

## *Epilobium pseudorubescens* A.K. Skvortsov (*Onagraceae*), a new invasive alien for the Polish flora

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During my visit to the University of Warmia and Mazury in Olsztyn I have discovered in OLTC (OLS) herbarium three specimens of *Epilobium pseudorubescens* A.K. Skvortsov, an invasive alien new to Poland: 1) Tyłkówko k/Pasymia, przy bazie "Energopolu", na osuszonym dnie stawu [ca. 20 km to SE from Olsztyn, Tyłkówko fishery ponds, drained pond bottom], 16.VII 1999, M. Środa (OLS 15277); 2) Michałki k/Pasymia, kompleks stawów rybnych "Michałki", staw po prawej stronie drogi Michałki – Miłuki, bliżej wsi Miłuki, na osuszonym dnie akwenu [ca. 20 km to SE from Olsztyn, Michałki fishery ponds, drained pond bottom], 17.VII 2001, M. Środa (OLS 16922) (a plant of *E. pseudorubescens* and a twig of *E. adenocaulon*); 3) Olsztyn, ok. 500 m na pd. od ul. Piłsudskiego i ok. 300 m na wsch. od ul. Białostockiej na Osiedlu Mazurskim, oczko wodne ok. 1 ha, brzeg zachodni [City of Olsztyn, SE part, bank of the water hole], 23.VII 2006, B. Korycińska (OLS 25642).

*E. pseudorubescens* is a member of *E. ciliatum* Raf. complex. This species was described by Skvortsov (1995) from Finland (with paratypes from Sweden and Russia), but its North American origin is discussed in the protologue. It was formerly known as *E. rubescens* auct., but this name proved to be misapplied (Skvortsov, 1995). *E. pseudorubescens* is readily recognized from *E. adenocaulon* by white petals (slightly rose in buds), light green shoots, and lanceolate leaves (oblanceolate in *E. adenocaulon*). These two species are often found growing together, but no transitions were recorded in mixed populations.

*E. pseudorubescens* is usually treated as a synonym of *E. ciliatum* s.l. in the European floras, but at least two separate taxa from this group are known to occur in the Eastern Europe (namely rose flowered *E. adenocaulon* and white flowered *E. pseudorubescens*). They are familiar to merely all Russian florists, and therefore history of their invasions is well-documented.

There is a gap of few decades between the invasions of *E. adenocaulon* and *E. pseudorubescens*. For instance, the first specimen of *E. adenocaulon* was collected in Vladimir Province of Russia in 1912 while *E. pseudorubescens* was collected here only in 1967 (Seregin, 2012). In Kaluga Province of Russia, the first record of *E. adenocaulon* dating back to 1909 is 66 years younger than a record of *E. pseudorubescens* (Reshetnikova et al., 2010).

White flowered *E. pseudorubescens* is still unknown (or was discovered just recently) in many areas where *E. adenocaulon* is a common plant. Finland presumed to be a starting ground of *E. pseudorubescens* invasion in the Old World (Piispala, 1964; Vinogradova et al., 2009). It reached now the Black Sea Coast near Sochi on the southern limit and Khabarovsk Krai on the easternmost limit of its secondary range (Skvortsov, 1995; Seregin, Shvedchikova, 2008). However, *E. pseudorubescens* is known to occur in Siberia only in scattered localities in Tomsk, Kemerovo, Novosibirsk, and Irkutsk provinces, Krasnoyarsk, Altai, and Zabaykalsky krais (reviewed by Ebel, 2008). General history of *E. pseudorubescens* and *E. adenocaulon* invasions in Russia including maps and photos is published recently in Russian (Vinogradova et al., 2009).

At the moment, *E. pseudorubescens* is recorded from Sweden, Finland, Russia, Ukraine, Belarus, and the Baltic states. So, the records from NE Poland were predictable. It should be mentioned that *E. adenocaulon* was first recorded for Poland in *Flora Polska* (1959). Since that time *E. pseudorubescens* could be seen, but not recognised by the Polish botanists. I could assume that in other Polish herbaria one can find more specimens of *E. pseudorubescens*.

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