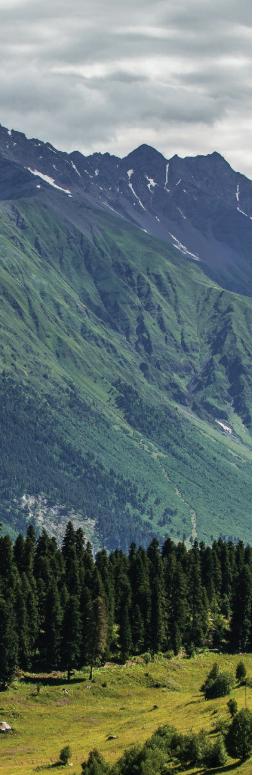


### Liquid Gold of Georgia

The beauty of Georgian honey





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#### CONTENT

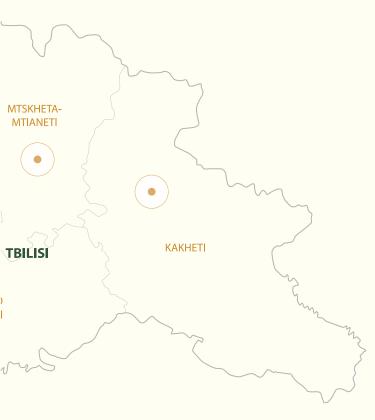
GEORGIA AND ITS BIODIVERSITY AJARA **GURIA** SAMEGRELO-ZEMO SVANETI ABKHAZIA RACHA-LECHKHUMI- KVEMO SVANETI IMERETI SAMTSKHE-JAVAKHETI SHIDA KARTLI **KVEMO KARTLI** MTSKHETA-MTIANETI REGION KAKHETI **URBAN BEEKEEPING** CAUCASIAN HONEY BEE TYPES OF HONEY

JARA





Georgia is located at the eastern end of the Black Sea on the southern flanks of the main crest of the Greater Caucasus mountains. Georgia is a small country covering 69, 700 square kilometers of land. Seventy-five percent of the country is mountainous. Forty percent of Georgia is forested. The forests are known for their biodiversity, which include more than 13 000 species of flora, out of which 380 are endemic to the region. Georgia includes a wide range of agro ecological zones ranging from semi-desert to sub-tropical and alpine. Altitudes range by regions and go from zero to 5,201 meters.

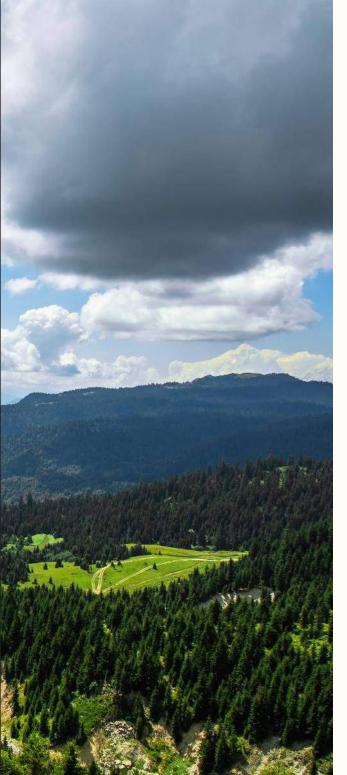


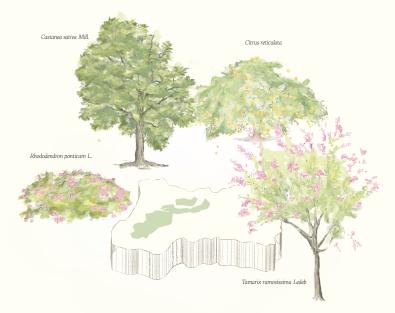
These are ideal conditions for the production of honey: Acacia, Blossom, Linden, Chestnut, Alpine and wild honey 'Jara'. Beekeeping in Georgia has a long history. Archaeological evidence dates honey to 7000 years ago, exceeding honey remnants found in Tutankhamen's tomb date at approximately 3500 years ago. Xenophon writing in the fourth century BC tells of the defeat of the Greeks invading the Black Seas coast using poisoned honey. The healing qualities of Georgian honey are mentioned in texts dating back to the thirteenth century AD. Georgia is the homeland of the Caucasian Grey bee, famous for its long 7,2 mm tongue, high resistance, docility and outstanding ability to obtain nectar.

