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Volhynian Polesia – main source of the Yellow Azalea (*Rhododendron luteum* Sweet) in European gardens and parks

Polesie Wołyńskie – główne źródło pochodzenia różanecznika żółtego
(*Rhododendron luteum* Sweet) w ogrodach i parkach Europy

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ABSTRACT: Natural range of the Yellow Azalea *Rhododendron luteum* Sweet (*Azalea pontica* L.) includes the Caucasus, Asia Minor, Volhynia and SE rim of the Alps (Slovenia). There is also a natural locality of this species in Poland, in Wola Zarczycka near Leżajsk. The plant was discovered in 1795 in Volhynian Polesia by an eminent gardener Dionizy Mikler, and its popularity grew thanks to the Botanic Garden affiliated by the Krzemieniec College. Already at the first half of the 19th century Yellow Rhododendron, originating from Volhynian Polesia, was in cultivation in most of European Botanic Gardens. Nowadays this species can be easily found even in small private gardens. It has also been planted in forests. In Volhynian Polesia it grows abundantly in continental mesotrophic oak-pine mixed forests (*Quercus robur*-*Pinetum*), sometimes covering 100% of the shrub layer. It is equally common in continental swamp pine forests (*Vaccinio uliginosi*-*Pinetum*). The soils where the species grow are always moist and very acidic (pH below 4). In Volhynia plant communities with *R. luteum* cover over 1.5 billion ha. In Ukraine the plant is not protected by law.

Key words: Ericaceae, introduction of trees, Dionizy Mikler, Willibald Besser, Krzemieniec

Natural range of the Yellow Azalea *Rhododendron luteum* Sweet (*Azalea pontica* L.) includes the Caucasus, Asia Minor, Volhynia and SE rim of the Alps (Slovenia) – Fig. 1. For many years it had been assumed that the plant original range extended solely from the Caucasus to Asia Minor. Yet the discovery of the paleobotanical evidence of the *R. luteum* occurrence in the Carpathians near Czorsztyń (Szafer 1954) and modern localities in the Alps made the researchers revise this notion. From the above facts one can assume very broad distribution of the species in the Tertiary, which was much reduced later in the Pleistocene to the areas not covered by glacial ice sheets. Therefore in Volhynian Polesia Yellow Rhododendron can be regarded as tertiary relict (Sychowa 1962). In postglacial it colonised neighbouring areas, creating some small “islands”, including the farthest from

the Volhynian refuge site in Wola Zarczycka near Leżajsk. Its occurrence in Volhynian Polesia was further facilitated by soils, namely shallowly deposited crystalic rocks (Stecki, Jakubczyk 1932).

The knowledge among the gardeners, and botanists even, of the fact of discovery of *R. luteum* in Volhynian Polesia and further distribution of the plant in botanic gardens and parks in Europe is rather uncommon.

The species was found in 1795 on the Stucz river by Dionizy Mikler (1762-1853). Born in Ireland Mr Mikler (MacClair) came to Poland upon the invitation from duchess Izabella Czartoryska. After a short stay in Puławy he moved to Volhynia, where he remained until his death. He became polonized, for over 40 years he lived in Dubno where he was finally buried. Mikler and his family's thumb shared the fate

