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Translations

About one forgotten dog rose species[1]

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I was born and spent the first ten years of my life in the countryside near the City of Smolensk (Zhelanya, Ugra District). My memory still retains an image of a garden gazebo from my early childhood, a dense ring of straight-stemmed, tall (nearly twice a man's height) dog rose—and my granny, babushka, boiling some berry preserve on a coal-heated stove in that gazebo. Ever since those childhood years, I've been positive about a complete difference between the wild rose rather common in the area (particularly along the Ugra River) and our gazebo rose.

Even though for the rest of my life I was told multiple times by all existing floras, field guides, and other literature that there was no wild rose in this area other than *Rosa majalis* Herrm., I could never cope with this information and have been hoping to solve this puzzle. Now that I am old, it seems to me, I have finally arrived at some explanation. Perhaps this could be of interest to my colleagues—botanists and horticulturists.

In addition to our garden, this rose was growing on at least two more neighboring properties. Nothing survived the war there—everything was burned and ruined. After the war, I had a chance to visit my native place around 1950 and then noticed that the roses were still growing in place of former houses. In the late 50's, I ran into the same rose in another village of the same district and propagated it for my summer residence, *dacha* near Moscow. The plants have not survived until now, though I collected herbarium samples from them (1.X.1962 and 24.IV.1964). Later on I had two more encounters in Kaluga Oblast (Pustaya of Spas-Demensk or Mosalsk District, Skvortsov, Proskuryakova 1–2.VII.1974; Tarutino, Maloyaroslavets District, 16.VIII.1975), plants found either around dwellings or ruins. Finally, I had another chance to visit my native Ugra District in 1999 and again found specimens of my rose persisting at a few different locations along streets and in front beds (coll. 4.VIII.1999).

All in all, I now have 20 herbarium sheets—a collection not that large, yet representative enough.

Can we consider the 'babushka's rose' to be a species different from *R. majalis*? In my opinion there is no doubt about it. The character that makes the 'babushka's rose' immediately recognizable (and quite different from *R. majalis*) is, first of all, its growth habit: upright vertical stems. Prickles are small, thin, numerous only at base of canes, wilting on the second-third year, wanting on the rest of the plant. Particularly, the paired small infrastipular prickles, so typical for *R. majalis,* are extremely rare. The plant is devoid of glands, except for the tiny ones along the stipule margins. Sepals are 25-30 mm long (longer than in *R. majalis*). Fruits are ovoid or even oblong, mostly drooping; sepals are erect at fruit.

It is very important that our rose has never been found in a natural setting—only within settlements. This gives us a hint: we are dealing with an introduced plant. There is a whole list of such non-native woody plants known from around Smolensk and Kaluga. Once planted near churches, on private estates, and near countryside middle-class homes, these plants have gone astray, though still marking spots of former dwellings. Among them are *Populus alba* L., *P. longifolia* Fish., *Sorbaria sorbifolia* (L.) A.Br., *Spiraea alba* Du Roi, *S. media* F.Schmidt, *Prunus insititia* L., *Crataegus sanguinea* Pall., *Caragana arborescens* Lam., *Swida alba* (L.) Opiz, *Syringa vulgaris* L. There is a similar group of herbaceous plants, among which the most distinctive are *Inula helenium* L. and *Petasites hybridus* (L.) Gaertn., Mey. et Scherb.

When, how, and from where were these plants introduced? It is hard to tell. A way to find out would be digging through old literature sources. Roughly speaking, we can say that the major wave of introductions occurred during the late 18th and early 19th century. For example, in 1841 F.B.Fisher [1] described *Populus longifolia* cultivated in Gorenki, [an estate of a prominent Russian family, Razumovsky, not far from Moscow], though he could not provide information on the origin. Apparently, by 1841, the first appearance of this poplar in Russia had been already forgotten.

My grandfather bought our house together with the garden around 1880. The abutting property, which also housed the plant of our interest, appeared to be even older. Shall we now try to supply our dog rose with a name? Was it ever recognized or described as a distinct species? Let's start our analysis from Linnaeus. Twelve species of roses were listed in the first edition of *Species plantarum* [2]. It is № 11, *R. pendulina* L. that immediately attracts attention. Here is the full text referring to this species:

"Rosa fructibus oblongis pendulis./ *Rosa Sanquisorbae* majalis folio, fructu longopendulo. Dill. Elth., 325, t. 245 f. 317. / Habitat in Europa."