There are 14,000 beekeepers with up to 240,000 beehives producing 2,5-4 thousand tons of honey annually.

AZERBAIJAN

## AJARA





The Autonomous Republic of Ajara is a coastal region located in the southwest of Georgia. This picturesque region is known for its beauty with subtropical landscapes, 121 km coastline, forested green hills and mountains. In Ajara, there are two national parks and two protected areas which cover more than 20 % of the region. Annually, the sun shines for an average of 192 days and rainfall is 1466 mm.



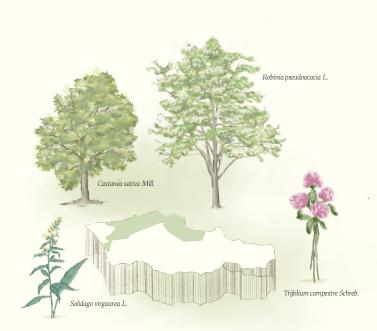


The region has a great variety of eco-systems: the lowlands of Ajara are full of citrus Citrus reticulata plantations and tea is grown. A bit higher the mountain forests contain chestnut Castanea sativa; Linden Tilia begoniifoli; four types of Rhododendron ponticum; Spurge Laurel Daphne *mezereum*; Ground-ivy *Glechoma hederacea*; Guelder Rose Viburnum opulus; Sycamore Acer pseudoplatanus and other trees. The alpine zone includes untouched hectares of wild alpine flowers such as: Salt Cedar Tamarix ramosissima; Largest Masterwort Astrantia maxima; Welted Thistle Carduus acanthoides; Hyssop Hyssopus angustifolius; Creeping Savory Satureja laxiflora. The region is famous for its chestnut honey which has a special bittersweet taste.

# GURIA

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Guria is situated in the western part of Georgia to the north of Ajara on the Black Sea coast. Guria's diverse nature and climate, which includes subtropical landscapes, coastline, lowlands, wetlands and the high mountains of Lesser Caucasus, make the region unique. Guria's humid subtropical climate merged with mountain and sea air, creates the medicinal properties of its resorts.

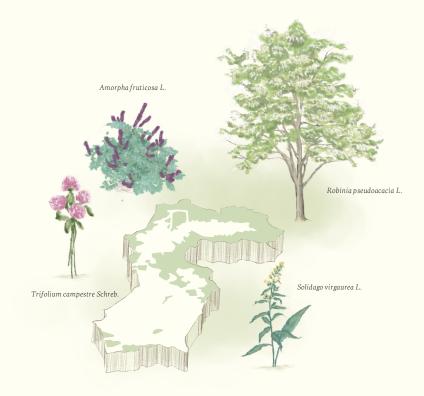




Citrus plantations, fruit gardens, tea and nuts, grapes and maize are the main crops. Wooded lowlands are covered with Chestnut *Castanea sativa*; False Acacia *Robinia pseudoacacia*; Spurge Laurel *Daphne mezereum*; European Bilberry *Vaccinium myrtillus*; Guelder Rose *Viburnum opulus*; Solidago or Goldenrod *Solidago virgaurea* and Field Clover *Trifolium Campestre*; Largest Masterwort *Astrantia maxima*; Groundivy *Glechoma hederacea*; Devil's-bit Scabious *Succisa pratensis* are widely spread. There are several mountainous resorts in the region, such as Gomi and Bakhmaro resorts, which are covered with alpine wild flowers and create the ideal conditions for the transhumance of bees.

### SAMEGRELO-ZEMO SVANETI





Samegrelo is located among the ravines created by Rioni, Enguri and Tskhenistskali rivers. Svaneti is landlocked by the Greater Caucasus mountains. Its north end in the Svaneti region reaches 5201 meters. This western region is kept warm and humid by the Black Sea. From south to north, the climate changes from subtropical to a moderate climate. Annual humidity ranges from 900 – 1400 mm. Thanks to these climate conditions, bees are active for 255 days of the year.