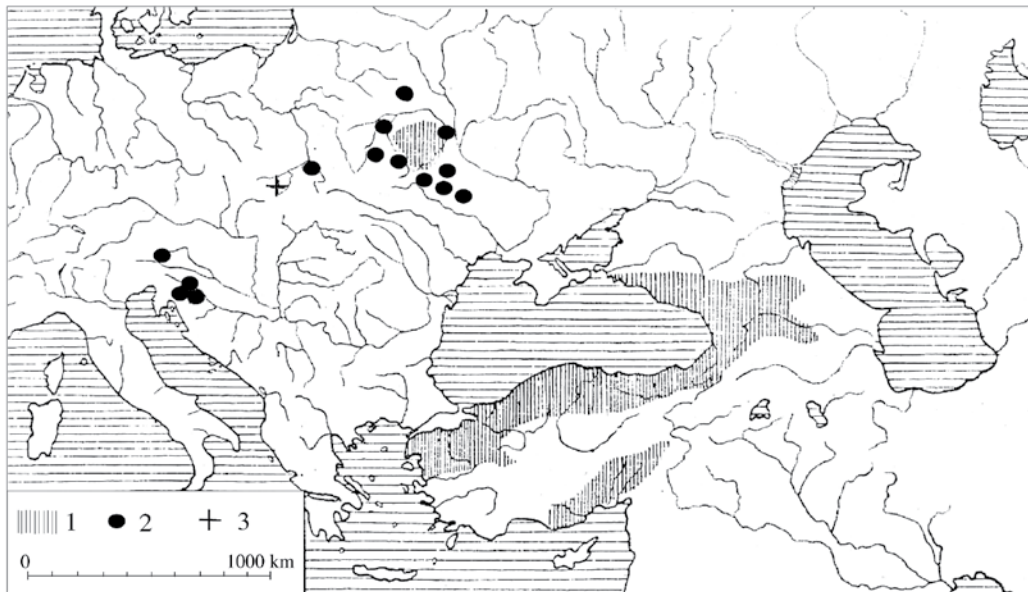


Fig. 1. Natural distribution of *Rhododendron luteum*.
1 – main range, 2 – small “islands”, 3 – paleobotanical localities

of the whole Polish cemetery, it was destroyed after 1970. Mikler's great legacy was over 60 gardens established or redesigned in Volhynia and Podolia, including restoration of the post-Jesuits gardens in Krzemieniec for the purpose of the botanic garden (Mielnik 2000, Rodiczkin, Rodiczkina 1995). Mikler's contribution in Poland as gardener-landscaper is described in his personal profile by Osińska (1976). The plant is said to be discovered in Volhynia approximately at the same time simultaneously by a Pole Antoni Pantaleon Howe, plant hunter and discoverer by profession, working for sir Joseph Banks and the Kew Gardens (Daszkiewicz 2000). The argument of precedence of either of the two botanists is still unsolved in the literature. There are however

no reasons to discredit the role of the Krzemieniec Botanic Garden, and above all Mikler himself and Willibald Besser spread of *Rhododendron luteum* in Europe. Nowadays it is also confirmed, by the way of presentation of the family, by living descendants of Dionizy Mikler from Poland and USA (Majdecki 2009, Mikler 2009, Śladami... 2009).

Cuttings (seeds?) gathered by Mikler were propagated by him in the orangery in Puławy, and later sold in the London plant market. The profits allowed him even to buy a small manor near Dubno (Melnik 2008). In the foreword to the first edition of the Plant Index of the Botanic Garden of the Lyceum of Krzemieniec Besser (1810) wrote that Mikler's great contribution to the garden was not only the garden's project but also his discovery by the Słucz river of a rare bush of azalea. The plant, according to Besser, was the garden's real ornament.

The spread of *Rhododendron luteum* across Europe is the contribution of the Botanic Garden of the Lyceum of Krzemieniec. The Lyceum was founded in



Fig. 2. Plant exchange of the Botanic Garden in Krzemieniec in years 1810-1821 (according to Oleszakowa 1971).

Barnaul 1, Berlin 35, Bila Cerkva 11, Brno 57, Brody 22, Brema 48, Charkov 44, Copenhagen 34, Dorpat 12, Dresden 36, Erfurt 51, Gatschina 7, Geneva 58, Gorenki 2, Göttingen 50, Halle 40, Hamburg 39, Hannover 49, Kamieniec Podolski 19, Klevan 16, Kollerniki 10, Königsberg 25, Kraków 28, KRZEMIENIEC 0, Krzeszowice 30, Landshutt 43, Leipzig 41 London 61, Madrid 63, Modena 46, Moscow 3, Munich 44, Naples 47, Niedźwiedź 29, Paris 62, Parma 56, Pavia 60, Pavlovsk 8, Peszt 31, Petersburg 9, Poltava 5, Poryck 21, Prague 37, Puławy 27, Rattenberg 45, Regensburg 42, Riga 13, Równe 23, Samostrzały 17, Schwetzingen 52, Sielec 15, Simferopol 6, Stockholm 24, Strasburg 54, Stuttgart 53, Torino 59, Trieste 38, Vienna 33, Vilnius 14, Warszawa 26, Wołoczyska 18, Wrocław 32, Zaleszczyki 20, Zürich 55, no data 4 near Poltava.



