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## TWO TAXA OF THE GENUS *EPIPACTIS* ZINN (*ORCHIDACEAE*) NEW FOR THE FLORA OF UKRAINE

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*Key words:* *Epipactis*, *flora*, *Ukraine*, *the Crimea*

**Abstract.** *Epipactis turcica* Kreutz and *E. helleborine* subsp. *orbicularis* (C. Richt) E. Klein. are reported from the Crimea as new for the flora of Ukraine. Data on key diagnostic characters of the taxa and collected herbarium specimens are provided.

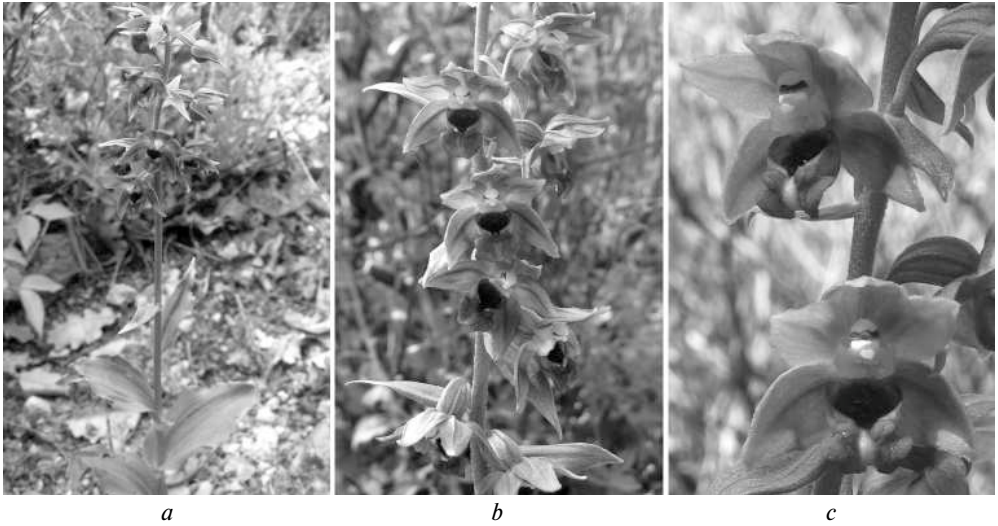
The range of the genus *Epipactis* Zinn comprises Eurasia, North America and Africa. Following the modern taxonomical concept, this genus includes 60–80 species [1]. Systematics of this genus is rather complicated which is especially true for species of the nominative series *Epipactis* of the nominative section *Epipactis*. Species of this series are very similar morphologically and hard to distinguish. Therefore, most of them were described only recently and are still not studied properly throughout the territory of the former Soviet Union.

Seven species of the genus *Epipactis* are known from the flora of Ukraine. Among them, 5 species are well known for a long time: *E. palustris* (L.) Crantz from sect. *Arthrochilium* Irmisch ser. *Palustres* Nevski ex Efimov; *E. atrorubens* (Hoffm.) Besser and *E. microphylla* (Ehrh.) Sw. from sect. *Epipactis* ser. *Atrorubentae* Nevski ex Efimov; *E. helleborine* (L.) Crantz and *E. purpurata* Sm. from sect. *Epipactis* ser. *Epipactis* [2–5]. Two other species of sect. *Epipactis* ser. *Epipactis* were discovered in Ukraine during recent years: *E. condensata* Boiss. ex D.P. Young [8] and *E. albensis* H. Nováková & Rydlo [6].

During the investigations of Crimean orchids, we found one species and one additional subspecies of *E. helleborine* new for the flora of Ukraine. Herbarium specimens of the discovered taxa are deposited in the Herbarium of National University of Life and Environmental Sciences of Ukraine, Southern Branch «Crimean Agrotechnological University», Simferopol (CSAU) and in the Herbarium of Nikitsky Botanical Garden — National Science Center, Yalta (YALT).

*Epipactis turcica* Kreutz, 1997, in *Eurorchis*, **9**: 61. — *E. tremolsii* C. Pau subsp. *turcica* (Kreutz) Kreutz, 2004, in *Kompend. Eur. Orchid.* 68.