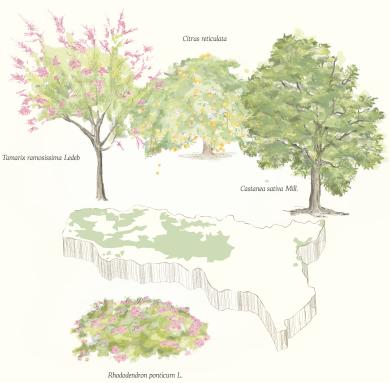




Samegrelo region is known for the Kolkheti National Park and its lowlands full of Solidago or Goldenrod *Solidago virgaurea* which flowers in autumn, and Amorpha *Amorpha fruticosa.* The region also has two national parks in Samegrelo and Svaneti with rich ecosystems such as: Largest Masterwort *Astrantia maxima;* Wild Mustard *Sinapis arvensis;* White Clover *Trifolium repens;* Gooseberry *Grossularia reclinata;* Sycamore *Acer pseudoplatanus.* Svaneti is characterized by alpine wildflowers: Field Clover *Trifolium Campestre;* European Bilberry *Vaccinium myrtillus;* Spurge Laurel *Daphne mezereum.* 

# ABKHAZIA





The Autonomous Republic of Abkhazia is a coastal region located in the northwest corner of Georgia. Abkhazia is a very mountainous. 75% of the area is covered by mountains and foothills with 195 km coastline. Here the climate is warm, humid and subtropical, average annual temperature is +15 degrees Celsius. In this land, the sun shines more than 220 days a year. At 4046 meters, Dombai is the region's highest mountain range and marks the beginning of the Caucasus.

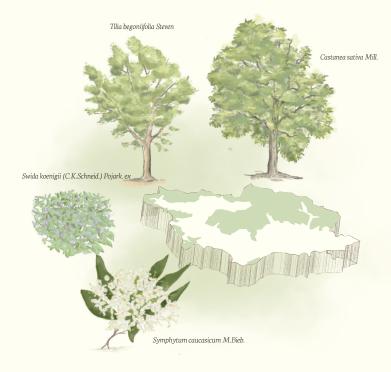




The nature of Abkhazia is characterized by forest resources and vegetation, with more than 133 plants endemic to Abkhazia. The region is home to 2000 species of flora, of which more than 250 are medicinal. Forest covers 52% of the land. Honey is obtained from native species such as: Sycamore Acer pseudoplatanus; Ground-ivy Glechoma hederacea; Honey Clover Melilotus albus; Creeping Savory Satureja laxiflora; Weaver's broom Spartium junceum; Devil's-bit Scabious Succisa pratensis; White Clover Trifolium repens.

## RACHA-LECHKHUMI KVEMO SVANETI





Racha-Lechkhumi - Kvemo Svaneti is a region in northwest Georgia. 46% of the region is a national park. The climate ranges from humid subtropical to moderate with an average humidity level of 85-90% annually. The region is one of the sunniest in Georgia, as its 267 annual days of sunshine creates theideal conditions for the bees to gather nectar.



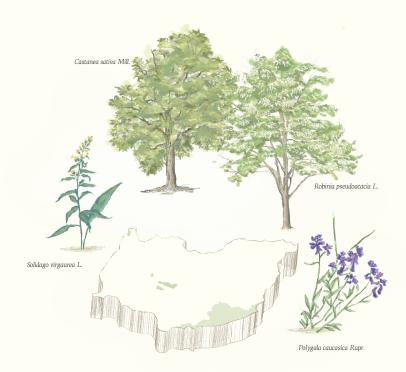


This region produces some of the most exceptional honey types in Georgia: chestnut, linden and alpine honey. The regional flora is rich with Chestnut *Castanea sativa*; Lime Tree *Tilia begonifolia;* Caucasian Comfrey *Symphytum caucasicum*; Dogwood *Swida koenigii*; Cornelian Cherry *Cornus mas*; Ground-ivy *Glechoma hederacea*; Pea *Lathyrus sativus*; Creeping Savory *Satureja laxiflora*. The altitude ranges from 400 to the highest peak (Lahili) 4008 meters here. The alpine zone is rich with Sycamore *Acer pseudoplatanus*; Spurge Laurel *Daphne mezereum*; European Bilberry *Vaccinium myrtillus*.

