



A NEW LOCALITY OF *CEPHALANTHERA RUBRA* (L.) RICH. (ORCHIDACEAE) IN LOWER SILESIA

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ABSTRACT. The paper presents a new locality of *Cephalanthera rubra* identified in summer 2015 in the Milicz Forest District, northern Lower Silesia, as well as describes potential threats, characteristics and habitat of the population.

KEY WORDS: *Cephalanthera rubra*, Orchideaceae, Milicz, Lower Silesia

INTRODUCTION

The Red Helleborine *Cephalanthera rubra* (L.) Rich. 1818, a species of orchids (Orchidaceae) included in Polska czerwona księga roślin (HEREŻNIAK & BERNACKI 2001, 2014) and classified as endangered (EN) and, more recently, as vulnerable (VU). According to the Red list of plants and fungi in Poland (ZARZYCKI & SZELĄG 2006) it is a critically endangered taxon (E). In accordance with Regulation of the Minister of Environment (Rozporządzenie... 2014) it is strictly protected species, included also in the European Red List of Vascular Plants (BILZ et al. 2011).

Cephalanthera rubra is an orchid found in the Mediterranean, Central Europe (ZAJĄC & ZAJĄC 2001), the Caucasus, Asia Minor, and northern Africa (MEUSEL et al. 1965). In Poland its localities are dispersed almost all over the country (BERNACKI 2000). It is both a lowland and upland species with single occurrences in mountains (HEREŻNIAK & BERNACKI 2014).

CHARACTERISTICS OF MORPHOLOGY AND HABITAT

Cephalanthera rubra is a perennial with a lobed, often vertical, rhizome. Shoots reach 30–60 cm of height. The leaves are longitudinal, upper leaves are lanceolate (SZAFER 1986), the sepals pink to red, 15–20 mm in length, protruding during flowering (RUTKOWSKI 2011). The optimum blooming period stretches from June to early July. The plant reproduces both by seeds

and by vegetative growth (HEREŻNIAK & BERNACKI 2014).

The Red Helleborine grows mainly in shaded places in moderately fertile and fertile soil, usually rich in calcium carbonate, with a pH from weakly acidic to alkaline. It is found in thickets and deciduous forests, rarely in lowlands (SZAFER et al. 1986). It is a species typical of orchid beech woods such as coastal *Cephalanthero rubrae-Fagetum* on the Wolin island (MATUSZKIEWICZ 2013).

CHARACTERISTICS OF THE NEW LOCALITY

The new locality was found in June 2015 in south Wielkopolska region, in Lasowice, (approximately 7 km southeast of Milicz), the Milicz Forest Inspectorate, compartment 145b, 51.45583°N, 17.28139°E (Figs 1–2).

Twelve flowering and 94 non-flowering shoots were reported. The total area covered by polichromes of the plant was 18 m². In order to illustrate the floristic composition and to determine the type of plant community in which *Cephalanthera rubra* occurs in the Milicz Forest Inspectorate, the phytosociological relevé was performed (10 × 15 m), 27.06.2015, layer cover: a – 75%, b – 30%, c – 80%, d – exiguously. Tree layer *Fagus sylvatica* 4.4. Shrub layer cover: *Fagus sylvatica* 3.1. The herbaceous layer: *Melica uniflora* 3.3, *Galium odoratum* 2.3, *Cephalanthera rubra* 2.2, *Calamagrostis arundinacea* 2.3, *Anemone nemorosa*



Fig. 1. The new locality of *Cephalanthera rubra* in the Milicz Forest Inspectorate: 1 – new locality, 2 – forest area, 3 – built-up areas, 4 – water courses, 5 – roads, 6 – railway

2.3, *Oxalis acetosella* 1.3, *Maianthemum bifolium* 1.3, *Luzula pilosa* +, *Carex pilulifera* +, *Carex sylvatica* +, *Viola reichenbachiana* +, *Fagus sylvatica* +, *Mycelis muralis* r, *Fraxinus excelsior* r, *Picea abies* r, *Orthilia secunda* r, *Rumex acetosella* r, *Veronica chamaedrys* r, *Acer pseudoplatanus* r. Moss layer: *Polytrichum formosum* +, *Eurhynchium angustirete* +.

The inventory was conducted on the entire occurrence area of Red Helleborine, located close to a forest road, with sandy-humus soil. The community was defined as *Galio odorati-Fagetum* – a fertile lowland beech forest.

All flowering specimens in the locality were measured. Generative shoots reached 39–45 cm of height, the length of the inflorescence was 7–14 cm, the number of flowers per inflorescence was 5–11, the longest leaf was 10–11.5 cm long and 1.5–2.5 cm wide. The height of plants is within the range given by RUTKOWSKI (2011) and length of the inflorescence does not differ from the numbers given by HEREŹNIAK & BERNACKI (2014).

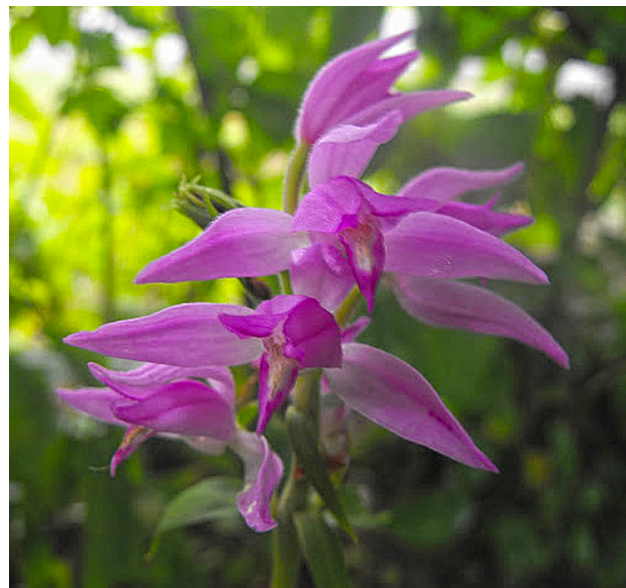


Fig. 2. *Cephalanthera rubra* in the Milicz Forest Inspectorate (photo K. Michalak)

POTENTIAL THREATS AND POSSIBLE CONSERVATION

The tree felling of the summer 2015 proved detrimental to the population of the plant, causing mechanical damage of *Cephalanthera rubra* specimens, smothering the habitat with wood particles and exposing the plants to excessive insolation. The area should be clearly marked and given special attention of local forest authorities. As one of the few localities in the Central Polish Lowland, the area is of a particular value. The population seems likely to expand due to the fact that similar ecological compositions have been observed in its neighbourhood.

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