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A NEW LOCALITIES OF *LIRIODENDRON TULIPIFERA* L. IN THE CENTRAL PART OF POLISH POMERANIA

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Abstract

The measurements and the observations of *Liriodendron tulipifera* L. in the central part of Polish Pomerania were conducted in the years 2002-2005. The height of the trees was measured with the use of Suunto height gauge, and the trunk perimeter with the aid of the tape measure in the height of 130 cm of the trunk length measured from the soil level. During researches we have found 9 new locations of yellow-poplar trees. The largest trunk perimeter – 330 cm, possessed the individual of it in Skoczów Kołobrzeski. The highest yellow-poplar tree was measured in Strzykocin. The tree reached the height of 27 m.

Key words: *Liriodendron tulipifera* L., trunk perimeter, ATPOL grid, Pomeranian Region

INTRODUCTION

Liriodendron tulipifera L. (*Magnoliaceae*) grows throughout the Eastern United States from southern New England, west through southern Ontario and Michigan, south to Louisiana, then east to north-central Florida (Little 1979). This species was introduced to cultivation in Europe (Germany) in 1697 (Szymanowski 1959). Some first individuals of yellow-poplar trees appeared in Poland in the end of 18th century. Most of the *Liriodendron tulipifera* L. trees in Poland were planted at the turn of 18th and 19th century (Czekalski and Danielewicz 1985). *Liriodendron tulipifera* L. follows the cycle of vegetative and generic creation and as a result creates seeds in Polish climate conditions. *Liriodendron tulipifera* L. is a tall, deciduous, long-lived broadleaf tree. The leaves are alternate with a distinctive tuliplike shape. The flowers are tuliplike in size and shape. The fruit is a conelike structure consisting of many winged samaras on a central stalk. Yellow-poplar has a singly occurring, perfect flower 4 to 5 cm wide, with six petals varying in color from a light yellowish green at the margin to a deep orange band at the center. The trees usually produce their first flowers at the age of 15-20 years and many continue production for 200 years (Renshaw and Warren 1958, Olson 1969). Probably the oldest individual of yellow-

-poplar tree grows in locality in Pożarowo (community Wronki, Wielkopolska Province). In 2004 the tree was 220 years old, reached the height of 28 m and 454 cm of trunk perimeter (Korszun and Zalewska 2005).

The aim of this work was to present a new locations of *Liriodendron tulipifera* L. (yellow-poplar tree) growing in the area of central part of Polish Pomerania.

MATERIALS AND METHODS

Materials for this paper were collected in the years 2002-2005. Site researches were conducted in the area of central part of Polish Pomerania. Central part of Polish Pomerania is understood here to be the area between the rivers Łeba in the east and Parsęta in the west. According to Kondracki (2000) it is the east part of Western Pomerania. Distribution of *Liriodendron tulipifera* L. new localities is presented in Fig. 1. For each new locality the number of ATPOL square is given, according to system applied in the *Distribution atlas of vascular plants in Poland* (Zajac 1978). Information about location of yellow-poplar tree growing in the central part of Polish Pomerania was obtained from own observations. The height of trees [in m] was measured with the aid of Finnish height gauge Suunto PM 1520, and the trunk perimeter [measured in cm] with the aid of tape measure at the height of 130 cm of the trunk measured from the soil level.

The nomenclature of vascular plants is after Mirek et al. (2002).

CHARACTERISTICS OF LOCALITIES

As a result of the personal site research in years 2002-2005 the yellow-poplars in 9 localities were measured (Fig. 1).