## IMERETI

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The region of Imereti is situated along the middle and upper end of the Rioni river and is one of the largest beekeeping zones. Imereti is divided into Zemo (upper) and Kvemo (lower) Imereti. It borders the Likhi Mountain Range to the east, the Tskhenistskali River to the west, the Caucasus Mountains to the north and the Meskheti Mountains to the south. The lowlands of Imereti are mostly covered with Colchis low brush, forests, oaks, groves, and meadows. The mountainous parts of Imereti are mainly Colchis deciduous forests. The altitude ranges from 150 to 3000 meters here.



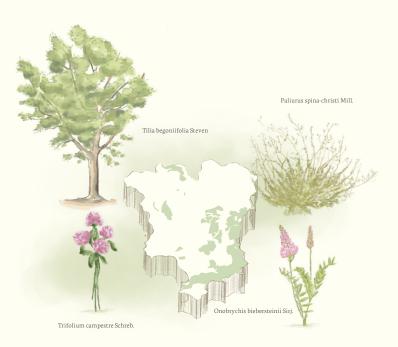


Imereti is known for its various honey flowers, such as Chestnut *Castanea sativa;* False Acacia *Robinia pseudoacacia; G*oldenrod *Solidago virgaurea;* Snakeroot *Polygala caucasica.* The Borjomi-Khragauli national park forms one-tenth of the country's territory. The park is rich with: Black Poplar *Populus nigra;* Honey Clover *Melilotus albus;* White Nettle *Lamium tomentosum;* Wild Grape *Vitis sylvestris.* 

# SAMTSKHE-JAVAKHETI

TZ A





Samtskhe-Javakheti is located in the southern part of Georgia. Its volcanic mountains, open plains, freshwater lakes, ravines, canyons, and fast-moving rivers, as well as archeological, religious and cultural sites, are impressive. The region is fully alpine. The altitude ranges from 1000 to 3305 m. In its valleys average yearly humidity is 500-800 mm. The sun shines more than 170 days of the year. The region is rich in nature reserves, such as Ktsia-Tabatskuri, Tetrobi and Nedzvi.





Samtskhe-Javakheti is famous for its alpine honey from the variety and abundance of alpine flowers growing there, such as Wild Thyme Thymus caucasicus; Sainfoin Onobrychis biebersteinii; Thistles Cirsium aggregatum. Rowan Sorbus boissieri. Honey here is full of alpine wildflowers with high glucose content therefore it is easily crystallized. The region is rich in nature reserves, such as Ktsia-Tabatskuri, Tetrobi, and Nedzvi. Both, the Javakheti and Borjomi national parks help to create a rich ecosystem in the region, which contains: Musk Thistle Carduus nutans; Cornelian Cherry Cornus mas; Hyssop Hyssopus angustifolius; Meadowsweet Filipendula ulmaria; Creeping Savory Satureja laxiflora; White Mustard Sinapis alba; Scalloped Spirea Spiraea crenata; European Bilberry Vaccinium myrtillus. Alfalfa Medicago caucasica; Yellow Alfalfa Medicago falcata; Woodland Sage Salvia nemorosa; Wild Mustard Sinapis arvensis.

### SHIDA KARTLI





Shida Kartli is a region in eastern Georgia. It is located in the central part of the lowlands between the Greater and Lesser Caucasus mountains. The region is formed by extensive plain and mountain edges. The altitude ranges from 470 to 3877 meters. Shida Kartli has a variable climate; in some parts moderate humid and in some dry subtropical. Average annual temperature is 9-11 Celsius and average annual precipitation is 824 mm. In its valleys the sun shines 213 days. Low humidity and flora favor excellent quality of pollen production.





The region's ecosystem is enriched with the Liakhvi and Trialeti national parks, and includes flora, such as: Largest Masterwort Astrantia maxima; Welted Thistle Carduus acanthoides; Moldavian Dragonhead Dracocephalum moldavica; Gooseberry Grossularia reclinata; Yellow Alfalfa Medicago falcata; Creeping Savory Satureja laxiflora; White Mustard Sinapis alba; Armenian Plum Armeniaca vulgaris. The honey flowers widely found here are Salt Cedar Tamarix ramosissima; White Willow Salix pentandroides; Jerusalem Thorn Paliurus Spina-Christi; Georgian Barberry Berberis Iberica.

