

NEW SPREADING AREAS OF SOME SPECIES IN THE BOTANICAL-GEOGRAPHICAL
 REGIONS OF THE MIDDLE PART OF THE CASPIAN COAST

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Abstract. The article provides information on the discovery of new spreading areas in the Botanical-geographical regions of Absheron and Gobustan, as well as phytocenoses formed in the middle part of the Caspian coast. In this regard, the "map on the new distribution area of plant species in the botanical-geographical regions of the Caspian coast" of those species registered in the vegetation cover of the territory was compiled for the first time on the scale of 1:600000, as well as "map of the middle part of the Caspian coast" 1:5000. Ecological-geobotanic studies and systematic taxon studies were carried out in the middle part of the Caspian coast. During ecological-geobotanic researches in the central part of the Caspian coast in Absheron and Gobustan botanical-geographical regions new distribution areas of the following species have been identified: *Suaeda forrsk* belonging to the family. *Chenopodiaceae* Vent ex. *Suaeda heterophylla* Kar. et Kir belonging to Scop genus, *Atriplex turkmenica* (Moq.) Boiss belonging to *Atriplex* L., *Salsola nitraria* Pall., in the genus *Salsola* L., *Erysimum caspicum* N. Busch belonging to *Brassicaceae* Burnett. Family, *Erysimum* L. genus, *Astragantha falcatulus* Lam. belonging to *Fabaceae* Lindl. Family, *Astracantha* Podlech. genus and *Scrophularia divaricata* Lebed belonging to *Scrophulariaceae* Juss. Family and *Scrophularia* genus.

Keywords: phytocenosis, areal, formation, flora, genus

Introduction. Botanical-geographical region of Absheron is located in the middle part of the western coast of the Caspian Sea between the lowland of the Caspian coast and the Administrative District of Alat. In particular, the vegetation cover of the Absheron Peninsula is spread on gray-brown, saline grassy gray and sandy soils from 25 to 50 meters above sea level. The climate is mainly mild, hot and dry subtropical. Part of the Samur-Absheron canal, Jeyranbatan water reservoir, Masazir, Mirkhalid and other years are located on the territory of Absheron botanical-geographical region. Gobustan Botanical-geographical region borders on Absheron (Peninsula) and Lankaran-Mugan geobotanical regions along the Caspian region; it is surrounded by Alat, Pirsaat and Atbulag administrative-territorial circles. Mud volcanoes were observed here.

Climate of the area is characterized by hot

dry summer and mild humid winter. The relief is slightly sloping. The vegetation is spread on grey-brown, saline grass-grey, saline, and sandy soils. It spreads at an altitude from 27 m to 70 meters above sea level.

The object and methodology of research. While conducting researches on geobotanical study, morphological signs and systematic taxa in the middle part of the Caspian coast, as well as in the corresponding botanical-geographical regions, it was established that information on the spread of these species herein Floristic literature was not disclosed.

When determining the Botanical Institute of the National Academy of Sciences of Azerbaijan and the types of systematic taxa in herbarium funds of the Botany Department of BSU, "Flora of Azerbaijan" [Flora of Azerbaijan 1950-1961], "Absheron Flora" [Karyagin, 1952], [Grossgeim, 1939-1967], [Askerov 2005;

2006], [Gajiyev and Musayev 2008], [Gurbanov, 2009] and other scientific works [Agadzhanov, 1967] mainly found that these species are new to the middle part of the Caspian coast, as well as to the botanical-geographical regions of Absheron (III) and Gobustan (IV) (pic.).

The results of the research. According to the literature, *Suaeda heterophylla* Kar.et.Kir. Bunge. plant is spread in the Shirvan, South-Eastern Shirvan, Salyan and Mugan plains in the Kur-Araz lowland of Azerbaijan, as well as in the saline and saline soils of the lowlands (plains) and foothills. As noted in the reference books on the wild flora of the Caucasus, Azerbaijan and Absheron, *Suaeda heterophylla* Kar.et.Kir. Bunge. species is spread in most countries of the world, including desert and semi-desert regions and in the eastern part of the South Caucasus.

