

AGASTACHE RUGOSA (LAMIACEAE), A NEW CASUAL ALIEN IN THE FLORA OF POLAND
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Abstract

Pliszko A., 2015: *Agastache rugosa* (Lamiaceae), a new casual alien in the flora of Poland [*Agastache rugosa* (Lamiaceae), nauja atsitiktinė svetimkraštė rūšis Lenkijos floroje]. – Bot. Lith., 21(1): 74–76.

In September 2014, the casual occurrence of *Agastache rugosa* in Poland was confirmed. It was found on a ground heap between fallow and arable fields in Łbiska near Zalesie Górne in the community of Piaseczno, the Masovian Voivodeship (coordinates: 52°1'33.06" N, 21°0'27.72" E; the ATPOL cartogram unit: ED46). This rare species of Asian origin is cultivated in bee-plant gardens of some beekeepers in Poland. The map of distribution and mode of introduction with garden waste from horticultural farms were presented.

Keywords: *Agastache*, casual alien, distribution, garden escape, ornamental plant, Poland.

Agastache rugosa (Fisch. & C.A. Mey.) Kuntze (Lamiaceae, Nepetoideae, Mentheae), a perennial herb native to temperate regions of eastern Asia, is the only Asian representative of the genus *Agastache* J. Clayton ex Gronov. It belongs to *Agastache* sect. *Agastache* Lint & Epling (formerly known as *Lophanthus* sect. *Chiastandra* Benth.), which consists of species with the antrorsely bent filaments of the upper stamens (LINT & EPLING, 1945; VOGELMANN, 1985; SANDERS, 1987; FUENTES-GRANADOS et al., 1998). It is widely distributed in China, Japan, Korea, Taiwan, and southeastern Russia, where is found in meadows and rocky grass-covered slopes, especially along the streams and valleys (LINT & EPLING, 1945; OHWI, 1965; POYARKOVA, 1976; VOGELMANN, 1985; LI & HEDGE, 1994; NAVARRA, 2004; SMALL, 2006).

Agastache rugosa has been used in traditional Chinese medicine to treat fever, colds, headaches, angina pains, nausea and vomiting, diarrhea and cholera (PERRY & METZGER, 1980; NAVARRA, 2004). It is cultivated in eastern Asia, Europe, North America and Australia as an ornamental, medicinal and bee plant, and as a source of flavouring and

food spice (FUENTES-GRANADOS et al., 1998; SMALL, 2006; WHITELEY, 2011; RANDALL, 2007; ZIELIŃSKA & MATKOWSKI, 2014). It is regularly found as an escape from cultivation, usually near gardens and on rough ground (FUENTES-GRANADOS et al., 1998). Its casual occurrence has been confirmed in the United Kingdom (CLEMENT, 2005), France (VERLOOVE, 2007) and Belgium (VERLOOVE & LAMBINON, 2014). It is naturalised in Laos, and, moreover, it is treated as an environmental weed or as a horticultural species with the invasive potential in the United States (ANDERSON, 2007; RANDALL, 2012 and literature cited therein). In Poland, the plant is cultivated in bee-plant gardens of some beekeepers (JABŁOŃSKI & KOŁTOWSKI, 2001).

Agastache rugosa is very similar in habit to the North American *A. foeniculum* (Pursh) Kuntze and *A. urticifolia* (Fisch. & C.A. Mey.) Kuntze, however, it has abaxially sparsely hairy leaves, whereas those of *A. foeniculum* are densely hairy, and it has shorter corollas than *A. urticifolia* (DOUGLAS et al., 1999; WHITELEY, 2011). According to WHITELEY (2011), many *Agastache* hybrids have been cultivated under cultivar names.

The first casual occurrence of *Agastache rugosa* in Poland was observed in Łbiska near Zalesie Górne in the community of Piaseczno, the Masovian Voivodeship (coordinates: 52°1'33.06" N, 21°0'27.72" E; altitude: 110 m) on 17 September 2014. According to the ATPOL cartogram method (ZAJĄC, 1978), this place lies within the square ED46 (Fig. 1). The plant, which was well branched and appeared to be a small clonal colony (consisting of 10 stems), was found on a ground heap between fallow and arable fields in the company of *Cucurbita maxima* Duchesne, *Epilobium ciliatum* Raf., *Panicum capillare* L., *Rudbeckia hirta* L. and *Solidago canadensis* L. The habitat suggests that the plant was introduced with garden waste from nearby located horticultural farm. The identity of the collected specimens was determined on the basis of diagnostic features given by POYARKOVA (1976), LI & HEDGE (1994), FUENTES-GRANADOS et al. (1998) and WHITELEY (2011).

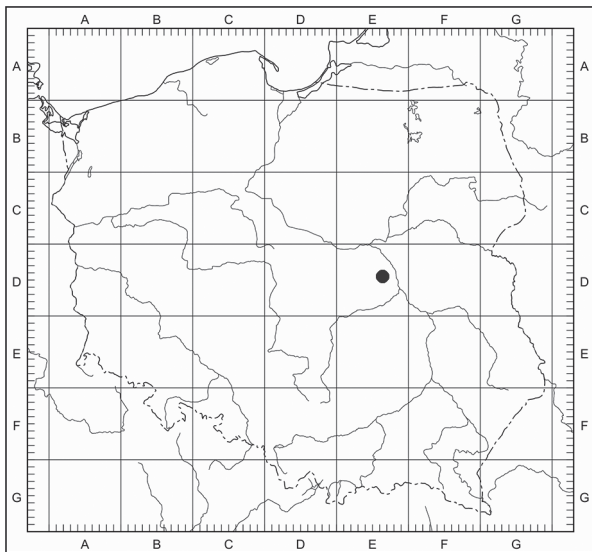


Fig. 1. Distribution of *Agastache rugosa* in Poland

Agastache rugosa is the second species of the genus *Agastache* recorded in Poland, following the discovery of *A. urticifolia* in Kraków by GUZIK & PACYNA (2003). The authors assumed that *A. urticifolia* was temporarily introduced with the soil used for recultivation of the sediment tanks of the former soda factory. In consequence, the plant joined to the Polish flora as a casual alien (ephemerophyte) (MIREK et al., 2002; URBISZ, 2011; TOKARSKA-GUZIK et al., 2012). Since the herbarium specimens of *A. urticifolia*

from Kraków appear to be lost, it is impossible to confirm the correctness of identification of this plant. Presumably, *A. urticifolia* was misidentified with *A. rugosa*, what frequently happens in Europe and North America, especially in horticulture (FUENTES-GRANADOS et al., 1998; VERLOOVE, 2014). Specimens of *A. rugosa* are deposited at the Herbarium of the Institute of Botany of Jagiellonian University in Kraków (KRA).

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AGASTACHE RUGOSA (LAMIACEAE), NAUJA ATSIKTIKINĖ SVETIMKRAŠTĖ RŪŠIS LENKIJOS FLOROJE

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Santrauka

2014 metų rugsėjį buvo patvirtintas atsitiktinis *Agastache rugosa* radinys Lenkijoje. Augalas buvo aptiktas ant žemių krūvos tarp dirvono ir dirbamo lauko Łbiska kaime, esančiame netoli Zalesie Górne, Masovian vaivadijoje (geografinės koordinatės:

52°1'33.06"N/21°0'27.72"E; ATPOL kartografinis vienetasis: ED46). Ši reta iš Azijos kilusi rūšis yra medinga, Lenkijoje auginama bitininkų. Pateikiamas paplitimo žemėlapis ir nurodoma, kad augalas iš sodininkystės ūkio į aplinką pateko su sodo atliekomis.