both are coriander-flower and young-flowered. Jonjolis share is a favorite and popular food. Scattered altitudes of lowland and flood plain forests are 320-1058m and eastern Kakheti and southern Georgia Tbilisi, Kartli, Javakheti, Akhaltsikhe and Adjara. People of the past collect wild flowers from forest materials, but once you get to know the lowlands and the lowlands can flood, they plunge into the jungle and offer rural charities.

#### Statistical analyses

Pear is *Staphylea pinnata* L. multi-flowersin petals and in flowers are of chloroplast DNA (cpDNA). Total DNAs of *Staphylea pinnata* L. species were extracted by the method with a slight modification. Total DNAs of *Staphylea pinnata* L. species were extracted according with a slight modification to reduce contamination by flowered. The structure of pear cpDNA was almost the same in terms of genome size and gene order as that of tobacco cpDNA. Correspondence Analysis (DCA) to demonstrate relationships between species distribution and environmental conditions among plots of habitat types. Vegetation coveris used one-way ANOVA (p<0.05).

## Results

Common name bladdernut and Family *Staphyleaceae* Lindl. are as *Staphylea pinnata* L. is a deciduous shrub growing to 4.5m end is hardiness 5-9m. Plants have dense underground root systems and are of some value in erosion control are known hazards none known. Said to taste like pistachios, the seeds are eaten by children in Georgian. *Staphylea pinnata* L. is an accepted name in Georgia (Table 1) and is are 1-Kakheti 320m-618m. 2-Tbilisi 400m-769m. 3-Lower-Kartli Bakuriani 534m–862m and Borjomi 788m-977m. 4-Samtskhe-Javakheti Akhaltsikhe 932m-1058m. 5-Adjara 234m-519m. Kakheti east village Shilda low flowering is plant and favored by wet weather and the temperatures of 25-30°C and high 33-35°C. The tins are april sunlight and gives 25-35m then supply the plant with stall and we will reach pity.

 Table 1: Staphyleaceae (DC.) Lindl. - Staphylea pinnata L. are in different medicinal plant in Georgia.
 1- Kakheti, 2-Tbilisi, 3- Kvemo Kartli, 4 

 Samtskhe-Javakheti, 5- Adjara, 6-Guria, 7. Abkhazia.
 Kakheti Shilda Kvareli Lagodekhi Gorjaani Dedoplistskaro.
 S.N=19.

S.N.	Location - Staphylea pinnata L.	Coordinates	Elevation
1	Kakheti east Shilda low	41º 54' 598 N - 45º 42' 405 E	320m
2	Kvareli district Shilda	41º 58' 193 N - 45º 43' 215 E	453m
3	Shilda Medicinal plant	41º 59' 576 N - 45º 51' 464 E	503m
4	Kakheti East Kvareli	41º 56' 291 N - 45º 46' 273 E	406m
5	Kakheti East Lagodekhi	41º 84' 825 N - 46º 29' 145 E	618m
6	Kakheti East Gurjaani plant	41º 26' 423 N - 45º 42' 415 E	428m
7	Tbilisi Medicinal plant	41º 39' 454 N - 44º 52' 406 E	400m
8	Tbilisi Georgia plant	41º 45' 289 N - 44º 48' 572 E	582m

How to cite this article: Maia A. Medicinal Remedies is Plant are Species of Staphylea pinnata L. and Family Staphyleaceae Lindl. in the Georgia (South Caucasus). Agri Res& Tech: Open Access J. 2020; 24(1): 556255. DOI: 10.19080/ARTOAJ.2020.24.556255

## Agricultural Research & Technology: Open Access Journal

9	Tbilisi Georgia plant mtatsminda	41º 41' 500 N - 44º 46' 510 E	769m
10	Lower Kartli Bakuriani south	41º 48' 201 N - 43º 21' 935 E	534m
11	Lower Kartli Bakuriani Plant	41º 75' 131 N - 43º 24' 015 E	771m
12	Lower Kartli Bakuriani others	41º 84' 866 N - 43º 39' 996 E	862m
13	Lower Kartli Borjomi plant	41° 50' 110 N - 43° 23' 490 E	788m
14	Lower Kartli Borjomi south	41º 48' 292 N - 43º 18' 350 E	833m
15	Lower Kartli Borjomi others	41º 48' 390 N - 43º 19' 394 E	977m
16	Samtskhe-Javakheti Akhaltsikhe	41º 41' 368 N - 43º 08' 208 E	932m
17	Samtskhe-Javakheti Akhaltsikhe	41° 39' 109 N - 43° 04' 114 E	1058m
18	Adjara Batumi west plents	41º 38' 512 N - 42º 06' 609 E	234m
19	Adjara west south	41° 37' 744 N - 42° 14' 539 E	519m