## KVEMO KARTLI





Kvemo Kartli is situated in the southeastern part of Georgia. The landscape of Lower Kartli consists largely of steppes and forested steppes. The lowlands in the region are characteristics of semi-deserts. More than 300 days are sunny here. The average air temperature is 12 Celsius, with 400-600 mm of precipitation annually. The Algeti National Park in the Trialeti region is especially interesting, offering a large diversity of flora. It is often referred to as a Floral Junction, since it supports such a wide array of flora, including plants native to Colchis, Persia, Iberia, Iran, the Middle East and the Caucasus area.





This includes: Field Maple Acer campestre; False Acacia Robinia pseudoacacia; Seaberry Hippophae rhamnoides; Black Poplar Populus nigra; Wild Grape Vitis sylvestris. Kvemo Kartli's ecosystem is rich with the Trialeti national park, the Gardabani nature reserve and Tbilisi National Park which offer a variety of ecosystems which feature species such as: Scalloped Spirea Spiraea crenata; Honey Clover Melilotus albus; Cornelian Cherry Cornus mas; Alfalfa Medicago caucasica; Hyssop Hyssopus angustifolius; Meadowsweet Filipendula ulmaria.

## MTSKHETA-MTIANETI





Mtskheta-Mtianeti is one of the most picturesque and diverse lands located in eastern Georgia. It is home to 3500 and 5000-meter-high snowy peaks of the Greater Caucasus and mountain passes, beautiful gorges, secluded lakes and alpine valleys. The Caucasus Mountains in Khevi and Khevsureti are particularly scenic. The steep slopes descending into the Aragvi valley are examples of some of the most beautiful views encountered anywhere in the world.

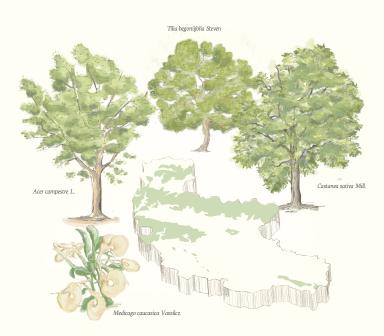




The region's ecosystem is enriched with the Tbilisi and Kazbegi national parks, the Gudauri recreational territory which is a popular area for transhumance among beekeepers, because of warm spring climate and abundance of early flowering varieties. This natural diversity offers a wide variety of honey plants such as: Largest Masterwort Astrantia maxima; Plumeless Thistles Carduus acanthocephalus; Cornelian Cherry Cornus mas; Meadowsweet Filipendula ulmaria; Yellow Alfalfa Medicago falcata; Creeping Savory Satureja laxiflora; Wild Mustard Sinapis arvensis; Spirea Spiraea hypericifo*lia.* The climate of the region is moderately humid with an average 11 Celsius. The most widespread honey plants are: Lime Tree Tilia begoniifolia; Jerusalem Thorn Paliurus Spina-Christi; Sainfoin Onobrychis biebersteinii; Field Clover Trifolium Campestre.







Kakheti is one of the most beautiful and diverse parts of Georgia and is situated in the extreme east of Georgia. Its stunning landscapes include the snow-covered mountains of the North Caucasus Mountain range, with peaks reaching up to 4500 meters standing side by side with fertile lowland – valleys and fields. To the North one of the rightly famous roads of the world winds precipitously up the range to the ecological jewel which is Tusheti, buried within the mountains. To further east there are even the semi-desert areas of Dedoplistskaro and the Sagarejo Municipality.





The climate in the Alazani Valley is characterized by moderately humid subtropical features. Average winter temperature is around 0+1 C; in summer the temperature reaches up to +23-25. Annual precipitation ranges from 600 to 1000 mm in the valley.

Kakheti is rich with honey plants such as: Musk Thistle *Carduus nutans*; Ground-ivy *Glechoma hederacea*; Alfalfa *Medicago caucasica*; Honey Clover *Melilotus albus*; Woodland Sage *Salvia nemorosa*; Weaver's broom *Spartium junceum*. Kakheti is rich in parks and protected areas, with Vashlovani, Lagodekhi, Babaneuri, Batsara and the Tusheti National Parks, Kurugi and Ilto reserves. The Tusheti protected landscapes giving great diversity of flora such as: Lime Tree *Tilia begonifolia*; Jerusalem Thorn *Paliurus Spina-Christi*; Sainfoin Onobrychis *biebersteinii*; Field Clover *Trifolium Campestre*.



