

Lilium martagon L. in former manor parks and Protestant cemeteries in the central part of Polish Pomerania

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Abstract: The occurrence of *Lilium martagon* in former manor parks and Protestant cemeteries was studied. The species was found in 7 former manor parks i.e. Borkowo, Ciemino, Dąbrówka Bytowska, Duninowo, Moltowo, Zaleskie, Zdrzewno, and in 7 Protestant cemeteries situated in villages Budowo, Bukowo Morskie, Chotkowo, Kluki, Kopaniewo, Roszczyce, Smołdzino. The size of its populations varied from a few to around 1000 individuals.

Key words: *Lilium martagon*, former manor parks, Protestant cemetery, Pomerania region

Lilium martagon L. (Turk's cap lily) is widely distributed in Europe and west Siberia, covering almost the whole of Europe (except for the British Isles, Scandinavia, the Netherlands, and the north of Russia)

and in Asia it reaches Lake Baikal (Meusel *et al.* 1965). In Poland *L. martagon* was in the past numerously noted in the Carpathian Mountains, in the highland and in the Małopolska Upland (Raciborski 1919). Nowadays it is

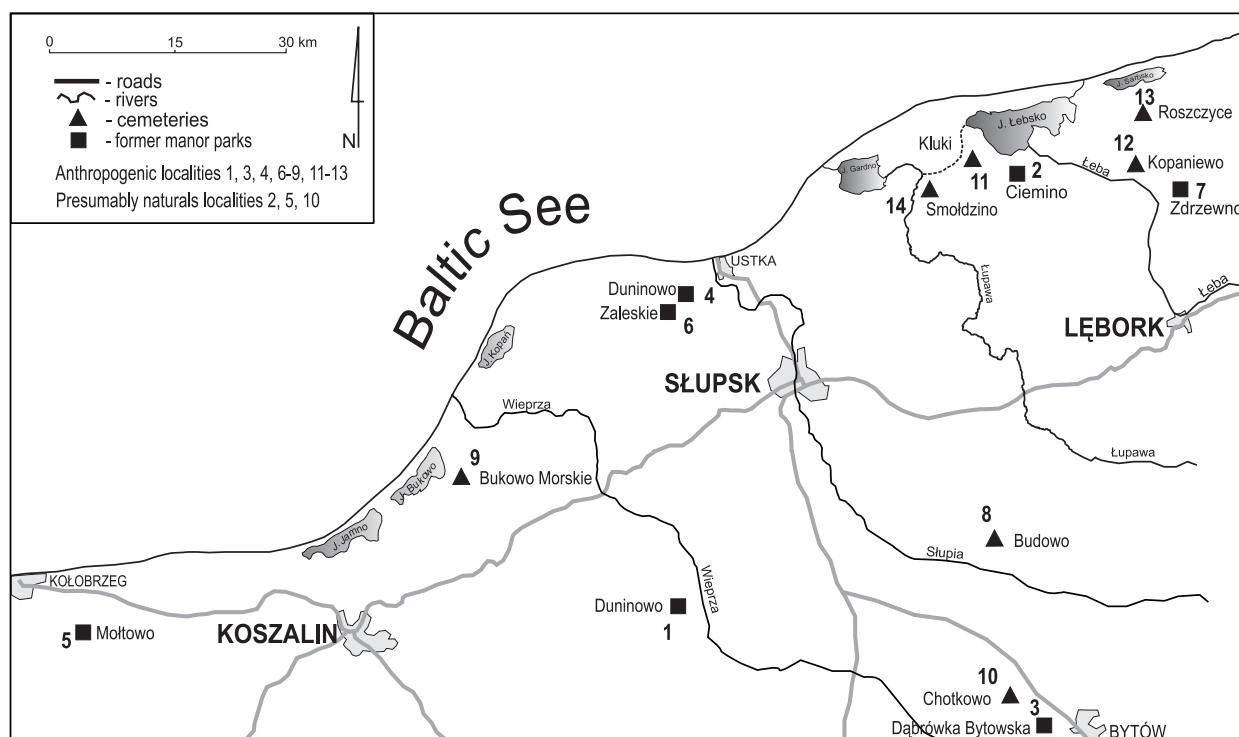


Fig. 1. Distribution of *Lilium martagon* in the central part of Polish Pomerania

still fairly common in Poland except for the Lubuska Land and Pomerania, where it is found only rarely (Zajac & Zajac 2001). Żukowski & Jackowiak (1995) classified it as vulnerable (V) in Pomerania and Wielkopolska. In the Gdańsk region it is nearly threatened (NT) because of the decline of its local populations (Markowski & Buliński 2004). From 1946, Turk's cap lily belongs to the species under strict species conservation in Poland (Szafer 1952; RMS 2004).

Lilium martagon is characteristic of broad-leaved forests of the order *Fagetalia sylvaticae* (Matuszkiewicz 2001). Sites of occurrence of *L. martagon* in the examined area were given, for example, by Misiewicz *et al.* (1993),

Filinger (1995), and Piotrowska *et al.* (1997). Those authors defined them as anthropogenic sites.

The aim of this study was inventory-making of the places of occurrence of *L. martagon* in the central part of Polish Pomerania in the former manor parks and Protestant cemeteries.