Staphylea pinnata L. has its leaf are and species long 1.0-1.3cm. Flowers are and wide 2.5-3.5mm. Flowers are and species meters 4.5m. Plant are long 5-11cm. Plant are as for and it has blunt 7-10mm (Figure 1). Staphylea pinnata L. are plants and double flower has from with genes B,C in down and genes A, B are for petals then complete. Staphylea pinnata L. has flowers 2,5-3,5mm and 4,5m meters and the yellow flowers and seeds in medicinal plants. Pollen of Staphylea pinnata L. has length of the horizontal height as 29-38µm. Pollen of *Staphylea pinnata* L. hes flowers as leaf 19-21µm (Figure 2). Medicinal plants are for *Staphylea pinnata* L. medium size with 2,5-3,5mm flowers. Medicinal plants are *Staphylea pinnata* L. is the place and where my mother Tsira Sidamon-Eristavi is apartment in the village of Shilda. Medicinal plants are food will be hidden. Medicinal plants are for *Staphylea pinnata* L. this is gas and are food will be hidden (Figure 3).

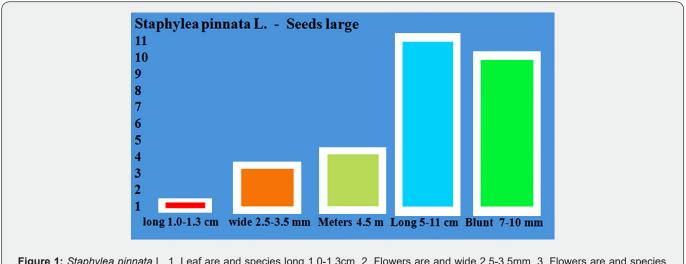


Figure 1: Staphylea pinnata L. 1. Leaf are and species long 1.0-1.3cm. 2. Flowers are and wide 2.5-3.5mm. 3. Flowers are and species meters 4.5m. 4. Plant are long 5-11cm. 5. Plant are as for and it has blunt 7-10mm.

Plants for a future can not take any responsibility for any adverse effects from the use of plants. Always seek advice from a Georgia before using a plant medicinally. It is a shrub or small tree, with 5m tall green shoots. Leaves 5-7 elongate, toothed, 5.5-11cm long. Leaves of leaves blunt 7-10mm long, 2.5-3.5mm wide. The seeds are of great size, 1-1.2cm long and 1.1cm wide. Georgian flora has species of *Staphylea pinnata* L. and it is an accepted scientific name is for and the Kakheti and this is the village Shilda. This is the plants and where my mother Tsira Sidamon-Eristavi is apartment as medicinal plants is the village of Shilda. Habitats rich moist thickets along streams and the borders of woods. Always

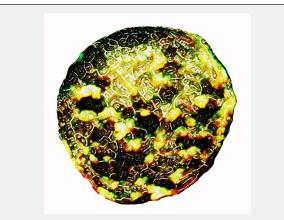
seek advice from a professional before using a plant medicinally. Edible shrubs provides detailed information, attractively presented, on over 70 shrub species. They have been selected to provide a mix of different plant sizes and growing conditions. Most provide delicious and nutritious fruit, but many also have edible leaves, seeds, flowers, stems or roots, or they yield edible or useful oil. Tolerant of a wide range of soils so long as they are not too dry, it prefers a rich loamy soil in full sun or semi-shade. Prefers a neutral to acid soil but tolerates some alkalinity. A very ornamental plant it is hardy to about -25-35°c April.



**Figure 2: (a)** Staphylea pinnata L. are plants and double flower has from with genes B,C in down and genes A,B are for petals then complete.



Figure (2): (C) Pollen of Staphylea pinnata L. has length of the horizontal height as  $29-38\mu m$ .



**Figure 2: (b)** *Staphylea pinnata* L. has flowers 2,5-3,5 mm and 4,5 m meters and the yellow flowers and seeds in medicinal plants.

0027



Figure (2): (d) Pollen of Staphylea pinnata L. hes flowers as leaf 19-21 $\mu$ m.



Figure 3: (a) Medicinal plants are Staphylea pinnata L. is the place and where my mother is apartment in Tsira Sidamon-Eristavi and in the village Shilda in Kakheti, Georgia.

How to cite this article: Maia A. Medicinal Remedies is Plant are Species of Staphylea pinnata L. and Family Staphyleaceae Lindl. in the Georgia (South Caucasus). Agri Res& Tech: Open Access J. 2020; 24(1): 556255. DOI: 10.19080/ARTOAJ.2020.24.556255



**Figure 3:** (b) Medicinal plants are for Staphylea pinnata L. medium size with 2,5-3,5mm flowers.



Figure 3: (c) Medicinal plants are *Staphylea pinnata* L. is food will be hidden.



Figure 3: (d) Medicinal plants are for *Staphylea pinnata* L. this is gas and are food will be hidden.