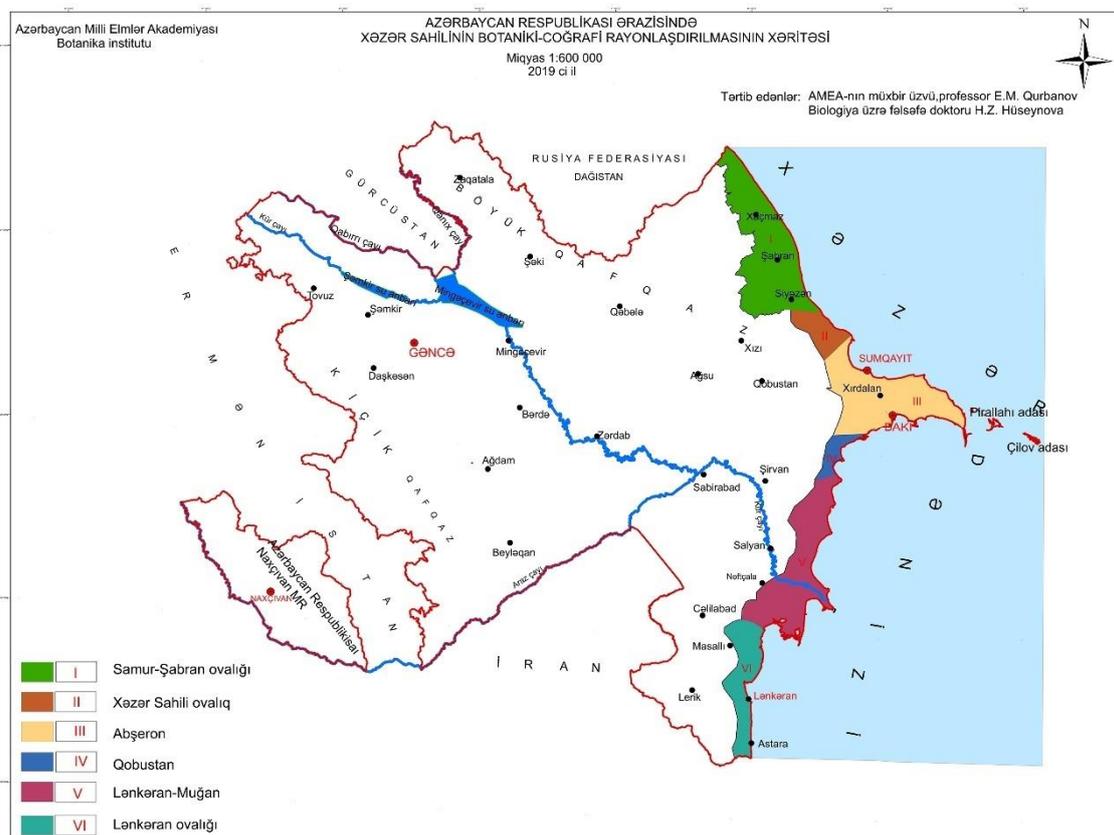
Geographical area - *Suaeda heterophylla* species belonging to Turan type has the following morphological, systematic and ecological features.

Suaeda heterophylla Kar.et.Kir. Bunge. - stem bare, unitary shoots, easily broken and 20-80 cm high with branches. The leaves are simple, alternate or intertwined, loose and gradually dry. The flowers are small, the spike is in a group of flowers. Flowering is a bowl-shaped.

The stamens are 1-5, the females are formed from two to five fruit leaves. The fruit is hazelnut. The petals of the flower remain close to the fruit and help it to spread with the wind. It is a perennial herb. It blooms in May and bears fruit in October. It is a fodder plant and contains potash. Sufficiently eaten by cattle in the last month of autumn.

Suaeda heterophylla is found in the middle part of the Caspian coast-saline (halophytic) desert vegetation in the Absheron botanical-geographical region as a dominant species in the formation of *Eremopyreta-Salsoletum-Suaedaosum* in the forest (2-3 points abundance). Resistant to salt and drought. It is a fodder plant.

PICTURE. Map of New Plant Species Distribution Area In Botanical-Geographical Regions Of The Caspian Coast. Scale 1:600 000



Location: Absheron peninsula. Sumgayit-chay and SAK crossing area at an altitude of 26 m above sea level. May 20, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Salsola nitraria Pall of the genus *Salsola* L. The species is widespread in Northern Iran, Iran-Turan and the Caucasus, as noted in the descriptive literature on the flora of the Caucasus and Azerbaijan.