The study area lies between the Parsęta River in the west and the Łeba River in the east; according to Kondracki (1998) it is the east part of the region called 'Pomorze Zachodnie'. Field research was conducted in 2002-2005 in 45 former manor parks and 28 Protestant cemeteries. Over 50-60 years ago most of the cemeteries and former manor parks stopped to be managed because

Table 1. List of *Lilium martagon* localities in the central part of Polish Pomerania

Number and name of locality	ATPOL square	Characteristic of population
Former manor parks		
1. Borkowo	BA97	A few individuals growing near the ruins of the grave of the former owners, von Manteuffel and von Natzmer, by the end of the monumental hornbeam alley.
2. Ciemino	CA52	Around 800 individuals under the canopy of trees (<i>Carpinus betulus</i> and <i>Fagus sylvatica</i>).
3. Dąbrówka Bytowska	CB02	About 30 individuals growing next to concrete wall separating the park from the old sheep house and the land-steward's house.
4. Duninowo	BA68	Six individuals found on the island of the manor pond.
5. Mołtowo	BB11	Over 1000 individuals growing in a beech stand (<i>Fagus sylvatica</i>) behind the manor house, under the canopy of the old fragment of the hornbeam alley (<i>Carpinus betulus</i>) next to the former land-steward's house and the crops warehouse.
6. Zaleskie	BA68	Around 1000 individuals growing under the canopy of horse-chestnut trees (<i>Aesculus hippocastanum</i>) and the monumental ash tree (<i>Fraxinus excelsior</i>) with the trunk circumference of 360 cm (Sobisz & Truchan 2005).
7. Zdrzewno	CA54	17 individuals, in the vicinity of the hornbeam alley and a patch of the butterbur <i>Petasites hybridus</i> .
Protestant cemeteries		
8. Budowo	CA82	Around 50 individuals grow next to preserved fragments of the stone fencing of the building situated near the closed Catholic cemetery. <i>L. martagon</i> is accompanied by: <i>Actaea spicata</i> , <i>Aquilegia vulgaris</i> , <i>Digitalis grandiflora</i> , <i>Galanthus nivalis</i> , <i>Hepatica nobilis</i> , and <i>Ribes nigrum</i> . There is <i>Lonicera periclymenum</i> climbing on the preserved gate poles. In this locality, reported first by Głuchowska <i>et al.</i> (1998), the population of this taxon is extending its area.
9. Bukowo Morskie	BA85	132 individuals growing in the part of the Protestant cemetery bordering on a Catholic cemetery along the hornbeam tree line <i>Carpinus betulus</i> .
10. Chotkowo	CB02	Around 70-80 individuals grow next to granite graves of von Puttkamer family (from 1896-1941), the last owners of the village. The destroyed fragments of the gravestones are overgrown with <i>Hedera helix</i> and <i>Vinca minor</i> . Next to a big cast-iron cross, several dozen specimens of <i>Aconitum variegatum</i> were noted.
11. Kluki	CA42	A few individuals grow behind Charlotta Klick's grave, who was the founder of this village and nowadays constitutes a museum. This site is threatened because of intensive tourism. (It is visited by almost 8000 tourists every year – oral information from the workers of the museum).
12. Kopaniewo	CA54	Around 300 individuals of <i>L. martagon</i> were noted under the canopy of <i>Picea abies</i> , <i>Sambucus racemosa</i> and <i>Syringa vulgaris</i> , where graves of French soldiers are situated. Next to the grave of the von Zimdars family (the former owners of the area), around 90 individuals of the lily were noted.
13. Roszczyce	CA44	About a dozen individuals of <i>L. martagon</i> under the canopy of <i>Acer pseudoplatanus</i> , in the old Protestant cemetery, currently bordering a church, next to a bell tower. The Turk's cap lily was accompanied by a few specimens of <i>Aquilegia vulgaris</i> .
14. Smółdzino	CA51	156 individuals next to cast-iron fences of the gravestones surrounded by the brushwood of hazel <i>Corylus avellana</i> and the European elder <i>Sambucus nigra</i> .

of the 2nd World War and the subsequent political changes. Many of them are distant from human settlements, so their limited penetration (particularly in the case of Protestant cemeteries) favoured renaturalization of those habitats.

We found 13 new localities of *L. martagon* in the study area and confirmed a locality reported earlier (Głuchowska *et al.* 1998). Seven of them are situated in former manor parks and 7 in Protestant cemeteries (Table 1). For each new locality of *L. martagon* the number of ATPOL square is given, according to the system applied in the *Distribution Atlas of Vascular Plants in Poland* (Zajac 1978). Distribution of these localities is presented in Fig. 1.

Most of the above-mentioned places of occurrence of *L. martagon* are probably anthropogenic. In spite of the absence of source materials about the pre-war flora

of the Protestant cemeteries, we suppose that *L. martagon* was intentionally introduced as an ornamental species. However, in the area of some former manor parks and cemeteries its origin is disputable, for instance in Ciemino, Chotkowo and Mołtowo. In those localities natural origin cannot be excluded. Indeed, most of the preserved parks in the central part of Polish Pomerania were created on the basis of the local vegetation, forests and groups of trees. In some cases cemeteries were situated in the vicinity of a mansion and a park, which was a part of an old forest. Therefore at least in some places the occurrence of this species may be natural, particularly that *L. martagon* has been found recently in a rich sub-Atlantic dry forest *Stellario holostea-Carpinetum betuli* Oberd. 1957 near Darłowo (Prajs *et al.* 2003).

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