This text seems to testify that the only source of information for Linnaeus about this species (including the illustration) was Dillenius's work [3]. As seen in the illustration, fruits in *R. pendulina* do have elongate shape and are really drooping. The pedicels and the fruits are apparently glabrous. It is highly probable, according to this drawing, that the true *R. pendulina* was the same very plant as my grandmother's rose. The New England origin of this rose was clearly stated by Dillenius. Similar information can be found in Aiton [4: 208], Willdenow [5: 1076], Lindley [6], Klinsmann [7]. Linnaeus, however, for an unknown reason, designated the homeland of the species as Europe, which resulted in a major confusion.

By the year of *Species plantarum* second edition (1762), Linnaeus had familiarized himself with another rose species growing in the mountains of Central Europe, which he described as *R. alpina* [8: 705]. In the 2–3rd editions of *Species plantarum* [8, 9], Linnaeus added the following language in the diagnosis of *R. pendulina*: "pedunculis cauleque hispidis" and even changed the name to *R. pendula*. This was the first step toward the confusion of *R. pendulina* and *R. alpina*, further aggravated by the British horticulturists, who, according to Lindley, interpreted the name *R. pendulina* as synonymous to *R. alpina*. This was not a big surprise though, because the rose from the Alps had been cultivated in England since at least 1683 [4: 208]. Today *R. alpina* and *R. pendulina* are unanimously treated as synonym names, which, as one can see from the above, is not correct. In the American literature, the name *R. pendulina* is not even mentioned as a synonym anymore, even though it was originally proposed for a North American plant [10–14].

In this situation, the name *R. pendulina* apparently deserves to be completely abandoned as a typical nomen confusum, the Alpine rose from Central Europe is to be called *R. alpina* L. I had an opportunity to observe and collect *R. alpina* in 1968 in the eastern Carpathians and also in 1990 in the Austrian Alps—and can testify with confidence that this species is completely different from my "babushka's" rose.

Then what would be the proper name for our rose? Lindley [6: 42] was trying to fix the difficult situation by proposing another name for Dillenius's plant—the one borrowed from Muehlenberg's list of American plants [15]: *R. stricta*. The epithet *stricta* sounds appropriate for our rose; however, in the description there is again the same language "pedunculis petiolisque hispidis."

Most probably our rose is a certain isolated clone of American *R. blanda* Ait. [4: 202]. There is some (rather vague) information about cultivation of *R. blanda* in Western Europe and its ability to go astray in some areas [16]. Then perhaps it would make sense to give our rose its own name? For example, it might be described as a variety. However, the notion of variety is supposed to depict only some deviating character(s), and here we are rather dealing with a prolonged isolation of genomes and taking over a new, specific ecological niche. These are features that would characterize a species. Here we are entering a realm of the genetic-evolutionary phenomenon called 'founder effect'. Here is one way to look at this: once a certain plant finds itself in a new environment, its progeny are able to retain the family traits. However, this approach does not seem to be very productive. The true value of the founder effect can be appreciated only when Darwinian selection is taken into account: from an array of random competitors, a certain genome that provides best for life in a new environment is being selected non-randomly. Perhaps the carrier of this genome may even look in a way unusual when compared to other representatives of its species; however, what's most important about it is the ability to exist and carry on the evolutionary process in a new niche. Over time, its descendants will develop their own range of variability, while retaining similarity with the founder.

Let's return to poplars as an example. In 1841, F.B.Fisher [1] described *Populus tristis* along with *P. longifolia*. However, *P. tristis* did not make it in Russia and gradually disappeared, while *P. longifolia* still persists. Even though large trees are rare and most of the time plants are small and shrub-like, it has been quite common in some towns: in Gagarin (former Gzhatsk) entire streets used to be lined with these poplars. *P. longifolia* most probably can be attributed to *P. balsamifera* L. s.l., particularly to its western race, which is sometimes treated as a separate species, *P. trichocarpa* Torr. et A. Gray. However, neither during my travel across continental Alaska, nor work at the Harvard University Herbaria (A/GH) in Cambridge did I ever find a single specimen that completely resembled *P. longifolia*—even though I was paying particularly close attention to poplars. If it were not the absence of pistillate specimens in *P. longifolia* (and none are known until now), this tree could be easily taken for an indigenous species in this country.

Here is another interesting example. Very competent botanists in the United States consider *Epilobium ciliatum* Raf. to be a single polymorphous species; however, upon introduction to this country, representatives of this complex started to develop as three separate species [17], and the more time passes, the more obvious the differences become.

We cannot exclude that our rose, too, later on can become a founder of such a new species.

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