According to the literature, *Salsola nitraria* is distributed in Azerbaijan on the plains of Nakhchivan (Ordubad and Julfa districts) and on dry-clay slopes in the Kur-Araz lowland, as well as on saline soils.

Geographical area - The type of dry salt marsh belonging to the Atropatan type has the following morphological, systematic and ecological features.

Salsola nitraria Pall. The body is grayish, branched and reaches a height of 40-80 cm. The branches are woody, the annual shoots are broken, finely hairy and smooth. The leaves are sessile, alternate, linear, blunt and covered with whitish-gray hairs. Inflorescence leaves are short, broad-ovate, the tips of these leaves are long and hairy. The mouth of the tooth is sharp, the column is equal or blackish-red, wide and sometimes narrow. The wings of the fruits are yellowish and dark red in the form of a curtain. It blooms in May and bears fruit in October.

In the middle part of the Caspian coast (Absheron botanical-geographical region and Absheron peninsula) saline desert vegetation is rarely (1-2 points) in the formation of *Salsolium-Artemisiosum*. It is well eaten by cattle as a fodder plant for winter pastures. It can be used for potash and soda.

Location: Absheron peninsula. Gobustan reserve and Shikhlar municipality grazing area. On saline gray-brown soil, at an altitude of 28 m above sea level. May 25, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Erysimum caspicum N.Busch, specific to the genus *Erysimum* L., is widespread in Europe, the Mediterranean, as well as in temperate Asia and the Caucasus, as noted in the descriptive literature on the flora of the CIS, Caucasus and Azerbaijan.

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According to the literature, *Erysimum caspicum* is distributed on clayey and mountain slopes in the middle mountain belt of Azerbaijan - Greater Caucasus (Eastern) and Eastern Transcaucasia.

Geographical area - *Erysimum caspicum* N.Busch, belonging to the type of Central Asia, as an endemic plant species of Azerbaijan is characterized by the following morphological, systematic and ecological features.

Erysimum caspicum N.Busch trunk is thin, covered with straight and branched hairs, rising to a height of 15-35 cm. The leaves are lanceolate. The bowl leaves are 4, arranged alternately in two circles. The petals are 10 mm long, yellow, sometimes whitish, and the fruit is horny. It is a perennial herb. It blooms in June and bears seeds in July.

Erysimum caspicum is found in the middle part of the Caspian coast, as well as in the semi-desert vegetation of the Absheron botanical-geographical region in the formation of *Ephemereta-Salsolium-Artemisiosum* with an abundance of 1 point (singly). It is a honey-giving and ornamental plant.

Location: Baku city, Garadagh district. In front of Sahil settlement - the border of the

State Land Fund. Winter pasture. At an altitude of 32.4 m above sea level. June 15, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Astracantha Podlech. *Astrafalus falcatus* Lam. The Caucasus, including the Caucasus, Dagestan, East and South Transcaucasus, is widespread, as noted in the descriptive literature on the flora of the former USSR, the Caucasus and Azerbaijan.

Astracantha falcatus Lam. According to the literature, the plant is distributed in Azerbaijan - in the Guba mountain range and west of the Greater Caucasus, in the north and center of the Lesser Caucasus, as well as in the mountains of Nakhchivan (from low to high mountain range) in bushes, forest areas, open forests and meadows.

Astracantha falcatus Lam, geographical area of Iran-Turan type. has the following morphological, systematic and ecological features.

Astracantha falcatus Lam. trunk 40 - 90 cm high; The leaves are 6 - 15 cm long and consist of 9 - 18 pairs of leaves. Clusters dense, many-flowered, 8 - 12 cm long; The crown is black and white, the beans are linear-curved and reach 14 - 25 mm. It is a perennial herb. It blooms in May-June and beans ripen in June - August.

Astracantha falcatus Lam. - Rarely (with 1 - 2 points) in the formation of the semi-desert plant *Artemisietum-Ephemerium* in the middle part of the Caspian coast (in the territory of Gobustan botanical-geographical region). It is a fodder plant.