Bobrowniki – community Damnica, Gdańsk Province (CA 62) – in ex-manor park, young tree. The height of the tree 3.6 m; the trunk perimeter at the basis of the trunk – 24 cm (3.6 m/24 cm),

Boboliczki – community Bobolice, Szczecin Province (BB 27) – in ex-manor park, three young trees (2 m/16 cm; 2.5 m/20 cm; 3.5 m/22 cm),

Janowice – community Nowa Wieś Lęborska, Gdańsk Province (CA 54) – in ex-manor park (16 m/148 cm with *Hedera helix* L.),

Manowo – community Manowo, Szczecin Province (BB 05) – environmental foot-path “Czapla Góra” (2.8 m/24 cm),

Skoczów Kołobrzeski – community Dygowo, Szczecin Province (BB 02) – in ex-manor park (23 m/330 cm),

Strzykocin – community Brojce, Szczecin Province (AB 29) – in ex-manor park (27 m/212 cm),

Wojęcino – community Bobolice, Szczecin Province (BB 25) – in ex-manor park (9 m/210 cm), many suckers,

Słupsk – Gdańsk Province (CA 70) – Matejki Street, young tree (2.1 m/17 cm),

Kleszcze – community Sianów, Szczecin Province (BB 95) – in a devastated ex-manor park. There were 4 suckers, one of them was 4.5 m high and with the trunk perimeter 39 cm. These suckers were found near the rotted stem.

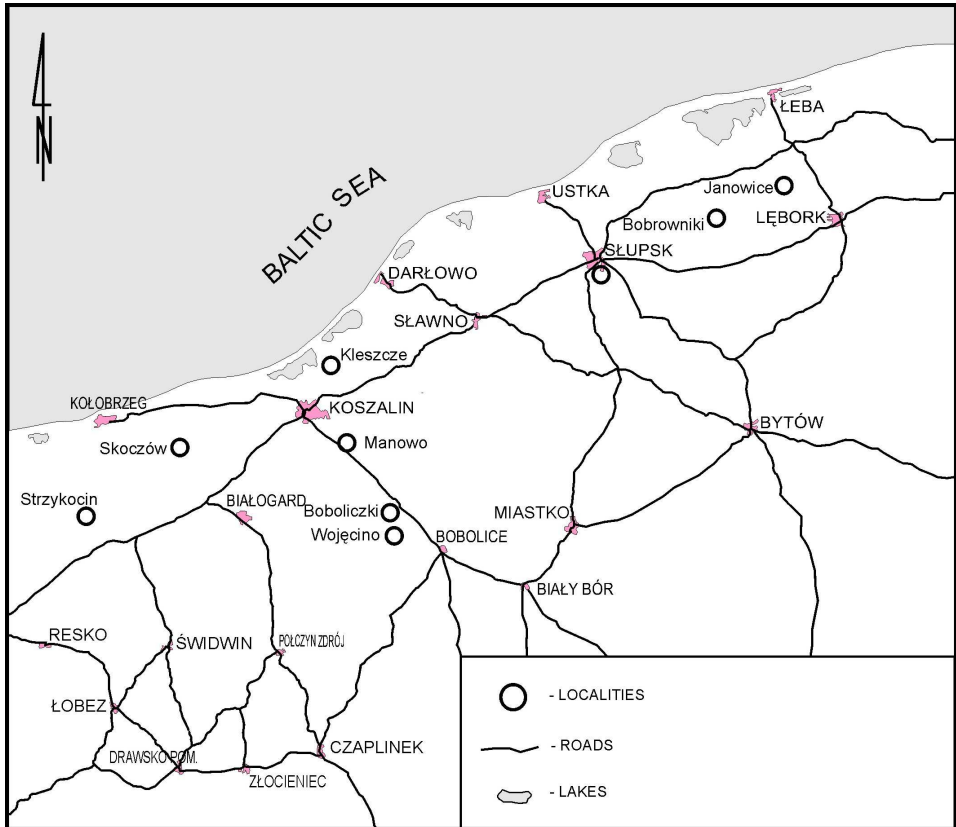


Fig. 1. New localities of *Liriodendron tulipifera* L. in central part of Polish Pomerania

DISCUSSION

Liriodendron tulipifera L. is known as an uncommon taxon. There are two works describing population of yellow-poplar trees – a paper about its existence in Poland (Czekalski and Danielewicz 1985) and a layout describing the trees in the Pomerania (Korszun and Zalewska 2005).

