

**The distribution of *Typha laxmanii* Lepech. –
new kenophyte in the Opole Silesia**

*Rozmieszczenie palki Laxmana Typha laxmanii Lepech. –
nowego kenofita na Śląsku Opolskim*

Arkadiusz Nowak

ABSTRACT: *Typha laxmanii* was firstly noticed in Opole Silesia. It is considered to be probably expansive kenophyte, which is supposed to invade new semi-natural and anthropogenic habitats. During the field researches on the mineral surface excavation, five locations of this species was found in limestone and basalt quarries and also in sand-pit in the middle and south part of the region.

KEY WORDS: *Typha laxmanii*, Opole province, quarries, rush species, anthropogenic habitats

The Laxmann reed-mace *Typha laxmani* is a new kenophyte in polish flora. The first location of this species was noticed in 1988 in limestone quarry close to Kielce (Baryła et al. 2004). According to Sanda et al (2003) it has a euroasiatic-continental character. Oberdorfer (1994) incorporates *Typha laxmani* to the east-mediterranean element.

Typha laxmanii is a perennial rhizomous plant of inflorescence shoots up to 150 cm high. It grows in shallow, not more than 30 cm water bodies with unstable water level, often periodically drying up.

In Poland *Typha laxmanii* is known from the sand-pits, chalk-pits and quarries in the Upper Silesia (Czyłok, Baryła 2003) Małopolskie and Świętokrzyskie provinces (Baryła et al. 2004). This species was also noticed in Southeast Europe, among others in Czech Republic (e.g. Dostál 1984, Kubát 2002), Slovakia (e.g. Rybniček 1981, Rozložník 1998), south Germany (Oberdorfer 1994), north Italy (Pignatti 1982), Romania (e.g. Nedelcu 1968, 1969), Slovenia (Kaligrič & Jogan 1996).

Within natural range *Typha laxmanii* occurs on riverbanks, river flooding areas and also on anthropogenic habitats like rice fields. The water pH index fluctuates

around 7,10 – 8,30 (Nedelcu 1968, 1969). In Opole Silesia all populations was found in shallow waters (5-30 cm), running dry at the end of summer with pH index of 7,00 – 8,00.

Population size in existing sites is quite large and it ranges from hundreds specimens at the site in Kamień Śląski and Kotlarnia to hundreds of thousands stated in Strzelce Opolskie.

The locations (Fig.1.)

1. Strzelce Opolskie, N 50⁰ 31' 10'', E 18⁰18'05''; ATPOL square: CF18. The population of *Typha laxmanii* is located in limestone out of work quarry. In the bottom of the excavation the extensive shell water reservoir creates the habitat for considered species. The aggregation of *Typha* occupies almost 1 ha. The deepness of the water oscillate about 0-15 cm.

2. Ligota Tułowicka, E 17⁰ 43' 05''; N 50⁰ 35' 23''; ATPOL square: CF03. This station is located in basalt quarry still in operation. *Typha laxmanii* grows alongside the drainage ditch and also on wet gravel on the bottom of the excavation. The population of the considered species covers about 300m².