0028

## Discussion

Plants in this genus are notably resistant to honey fungus. Plants for a future have a number of books available in paperback and digital form. Book titles include edible plants, edible perennials, edible trees, and book to be released soon. Seed this can be very slow to Georgia, sometimes taking 18 months or more. It is best sown as soon as it is ripe in a cold frame, and some of it at least should then Kakheti in the spring. Stored seed should be sown as early in the year as possible and given cold stratification it might not germinate until spring of the following year. Prick out the seedlings into individual pots when they are large enough to handle and grow them on in light shade in the greenhouse for their first winter. Plant them out early the following summer. Cuttings of half-ripe wood, 5-8 cm with a heel, April/August in a frame. Takes 15 months. Plants sometimes produce suckers, these can be removed in the dormant season and planted out [8].

Family *Staphyleaceae* Lindl. are in the genus *Staphylea* L. Species. are countries where the plant has been found are listed here if the information is available and this are from meni there is a lot around this-America, Asia, Australia, Britain, Caucasus, Europe, Georgia, Germany, Hungary, Mediterranean. *Staphylea* L. are Accepted for 11 plants-*Staphylea bolanderi* A. Gray, *Staphylea bumalda* DC., *Staphylea campanulata* J. Wen., *Staphylea forrestii* Balf. f., *Staphylea holocarpa* Hemsl., *Staphylea pinnata* L., *Staphylea pringlei* S., *Staphylea shweliensis* W.W. Sm., *Staphylea tricornuta* (Lundell) S.L. Simmons, *Staphylea trifolia* L., *Staphylea yuanjiangensis* K.M. Feng & T.Z. Hsu. There are many other planets and moods are two things, and so is that Synonym are 8 plants and other are Unresolved is 18 plants. There is one plant in Georgia and that is it Georgia *Staphylea colchica* Steven has make Unresolved [9].

## Conclusion

*Staphylea pinnata* L. is an accepted name and it is for medicinal plants. IUCN red list of threatened plants status. Right plant wrong place. We are currently updating this section. Please note that a plant may be invasive in one area but may not in your area so it is worth checking. Staphylea pinnata L. the leaves consist of 5-7 leaves. The box is slightly or very rounded at the waist and the tips are close to the waist. Seeds large, 1,0-1,3 cm long. Staphylea *pinnata* L. can be grown in full sun to partial shade, and tolerates a variety of soils. It is hardy in zones 6-8 it has low drought tolerance. Staphylea pinnata L. are deciduous shrubs or small trees producing hanging clusters of bell or cup shaped, white, cream or pink flowers, followed by bladder like, two or three-lobed fruit. Georgian end Kakheti is the village Shilda flora has species of Staphylea pinnata L. and it is an accepted scientific name is for and the and this. This is the plants and where my mother Tsira Sidamon-Eristavi is apartment as medicinal plants is the village of Shilda. Habitats Rich moist thickets along streams and the borders of woods.

## References

- 1. Akhalkatsi M (2019) Plant species in Natura 2000 Habitats in Georgia. Springer: 310.
- Akhalkatsi M (2015) Forest Habitat Restoration in Georgia, Caucasus Ecoregion. Clean Up Georgia – Increasing Public Awareness and Involvement in Solid Waste Management Improvement (Phase II). Tbilisi, Georgia: 1-103.
- Akhalkatsi M (2014) Conservation and sustainable use of crop wild relatives in Samtskhe-Javakheti. Recovery, Conservation, and Sustainable Use of Georgia's Agricultural diversity: 1-165.
- Grossheim AA (1939) Flora of Caucasus. V.2. Polypodiaceae Gramineae.
   Baku, Publishing

house AzFaN: pp.587.



This work is licensed under Creative Commons Attribution 4.0 License DOI:10.19080/ARTOAJ.2020.24.556255

- Szewczyk-Taranek B, Pawlowska B (2016) Investigation on micropropagation of *Staphylea pinnata* L, a rare protected ornamental plant. International Society for Horticultural Science 1113: 201-206.
- Latalowa M (1994) The archaeobotanical record of *Staphylea pinnata* L. from the 3<sup>rd</sup>/4<sup>th</sup> century A.D. in northern Poland. Vegetation History and Archaeobotany, Springer 3(2): 121-125.
- Grove MD, Weisleder D, Daxenbichler ME (1973) Pinnatanine and oxypinnatanine, novel amino acid amides from *Staphylea pinnata* L. Tetrahedron, Elsevier 29(18): 2715-2719.
- 8. Akhalkatsi M (2009) Conservation and Sustainable Use of Crop Wild Relatives in Samtskhe-Javakheti. Final Report. Tbilisi, Georgia: Elkana.
- Lacikova L, Muselik J, Masterova I, Grancai D (2007) Antioxidant activity and total phenols in different extracts of four Staphylea L. Species. Journal Molecules 12: 98-102.

## Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- · Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats (Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission https://juniperpublishers.com/online-submission.php