Four beehives and their inhabitants from the high mountains of Ajara started their new life on the terrace of one of the largest Hotels in Batumi, Georgia, the Hilton Batumi, to produce honey for hotel guests. The hotel had the idea, seeking to showcase the beautiful countryside of Ajara and take this first step in illustrating the story of locally sourced food and the people who produce it. The Hilton also installed a honey showpiece at the breakfast buffet, of mounted honey comb, a large map of the 10 honey production gorges of mountainous Ajara and the indig enous flora on which the bees feed with the honey and comb sourced through local honey producing company.



Urban beekeeping is increasingly popular in Europe as bee colonies decline and new ways are sought to develop a more ecologically sensitive lifestyle as urban centers grow. In Georgia, you can now find some people in each large city or town who are not professional beekeepers, but are interested to practice beekeeping while living in an urban area.

# MOUNTAINGREY CAUCASIAN HONEY BEE



Georgia is a homeland of the world renowned Mountain Grey Caucasian Honey Bee (Apis mellifera caucasica-Georgia). The complex climate and the biodiversity of flora in Georgia has led to the evolution of the breed and has given it extraordinary characteristics, making it unique compared to other honeybee breeds. The breed has a long tongue among honey bee species, which gives it the ability to reach nectar, where no other species can. However, this is not the only reason that it is one of the most productive honeybee breeds in the world.

Caucasian honeybees can work under less ideal conditions, such as cool temperatures and rain. The breed also produces propolis in larger amounts than others to protect the colony from harmful elements such as rain and cold winter conditions. These bees generally overwinter in a smaller cluster and with less honey. The queen is very frugal in her egg laying.

The Caucasian bee stores honey near the brood, typical for a mountain bee. It also uses a minimum number of combs for storing the honey; in other words, it doesn't proceed to a new comb until the previous one is com-pletely filled. Thus, at the end of harvesting there are no half or partially filled combs, a great advantage for extracting the honey.

All these characteristics have been recognized at international exhibitions and the honeybee received three gold medals at the International Exhibition of Gardening in Erfurt (Germany) in 1961; at the 20<sup>th</sup> APIMONDIA International Congress in Bucharest (Romania) in 1965; and at the 23<sup>rd</sup> APIMONDIA nternational Congress in Moscow in 1971.

### ACACIA HONEY (

#### CHESTNUT HONEY





Acacia honey is one of the most popular honeys in the world for its mild taste and lightly fragrant bouquet. Honeybees create it from the harvested nectar of acacia. The various types of acacia are widespread throughout Georgia including the dominant False Acacia (Robinia pseudoacacia). Georgian beekeepers harvest acacia honey at the end of the Spring. The honey has a light transparent colour with a rose-gold tint and sweet orange and floral notes. It is mild and easily digestible. Due to the high consistency of fructose, it crystalizes more slowly than other types of honey. As it is very sweet, it is used as a healthier alternative to sugar, even recommended for people with diabetes; has anti-inflammatory and bactericidal effect and is used as a prevention of stomach and duodenum ulcers. It is a natural post workout recovery food.

Chestnut honey is a rare honey for consumers who prefer a bittersweet and intense aroma. Chestnut is a mono floral honey. Honeybees create it from the harvested nectar of the flower of the chestnut tree (Cestane Sativa). The chestnut tree is indeed a very good source for nectar and pollen, but it also provides a lot of honeydew. Honeydew is a sweet and sticky liquid excreted by certain insects, usually aphids. Chestnut honey is dark in colour with a reddish tone. Chestnut trees are mainly widespread in Western Georgia. The honey is harvested in the middle of the summer. The level of fructose is very high which makes the honey crystalize slowly. It is distinguished by bactericidal properties and prescribed for angina and healing of wounds; it is believed to benefit blood circulation, stimulate bile production and is used for the treatment of digestive system diseases. It also said to regulate arterial blood pressure and works to prevent thrombophlebitis, phlebismus and prostatitis.