Fig. 3. Yellow Azalea (*Rhododendron luteum*) in continental mesotrophic oak-pine mixed forest (*Quercus roboris-Pinetum*) (phot. by J. Piórecki, 2009)

1802 by Tadeusz Czacki, who hired many eminent botanists, including Willibald Besser and Antoni Andrzejowski, discoverers of many new species of the Polish flora (*Betula oycoviensis* Besser, *Viola uliginosa* Besser, *Schivereckia podolica* Andr., *Aconitum besserianum* Andr., *Salvia dumetorum* Andr., etc.). Szafer (1964) writes: “By a lucky incident, at the very first year of the Krzemieniec Botanic Garden’s foundation, this beautiful bush unknown to anyone in Europe, was brought there”. The plant thrived in Krzemieniec, and as early as in 1812 the seeds were offered to other botanic gardens. In the Lyceum Registers (1810-1830) there are traces of numerous seed orders coming from Germany, France, Belgium, England and other countries (Macko 1951, Oleszakowa 1971).

Based on data from the Registers it is likely that already at the first half of 19th century *Rhododendron luteum* originating from Volhynian Polesia, was cultivated in most of European botanic gardens (Fig. 2). At present it can be easily found even in small private gardens.

It grows particularly well in mild climatic conditions. It is naturalized for instance in scattered localities in the UK, where it reproduces vegetatively by suckering. In Poland, apart of the natural population in Wola Zarczycka near Leżajsk, it grows well in Lower Silesia. One of the most beautiful collections is held in Arboretum in Wojśławice. The plants in the Bolestraszyce Arboretum, propagated from seeds from Wola Zarczycka (Piórecki 2008), are also very picturesque.

Sometimes Yellow Azalea is introduced into forest communities. For instance it was planted in the reserves

“Parkowe” in Złoty Potok and “Niebieskie Źródła” near Tomaszów Mazowiecki, also in the Forest Inspectorate (*Nadleśnictwo*) Rudka near Ciechanów. For the purpose of conservation of the anthropogenic locality, the reserve “Małecz” was created in the vicinity of the Małecz village. Yellow Azalea, originating from Volhynian Polesia, was planted there by the former forest owner count Jan Ostrowski (Hereźniak 2002).

At the end of May 2009, the time when Yellow Azalea is in full bloom, the authors travelled to Volhynian Polesia to visit several of the species populations described by eminent Polish botanists (Paczoski 1900, Macko 1930, Stecki, Jakubczyk 1932). To our surprise we have seen whole fields of Yellow Azalea, often covering 100% of the forest shrub layer (Fig. 3). The species optimum habitat is in moist mixed oak-pine forest (*Quercus roboris-Pinetum*) with pines dominating in the stand. It is also found, less abundantly though, in swamp pine forest (*Vaccinio uliginosi-Pinetum*), and seldom in broadleaf lime-hornbeam forest (*Tilio-Carpinetum*). The soil in all of these forest communities is very moist, and the pH of the top soil layer measured in H₂O is 3.56-3.93 (Dubiel, Piórecki 2010).

Forest communities with Yellow Azalea in Volhynia cover approximately 1.5 billion ha (Melnik 2000). In all localities the plants are very viable, in some cases it even regenerates better in forest clearances than in densely forested areas. Due to its abundant occurrence the species was not included into the list of protected plants in Ukraine.

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