*Diagnostic characters.* Plant slender, up to 60 cm tall; stem slender, rigid; leaves 7–11, broad, usually concave, from ovate to ovate-elliptical, arranged in the lower part of the stem; inflorescence loose, with 7–30 flowers, rachis densely pubescent, ovary



Plants, inflorescences and flowers of *Epipactis* taxa: *a–c* — *Epipactis turcica* Kreutz; *d–f* — *E. helleborine* subsp. *orbicularis* (C. Richt) E. Klein. Photos by A.V. Fateryga

Рослини, суцвіття та квітки таксонів з роду *Epipactis*: *a–c* — *Epipactis turcica* Kreutz; *d–f* — *E. helleborine* subsp. *orbicularis* (C. Richt) E. Klein. Фото О.В. Фатериги

loosely pubescent or subglabrous. Flowers cross-pollinated; epichile cordate, pink to crimson or violet, brighter than the inner surface of petals, usually with yellowish longitudinal stripe (figure, *a–c*).

*Material examined.* The Crimea, vicinity of Yalta, Nikita, «Mys Martyan» Reserve, 09.06.2011, A.V. Fateryga (CSAU). In the website «Plantarium» we also found the photo of this species made in another locality: the Crimea, Southern Coast, Sarych Cape, 08.06.2009, P.Ye. Yevseyenkov (<http://www.plantarium.ru/page/pictures/item/47986.html>).

This species was described from Turkey and previously known from Asia Minor, Middle East and partially from Southern Europe (North-East Greece) ([http://www.aho-bayern.de/epipactis/fs\\_epipactis\\_1.html](http://www.aho-bayern.de/epipactis/fs_epipactis_1.html)). It prefers open light forests and shrubberies [7, 9] and in the Crimea, formations of *Juniperus excelsa* M. Bieb. and *Quercus pubescens* Willd.

*Epipactis helleborine* subsp. *orbicularis* (C. Richt) E. Klein, 1997, *Phyton* (Horn), 37(1): 74. — *E. distans* Arv.-Touv., 1872, *Essai Espèce Var. Principal*. Pl. 11. — *E. orbicularis* C. Richt, 1887, *Verh. Zool.-Bot. Ges. Wien*, 190. — *E. helleborine* subsp. *distans* (Arv.-Touv.) R. Engel & Quentin, 1996, *Orchidophile*, 124: 205. — *E. molochina* P. Delforge, 2004, *Naturalistes Belges*, 85 (Orchid. 17): 173.

*Diagnostic characters.* Plant robust or slender, up to 80 cm tall; stem slender, some rigid; leaves 3—7, broad, usually flat or slightly concave, ovate to ovate-elliptical, arranged in the middle part of the stem; inflorescence loose or dense, with 10—50 flowers, rachis densely pubescent, ovary loosely pubescent or subglabrous. Flowers cross-pollinating; epichile cordate, pale-pink to brownish-pink, paler than the inner surface of petals, without yellowish longitudinal stripe (figure, *d–f*).

*Material examined.* The Crimea, vicinity of Yalta, Lopata Mt., pine forest, 13.07.2005, A.V. Fateryga (CSAU); *ibid.*, 09.07.2011, A.V. Fateryga (YALT).

This subspecies is widespread in Central, North and South Europe ([http://www.aho-bayern.de/epipactis/fs\\_epipactis\\_1.html](http://www.aho-bayern.de/epipactis/fs_epipactis_1.html)). It grows in various habitats, from shady coniferous forests to open grasslands [7]. In the Crimea this taxon grows in forests of *Pinus nigra* J.F. Arnold subsp. *pallasiana* (Lamb.) Holmboe.

The taxa revealed are difficult to distinguish from typical *E. helleborine*, so they can be stored in some herbariums with specimens from the Crimea being misidentified. Most probably that further investigations of herbarium specimens will allow finding new localities of these taxa and to specifying their distribution in the Crimea more thoroughly.

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**ДВА ТАКСОНИ З РОДУ *EPIPACTIS* ZINN (*ORCHIDACEAE*),  
НОВІ ДЛЯ ФЛОРИ УКРАЇНИ**

Уперше для флори України наведено *Epipactis turcica* Kreutz і *E. helleborine* (L.) Crantz subsp. *orbicularis* (C. Richt) E. Klein, виявлені в Криму. Наведено дані про ключові діагностичні ознаки цих таксонів і зібрані гербарні зразки.

*Ключові слова:* *Epipactis*, флора, Україна, Крим.

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**ДВА ТАКСОНА ИЗ РОДА *EPIPACTIS* ZINN (*ORCHIDACEAE*),  
НОВЫЕ ДЛЯ ФЛОРЫ УКРАИНЫ**

Впервые для флоры Украины приводятся *Epipactis turcica* Kreutz и *E. helleborine* (L.) Crantz subsp. *orbicularis* (C. Richt) E. Klein, выявленные в Крыму. Указаны ключевые диагностические признаки данных таксонов и собранные гербарные образцы.

*Ключевые слова:* *Epipactis*, флора, Украина, Крым.