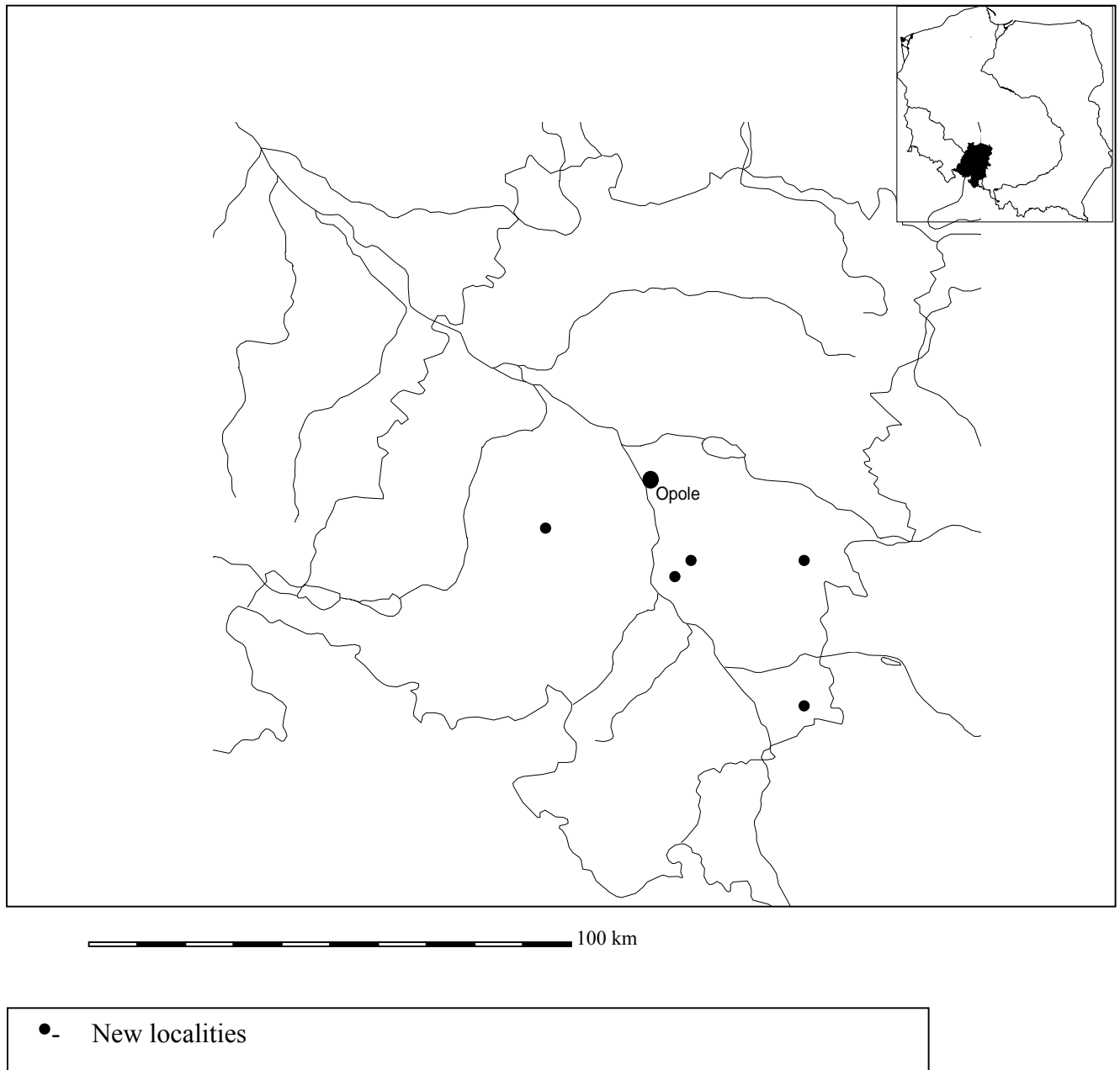
3. Kamień Śląski, N 50⁰ 32' 54'', E 18⁰ 04' 47''; ATPOL square: CF16. This population occurs alongside the bottom road used in restoration works. *Typha* occupies about 150m² on two patches on the opposite sites of the road. When found, there was no water present on ground. *Typha laxmani* grew on muddy lime deposit.

4. Górazdze, N 50⁰ 31' 69'', E 18⁰ 02' 45''; ATPOL square: CF16. In Kamień Śląski *Typha laxmani* occurs in shallow water reservoir located on the bottom of limestone quarry, very close to the wall under exploitation. The water deepness in place where *Typha* occurs fluctuates about 10-30 cm. The *Typha* assemblage occupies about 200m².

5. Kotlarnia, N 50⁰ 16' 18'', E 18⁰ 20' 33''; ATPOL square: CF48. The aggregation of *Typha laxmanii* was found in the middle of extensive san-pit excavation. The bottom of the pit basin is a mosaic of different ditches, channels, artificial lakes and also sand heaps, embankments etc. *Typha laxmanii* occupies about 50m² in shell water body.

Typha laxmanii is supposed to be expansive kenophyte in Opole Province. That's why it should be monitored to have indispensable information to implement eventual controlling actions. At present the species exists only in anthropogenic habitats, but, the species composition of the association has semi-natural character. So the plant would be probably able to expand into semi-natural and natural habitats on rivers, channels, and other water bodies shores.

Fig. 1 Distribution map of *Typha laxmanii* Lepech. in Opole Silesia



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Authors' address:

Arkadiusz

Nowak, Department of Biosystematics, University of Opole,

ul. Oleska 22, 45-052 Opole, Poland,

e-mail: anowak@uni.opole.pl

Streszczenie

Pałka Laxmana *Typha laxmanii* została po raz pierwszy odnaleziona na terenie województwa opolskiego. Gatunek ten jest nowym kenofitem w Polsce o prawdopodobnie ekspansywnej tendencji, co może skutkować przechodzeniem tego taksonu do semi-naturalnych i naturalnych biocenoz. Podczas badań terenowych na obszarze wyrobisk odkrywkowych pięć nowych stanowisk *Typha laxmanii* zostało odnalezionych w kamieniołomach wapienia i bazaltu oraz w piaskowni w środkowej i południowej części regionu.