The paper of Korszun and Zalewska (2005) contains some not updated information about yellow-poplar tree. These information involve the village Cecenowo (community Główny, Gdańsk Province), where during researches in 2002 we have a found lifeless tree (Truchan and Sobisz 2005). There was no information about the yellow-poplar tree from Machowino (community Ustka, Gdańsk Province), which

was known by Czekalski and Danielewicz (1985) and which locality was accepted in 2005 (Sobisz and Antkowiak 2005).

Three out of new found yellow-poplar trees should be protected by law (Rabiński 1994). They grow in a district of ex-manor parks in Skoczów Kołobrzeski, Strzykocin and Wojęcino.

REFERENCES

- Czekalski M., Danielewicz W., 1985. Tulipanowiec amerykański (*Liriodendron tulipifera* L.) (Yellow – poplar tree in Poland). *Roczniki AR*, Poznań, 12, 27-53, (in Polish).
- Kondracki J., 2000. Geografia regionalna Polski. (Regional geography of Poland). PWN, Warszawa, (in Polish).
- Korszun S., Zalewska J., 2005. Tulip tree in Poland's Pomerania. *Dendrobiology*, 53, 35-43.
- Little E. L. Jr., 1979. Checklist of United States trees (native and naturalized). U.S. Department of Agriculture, Agriculture Handbook 541. Washington, DC.
- Mirek Z., Piękoś-Mirkowa H., Zając A., Zając M., 2002. Flowering plants and pteridophytes of Poland. A checklist. Władysław Szafer Institute of Botany, Polish Academy of Sciences.
- Olson D. F., Jr., 1969. Silvical characteristics of yellow-poplar (*Liriodendron tulipifera* L.). USDA Forest Service, Research Paper SE-48. Southeastern Forest Experiment Station, Asheville, NC, 16 p.
- Rabiński J., 1994. Prawna ochrona drzew. (Legal tree protection). Green Park, Warszawa, (in Polish).
- Renshaw J. F., Warren T. D., 1958. Silvical characteristics of yellow-poplar. USDA Forest Service, Station Paper 89. Southeastern Forest Experiment Station, Asheville, NC, 18 p.
- Sobisz Z., Antkowiak W., 2005. Materiały do flory naczyniowej miasta i gminy Ustka. (Materials to the vascular flora of the town and Commune Ustka). *Ślupskie Prace Biol.*, 2, 97-104, (in Polish).
- Szymanowski T., 1959. Zagadnienie aklimatyzacji obcych drzew w Polsce. (Issue of acclimatization of the foreign trees in Poland). *Ochrona Przyrody* 26, 261-319, (in Polish).
- Truchan M., Sobisz Z., 2005. Parki podworskie wschodniej części Wysoczyzny Damnickiej. (Ex-manor parks of the eastern part of Damnica Plateau). *Ślupskie Prace Biol.*, 2, 147-156, (in Polish).
- Zając A., 1978. Założenia metodyczne „Atlasu rozmieszczenia roślin naczyniowych w Polsce”. (Methodical assumptions of „Distribution Atlas of vascular plants of Poland”). *Wiad. Bot.*, 22,3, 145-155, (in Polish).

NOWE STANOWISKA *LIRIODENDRON TULIPIFERA* L. NA POMORZU ŚRODKOWYM

Streszczenie

Badania nad występowaniem tulipanowca amerykańskiego *Liriodendron tulipifera* L. na obszarze Pomorza Środkowego były prowadzone w latach 2002-2005. Wysokość drzew mierzono przy pomocy wysokościomierza Suunto PM-1520, a obwody drzew mierzono na wysokości 130 cm od podstawy pnia. W trakcie badań stwierdzono 9 nowych stanowisk tulipanowca. Drzewo o największym obwodzie (330 cm) znajduje się w parku podworskim w Skoczowie Kołobrzeskim, natomiast najwyższe (o wysokości 27 m) stwierdzono w parku podworskim w Strzykocinie.