

A NEW RECORD OF *OENOTHERA VILLOSA* (ONAGRACEAE) IN POLAND

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Abstract

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The paper presents data on a new locality of *Oenothera villosa* in north-eastern Poland. The species was discovered in the western part of Suwałki in 2013. Two individuals of this rare alien species were found growing in the former sand and gravel pit, where the town dwellers occasionally dump the garden waste. Distribution map of *O. villosa* in Poland, based on the ATPOL cartogram method, is provided.

Keywords: alien species, ATPOL cartogram method, distribution, *Oenothera villosa*, Poland.

Oenothera villosa Thunb. (Onagraceae) is a biennial herb of North American origin. Taxonomic treatment of this species depends on two different species concepts in the genus *Oenothera* L.: the American and the European (ROSTAŃSKI, 1982). According to DIETRICH et al. (1997), who represent the American concept, *O. villosa* is divided into two subspecies, i.e. *O. villosa* subsp. *villosa* and *O. villosa* subsp. *strigosa* (Rydb.) Dietrich & Raven. In this treatment, the broad sense of *O. villosa* is highlighted by the placement of *O. depressa* Greene and *O. canovirens* Steele into the synonymy of *O. villosa* subsp. *villosa*. *Oenothera villosa* understood as *O. villosa* subsp. *villosa* occurs natively in the central and the eastern parts of the United States and the southern part of Canada, and it was introduced to and naturalized in South America, Europe, Asia and Africa. It usually occupies disturbed open areas such as roadside verges, fields, waste places, beaches and stream banks (DIETRICH & RAVEN, 1976; DIETRICH et al., 1997; CHEN et al., 2007; LESIĆ, 2012; ANGELO & BOUFFORD, 2014). Following the European species concept in the genus *Oenothera*, *O. villosa* is treated in the stricter sense, being separated from *O. depressa* and *O. canovirens*

(ROSTAŃSKI, 1982; ROSTAŃSKI et al., 2004). In consequence, *O. villosa* differs from *O. depressa* and *O. canovirens* by its truncate teeth in the apex of capsule. *Oenothera villosa* has been recorded in Belgium, Poland and Norway (ROSTAŃSKI, 2006; WOŹNIAK, 2009; ROSTAŃSKI et al., 2010). In this paper, the species is treated in connection with the European species concept in the genus *Oenothera*.

In August 2013, a new locality of *Oenothera villosa* was discovered in the western part of Suwałki (north-eastern Poland). It lies within the square unit FB08 (10 km × 10 km) of the ATPOL cartogram grid (ZAJĄC, 1978). Two individuals of *O. villosa* were found in the former sand and gravel pit (previously known as Żwirownia PKP), where the town dwellers occasionally dump the garden waste. This place is occupied by many alien plant species, including archaeophytes and kenophytes, i.e. *Amaranthus retroflexus* L., *Ballota nigra* L., *Bromus tectorum* L., *Capsella bursa-pastoris* (L.) Medik., *Cichorium intybus* L., *Corispermum leptopterum* (Asch.) Iljin, *Descurainia sophia* (L.) Webb ex Prantl, *Echinochloa crus-galli* (L.) P.Beauv., *Erigeron annuus* (L.) Pers., *E. canadensis* L., *Euphorbia helioscopia* L., *E. pepylus* L., *Galinsoga parviflora* Cav., *Geranium pusil-*

lum Burm. f. ex L., *Impatiens glandulifera* Royle, *Lamium purpureum* L., *Melandrium album* (Mill.) Garcke, *Papaver dubium* L., *Senecio vulgaris* L., *Setaria viridis* (L.) P. Beauv., *Solanum nigrum* L., *Thlaspi arvense* L., *Veronica persica* Poir., and *Viola arvensis* Murray. According to TOKARSKA-GUZIŁ ET AL. (2012), *O. villosa* belongs to established alien species in the Polish flora (kenophytes), and it has no invasive capacity. In the flora of Suwałki, it should be viewed as a casual alien plant, because there is a need of further observations on its local persistence and spread. Specimens of *O. villosa* from the newly discovered locality are deposited at the Herbarium of the Institute of Botany of Jagiellonian University in Kraków (KRA 0436635, 0436636).

National distribution of *Oenothera villosa* is poorly recognized (Fig. 1). It has been reported from three stands in the south-western part of Wrocław in the Lower Silesian Voivodeship, south-western Poland (WOŹNIAK, 2009). Presumably, *O. villosa* is more frequent in the Polish urban areas. The number of its localities is underestimated due to the confusion with *O. canovirens*, and a critical revision on herbarium materials is required.

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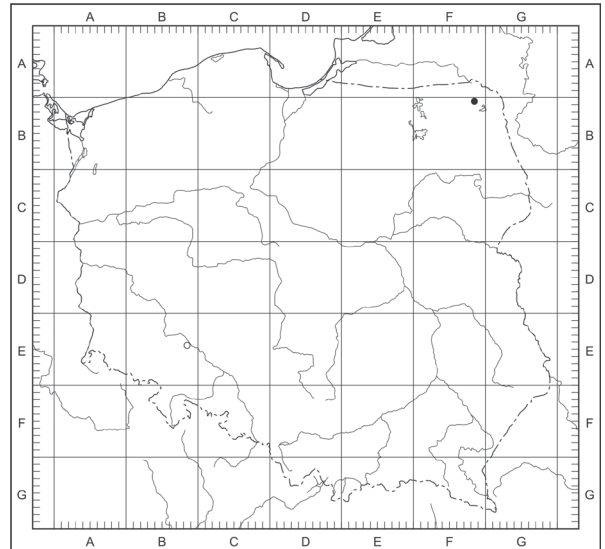


Fig. 1. Distribution of *Oenothera villosa* in Poland: ○ – known locality (WOŹNIAK, 2009); ● – new locality

NAUJA *OENOTHERA VILLOSA* (ONAGRACEAE) RADVIETĖ LENKIJOJE

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Santrauka

Straipsnyje pateikiami duomenys apie naują *Oenothera villosa* radvietę Šiaurryčių Lenkijoje. Ji aptikta 2013 m. vakarinėje Suvalkų miesto dalyje. Du šios retos svetimžemės rūšies individai buvo aptikti buvu-

siame smėlio ir žvyro karjere, į kurį miesto gyventojai kartkartėmis išverčia sodo ir daržo atliekas. Pateiktas *Oenothera villosa* paplitimo Lenkijoje žemėlapis, parengtas naudojant ATPOL kartografavimo metodą.