Location: rocky area with the border of Gobustan historical-artistic reserve. At sea level - 30.4 cm high. May 25, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Atriplex turcmonica (Mog.) Boiss belonging to the genus *Atriplex* L. The species is widespread in Europe, Asia, America, Central Asia and the Caucasus, as noted in the descriptive literature on the flora of the CIS, the Caucasus and Azerbaijan. *Atriplex turcmonica* is shown to be widespread in Azerbaijan - in most lowlands, foothills, sometimes up to the middle mountain range. This species is found in saline and saline soils, weeds and litter.

Atriplex turcmonica, belonging to the Med-

iterranean - Iranian type, has the following morphological, systematic and ecological features.

Atriplex turcmonica (Moq.) Boiss. The stem-reaches 60-100 cm in height together with the stem; the lower leaves on the trunk are round, rhomboid, toothed, and the upper leaves are lanceolate or hatvar. Flowers are homogeneous. The floriculture of masculine-bearing flowers is a bowl shaped. The males are 5. The tooth - bearing flowers do not have burns, and they are surrounded by two free or adjacent leaves of Floriculture. The upper ovary of the tooth and the mouth are two. Its fruit belongs to hazelnut group. It is an annual herb. It blooms in June-July and gives seeds in August-September.

Atriplex turcmonica-Ephemereta-Artemisietum-Suaedaosum formation is registered sparsely (1-2 points) from halophyte desert plants formed in the middle part of the Caspian coast, as well as on clay-saline gray-brown soils in Absheron botanical-geographical region.

Location: Garadagh District, northern slope of Sangachal settlement, 2 km distance from Baku-Gobustan Highway - winter pastures. At an altitude of 35, 2 m above sea level. June 20, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Scrophularia typical of the genus *Scrophularia* Lebed wallicata as mentioned in the literature on the wild flora of Caucasus and Azerbaijan the species is spread in Eurasia, Mediterranean countries and the Caucasus.

According to the literature data, *Scrophularia wallicata* plant is spread in Azerbaijan in the Greater Caucasus (Guba mountain range), Nakhchivan and Talish (in shady forests and bushes till Arandan-Alpine zone, Mountain Meadows, among rock and river valleys).

Scrophularia wallicata, which belongs to the Atropatan type of geographical area, is the Endemic plant of the Caucasus, as well as has the following morphological, systemic and ecological features.

Scrophularia Lebedwallicata. the body is a flat shield, four-cornered and reaches 40-70 cm in height. The leaves are located opposite. The lower part is divided into five, the crown has

two lips, the tube is swollen, the number of males is 4, two of them are longer, the trunk of the crown is adjacent, the fifth is reduced. The tooth is formed from two fruit leaves, and the ovary is in the upper position. Open the box with two-volume, multi-volume and lids. Its fruit is box-shaped. It is a perennial herb. It blooms in May and gives seeds in August-September.

Scrophularia wallicata is found individually (1 point) in the *Salsoletum-Artemisiosum* formation of semi-desert plant in the middle part of the Caspian coast (in the territory of Gobustan botanical-geographical region). It is a honey-bearing plant. It is used in folk medicine.

Location: Garadagh district, Gobustan art reserve, south-slope of Alat settlement, 1-2 km from Baku-Salyan Highway, saline grey-brown soil, winter pastures. At an altitude of 58, 2 m above sea level. May 15, 2019.

Collectors: E.M. Gurbanov, H.Z. Huseynova.

Discussion of results. In general, during

the ecological-geobotanic researches carried out in the middle part of the Caspian coast, as well as morphological and systematic analyses of wild flora in natural plants of Absheron and Gobustan botanical-geographical regions, it was revealed that *Suaeda belongs to Forsk.ex.Scop. species.*, *Suaeda heterophylla* belongs to Kar. et. dirt. Boiss., *Atriplex*, to the genus L, *Atriplex turcomonica* belongs to (Moq.) Boiss., *Salsola*, to L,

Salsola nitraria to Poll, *Erysimum*, to L, *Erysimum Caspicum* to N.Busch., *Astracantha Podlech.* to the genus *Astracantha Palcatus* Lam. and *Scrophularia* L. specific to the genus *Scrophularia Lebed wallicata*. For the first time the spread of species was determined by us and new spreading areas were noted. These species are endemic, rare, as well as essential oil, decorative and fodder plants.

Herbariums of the assigned plant species are kept in herbarium fund of the Botany Department of Baku State University.

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