INTRODUCTION OF WILD ONION A. FUSCOVIOLACEUM FOM AND A. MARIAE E. BORDZ TO NATURALIZATION

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ABSTRACT
The possibility of cultivating of the wild species A. fuscoviolaceum Fom. and A. mariae E. Bordz was studied. The terms of the onset of the main phases of development have been determined, and the ways of their practical use for their decorative floriculture have been proposed.

KEYWORDS: introduction, mother bulbs, reproduction, phases of development.

1. INTRODUCTION
Many kinds of ornamental herbaceous plants of the natural flora of Azerbaijan as a result of intensive anthropogenic impact (gathering, grazing, development of lands, etc.) become rare and disappearing, which significantly reduces the area of their growth [Koshcheev, 1981; Shisha, 2008; Talibov, 2010, 2014]. Among them are we can name some species of the genus Allium L. which representatives are A. fuscoviolaceum Fom. and A. mariae E. Bordz. These species are of particular interest for introduction to culture, as it is one of the most decorative and endangered species of onions [İbadlı etc., 2004; İbrahimov etc., 2011; Hasanov, 2015].

Earlier it was also noted that for many wild-growing and endangered plant species, even primary methodological aids or recommendations for their reproduction and preservation have not been developed [Yusupov et al., 2014]. We must admit that this issue remains relevant for today.

Proceeding from the above, in order to develop recommendations for their use in gardening we set the goal to determine the possibilities of cultivating wild decorative bows in the conditions of culture.
The research task was to study the seasonal rhythm of the development of introducers when they were planted with bulbs, as by the seeds wild-growing onions enter the flowering phase very long, only on the 4th-5th year after sowing [Kasach, 1977; Khayretinova, 1983; Tukhvatulina, 2002].

2. THE OBJECT AND CONDITIONS OF THE RESEARCH

Objects of the research were the wild species *A. fuscoviolaceum* Fom. and *A.mariae* E. Bordz. In the first object of the study, the flowers are brown - wine - purpurea, the umbrella is spherical, multiflorous, and in the second - the flowers are dark wine-red, the umbrella is dense, hemispherical.

For the cultivation and study of the introduced introducers their mother bulbs were used. Bulbs of *A.fuscoviolaceum* Fom. were assembled from the Great Caucasus Mountain Azerbaijan (Cuban mountain massive). Bulbs of *A.mariae* E. Bordz. were collected from the Maly Caucasus in the middle mountain belt of Azerbaijani part (Nakhchivan Autonomous Republic). Planting of the introduced species was carried out on a demonstration plot in the inter-rows of the full-aged pine trees - in three rows. The length of the rows is 2 m, the distance between the rows is 50 cm, between the plants in rows of 20 cm, and the depth of plantation is 5-7 cm. The repetition of experimental planting of each object is three-fold. Placement of experimental plots was randomized according to the method by B.A. Dospekhov [Dospekhov, 1985].

In order to take care after the introducers during their growing season, appropriate agronomic measures were carried out (loosening the soil, feeding, watering, weeding). Whereupon, the plants did not ache, intensively blossomed and formed full seeds.

The research was carried out in the experimental section of the Genetic Resources Institute of the National Academy of Sciences of Azerbaijan, Baku (2 m. above sea level) located on the shore of the Caspian Sea, which territorially belongs to the Apsheron agroclimatic area [Budagov et al., 2005]. The climate is characterized by dry hot summers, mild, little snowy winters and high aridity [Madat-zade et al., 1968].

**Research results.** In the process of carrying out phenological observations of introduced plants revealed some differences in the timing of the passage of the main phases of development between the objects of the study. It turned out that the species of onion
A. mariae E. Bordz. the investigated phases of development occur earlier than in A. fuscoviolaceum Fom.

The data in the table below shows that in the first year of the experiment when planting the introductions, conducted at the beginning of the third decade of October 2013, the appearing of shoots (rosette of leaves) in the species of onion A. mariae E. Bordz. was observed at the end of the third decade of January, and in the onion A. fuscoviolaceum Fom. at the beginning of the first decade of February 2014.

Table: Data of phenological observations of wild onion species in cultivation conditions

<table>
<thead>
<tr>
<th>Species</th>
<th>Bulb planting</th>
<th>Phase beginning date</th>
<th>Shoot</th>
<th>Bolting</th>
<th>Flowering</th>
<th>Seed maturation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. fuscoviolaceum Fom.</td>
<td>22.10.13</td>
<td>05.02.14</td>
<td>22.03.14</td>
<td>22.03.14</td>
<td>26.05.14</td>
<td></td>
</tr>
<tr>
<td>A. mariae E. Bordz.</td>
<td>22.10.13</td>
<td>30.01.14</td>
<td>14.03.14</td>
<td>04.04.14</td>
<td>16.05.14</td>
<td></td>
</tr>
<tr>
<td>A. fuscoviolaceum Fom.</td>
<td>09.10.14</td>
<td>16.02.15</td>
<td>16.03.15</td>
<td>14.04.15</td>
<td>23.05.15</td>
<td></td>
</tr>
<tr>
<td>A. mariae E. Bordz.</td>
<td>09.10.14</td>
<td>09.02.15</td>
<td>11.03.15</td>
<td>06.04.15</td>
<td>16.05.15</td>
<td></td>
</tr>
</tbody>
</table>

The bolting phase (appearance of peduncles) in the species A. mariae E. Bordz. and A. fuscoviolaceum Fom. accordingly began at the beginning of the 2nd and 3rd decades of March, the flowering phase - at the beginning of the 1st and 2nd decades of April, the maturation of seeds - in the middle of the 2nd and 3rd decades of May. In this case, all three marked phases of development in species of onion A. mariae E. Bordz. passed ahead 8, 9 and 10 days earlier than in the species A. fuscoviolaceum Fom. The same patterns were observed in the second year of the study. So, planted at the end of the first decade of October 2014, onion bulbs in the species A. mariae E. Bordz., and in the species A. fuscoviolaceum Fom. gave amicable shoots, but a little later than in the previous year - respectively at the end of the first and the middle of the second decade of February 2015. The onset of other studied phases of development in the species of onion A. mariae E. Bordz. was observed in the following terms: the bolting - at the end of the first decade of March; Flowering - in the middle of the first decade of April; Maturation of seeds in the middle of the second decade of May. In the species of onion A. fuscoviolaceum Fom. all these phases of development were advancing, respectively 5, 8 and 7 days later. When collecting the bulbs of both experimental plants, both in the first and second year of the experiment, it was established that they also form daughter bulbs, as in the onion of the highest species, which we have studied for last three years (2014-2016) in the collecting section of Genetic Resources Institute of ANAS.
As a result of the introduction and study of the main phases of the development of wild onion
*A.fuscoviolaceum* Fom. and *A.mariae* E. Bordz. has been established the degree of their
conformity in terms of acculturation and the possibility of practical use for decorative
floriculture.

The decorative bows are recommended to be planted in rows or in separate groups, during the
flowering they look very effective and aesthetically much more beautiful.

4. CONCLUSIONS
For gardening purposes, the bows, studied by us can be planted both in the open area and
between rows and near or under the trees, which in the spring are still devoid of leaves, and
light will be enough for them.

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16. (Literature is available in Azeri and Russian).