### ALPINE HONEY

#### LINDEN HONEY





Alpine honey is is a highly prized polyfloral honey harvested in the meadows of Georgia's alpine zone. Honeybees collect the nectar of the vast array of alpine flowers, many of which are endemic in Georgia, blooming at altitudes of 1700-2500 meters above sea level. It is harvested at the end of Summer by beekeepers engaged in transhumance. The honey harvested in the alpine zones differs throughout the regions due to the geographical location, where specific types of flower grow differently. Thus the taste of alpine honey is more complex and aromatic than others. It contains a higher level of glucose so crystalizes faster than other honeys. The honey is golden-yellow, sometimes yellow-brown with pleasant aroma (very sweet) and has a pleasant sweet taste. It contains a lot of nutrients. This is honey with strong antibacterial, anti-inflammatory and analgesic properties.

Linden honey is a mono floral honey made from the nectar of the linden flower of the lime tree. The Caucasian Lime (Tilia Caucasica) tree is widely spread in Georgia. The colour can vary from amber to darker colour, but generally it is lighter in colour. Darker linden honey is more characterised to Western Georgia where the blooming period of linden matches that of chestnut and other honey flowers making the aroma more distinct. The flavour of the honey can be described as fresh and woody with a hint of mint, balsamic and camphor aromas. Linden honey is sweet sometimes with a touch of bitterness. Glucose prevails slightly in the sugar ratio which makes the honey prone to crystalize faster than acacia or chestnut honey. Linden honey contains a brilliant combination of vitamins, micro- and macronutrients, minerals and acids which makes it perfect additional cure for many diseases. It is highly recommended for use during flu, coughing and high temperature.

#### **BLOSSOM HONEY**

Blossom honey is a polyfloral honey harvested from the nectars of miscellaneous and undefined flowers widespread in Georgia. The colour varies from amber to dark amber, some of them are even darker indicating that it contains honeydew. It can contain the pollen of various flowers such as clover, currant, Caucasian comfrey, linden, white willow or drupaceous plants. It may have different aromas, but has a delicate and somewhat spicy taste. The glucose/fructose ratio can be different depending on dominant flower. The honey has different healing properties. Locals usually use it against flu, diarrhea, fluid retention and viral respiratory infections.





#### SOLIDAGO HONEY

Solidago or Goldenrod honey is a mono floral honey made from the nectar of the Solidago flower or Goldenrod (Solidago virgaurea Caucasica). It is widespread in the Kolkheti lowland of Western Georgia. Solidago blooms at the beginning of autumn and the honey is harvested at the end of October. The honey has a light transparent color but it crystalizes very fast as glucose content is very high. Beekeepers usually use it for feeding the bee colony during overwintering.

#### MATROBELA HONEY

Matrobela Tapli which translates from Georgian as drunk honey is a toxic honey harvested from the nectar of endemic flowers such as Rhododendrom ponticum and Rhododendrom luteum. Locals gave it such a strange name due to its hallucinogenic and laxative effect It is also known as a "mad honey". The honey contains grayanotoxin which is responsible for creating these effects. Depending on dose, intoxication may have several symptoms such as low blood pressure, vomiting, salivation, in some cases, even loss of coordination, muscular weakness, paresthesia and irregular heartbeat. This honey is used for medical purposes and treatment of various diseases.





#### JARA HONEY

Wild beekeeping techniques are rare these days, but Georgia is one of the few places in the world that has preserved wild beekeeping in remote dwellings located in the subtropical and subalpine zones of Western Georgia. Here, only a ten dozen beekeepers continue the difficult but ancient tradition of the domestication of wild bees – which is an excellent example of mutually useful coexistence of wild nature and humans.

Jara hives provide an opportunity to create true and uniquely flavoured wild honey through the replication of the tree hollow concept – the natural home of wild bees, without artificial wax and free from the involvement of beekeepers. Jara honey is also served with the honeycomb. This is top-quality honey produced from wild flowers, earning a place of honour on your table.



Photos by: Erekle Chikvaidze

Design and Content by: Helen Bradbury Erekle Chikvaidze Nana Giorgadze Lasha Khvichia Produced for the Georgian Beekeepers Union



By the SDC Project the Mercy Corps Georgia implemented Alliances Caucasus Programme www.alcp.ge



#### Georgian Beekeepers Union

www.honeyofgeorgia.com

