

**CONTRIBUTIONS TO CHOROLOGICAL DATA
ON ROMANIAN FLORA**

ANASTASIU Paulina*

Abstract: New chorological data about 16 vascular plant taxa are reported in the present work. Six of them are native species and subspecies and ten are alien species and subspecies recorded in the Muntenia and Dobrogea regions, as well as in the Danube Delta.

Keywords: chorological data, flora, alien species, Romania

Introduction

During the various field studies in the period 2008-2009, new data on the occurrence of some vascular plant species have obtained. Some of them are rare orchids, the others are alien plant species widely distributed in the country or limited to few locations.

The nomenclature is according to Flora Europaea (Tutin et al. 1964-1980, Tutin et al. 1993) and to Flora Ilustrată a României (Ciocârlan 2009). Beside the new chorological data, the geographic coordinates (WGS 1984 system) are given, as well as a discussion about the distribution in Romania.

Results and discussion

Native taxa

***Alopecurus myosuroides* Huds.**

Dobrogea: Constanța city, embankment of railway in Constanța harbour, N44°09'45.83", E28°38'11.19", 3 m alt., 12.05.2009. It is an Atlantic-Mediterranean element (Ciocârlan 2009), in our country reported from the Transilvania, Banat, Maramureș, Moldova, Muntenia (Oprea 2005). This is the first record of the species in Dobrogea. Considering its native distribution and the definition of alien plants (Richardson et al. 2000), we assess *Alopecurus myosuroides* as an alien plant for the Dobrogea region.

Dactylorhiza fuchsii* (Druce) Soó subsp. *fuchsii

Muntenia: Buzău County, Cocârceni W, N45°21'31", E26°25'43", 650 m alt., meadows, near the edge of the forest, 23.05.2009. It is a Eurasian element, rare in Romania (Oltean et al. 1994), reported from the Maramureș, Transilvania, Crișana (Oprea 2005), but not from the Muntenia, Buzău County.

Dactylorhiza incarnata* (L.) Soó subsp. *incarnata

Muntenia: Buzău County, Cocârceni W, N45°21'45", E26°27'37", 519 m alt., meadows, 23.05.2009. It is a Eurasian element, widely distributed in our country

* University of Bucharest, Faculty of Biology, Department of Botany & Microbiology, 1-3 Intr. Portocalelor, Sector 6, 060101-Bucharest, Romania. E-mail: anastasiup@yahoo.com

(Maramureș, Transilvania, Crișana, Banat, Oltenia, Muntenia, Moldova, Danube Delta), but reported from Buzău County only on the Penteleu Mts. (Șerbănescu 1939).

***Ophrys scolopax* Cav. subsp. *cornuta* (Steven) Camus**

Muntenia: Buzău County, Cocârceni W, bushes with *Hippophaë rhamnoides*, N45°21'38", E26°27'47", 458 m alt., 23.05.2009, two mature individuals. This is a central European-Mediterranean taxon, very rare in Romania, critically endangered (Dihoru & Negrean 2009), reported from the Banat, Oltenia, Muntenia, Moldova (Oprea 2005). From Buzău County, it was mentioned from three localities: Cislău (Nyárády & Beldie 1972, Oprea 2005, Dihoru & Negrean 2009), Pătârlagele (Popova et al. 1981 in Oprea 2005) and Cănești (Anastasiu et al. 2008).

Orchis tridentata* Scop. subsp. *tridentata

Muntenia: Buzău County, Cocârceni W, N45°21'37", E26°25'51", 620 m alt., meadows, at the edge of forest, 23.05.2009. It is a central-European element, rare (Oltean et al. 1994) in almost all the region of the country (Transilvania, Crișana, Banat, Muntenia, Moldova, Dobrogea) (Oprea 2005), not reported previously from Buzău County.

***Platanthera clorantha* (Custer) Rchb.**

Muntenia: Buzău County, Cocârceni W, N45°21'46", E26°27'22", 589 m alt., grassland with eastern exposure, 23.05.2009. It is known as rare (Oltean et al. 1994) from all the regions of the country, except the Danube Delta. However, this species was not reported up to now from Buzău County.

Alien taxa

***Ambrosia artemisiifolia* L.**

Danube Delta: Sulina, ruderal places, 24.07.2009, in the following locations: N45°08.865', E29°40.621'; N45°09.351', E29°38.030'; N45°09.346', E29°39.090'; N45°09.345', E29°39.735'; N45°09.342', E29°39.748'; N45°09.174', E29°41.032'. *Ambrosia artemisiifolia*, with native distribution in North America, is widespread in Romania, except in the Danube Delta. This is the first report of the plant for this region. Oprea (2005) mentions *Ambrosia artemisiifolia* from Sfiștofca (Danube Delta), taking erroneously information from Ciocârlan (1994) which reports from this locality only *Ambrosia coronopifolia*.

***Brachyactis ciliata* (Ledeb.) Ledeb.**

Muntenia: Buzău County, Cocârceni village, basin of Bălăneasa river, tributary to Buzău river, on pebbles and sandy places, N45°21'22", E26°28'18", 300 m alt., 26.09.2008; Viperești village, in ruderal places, 24.09.2009. This is an Asian species known from the Moldova, Muntenia, Dobrogea, Danube Delta (Ciocârlan 2009) and Transilvania (Filipaș & Cristea 2006). From Buzău County there is only one report for Râmnicul Sărat River (Ștefan 1980).

***Eclipta prostrata* (L.) L.** (Fig. 1)

Danube Delta: Tătaru channel E, alluvial soil, N45°24.379', E29°16.237' and N45°24.617', E29°16.723', 10.10.2009; Tătaru channel E, alluvial soil and ruderal places, N45°25.021', E29°16.905' and N45°24.991', E29°16.901'; Chilia Veche, alluvial soil near the harbour, 10.10.2009; Chilia Veche S, dam, N45°24.718', E29°16.843', 10.10.2009; Chilia Veche S, ruderal places, under the bridge, N45°24.583', E29°16.692', 10.10.2009; Ostrov Babina, alluvial soil, 09.10.2009; Ostrov Cernovca, alluvial soil, N45°25.096', N29°22.331', 09.10.2009; Ostrov Tătaru, ruderal places, 10.10.2009; Periprava N, alluvial soils, N45°24.374', N29°32.833', 09.10.2009; Sacalin Island, salty soils, N44°49.209', E29°34.937', 25.09.2009; Sacalin Island, wet places, 25.09.2009; Sf. Gheorghe, dam S, 26.08.2006, 28.09.2007, 23.09.2009; Sf. Gheorghe, quay, 25.09.2009; Sf. Gheorghe, flooded places on the left bank of Sf. Gheorghe channel, 26.09.2009; Sulina, str a II-a, 21.08.2009. *Eclipta prostrata* is an American species reported from Romania in 1998 (Dihoru & Sârbu 1998) from Brăila County. Afterwards it was reported from Constanța, Galați and Tulcea Counties (Oprea 2005). From the Danube Delta there is only one mention: Ciotic (Oprea 2005). A herbaria specimen collected by P. Anastasiu from Periprava on first October 1994 is deposited at BUC [373739].



Fig. 1. *Eclipta prostrata* on alluvial soil to Sf. Gheorghe, Danube Delta, 26.09.2009.

Erigeron annuus* (L.) Pers. subsp. *annuus

Danube Delta: Chilia Veche – Antipa, ruderal places near the bridge, N45°24.502', E29°16.600', 10.10.2009; Chilia Veche – Antipa, abandoned agricultural field, N45°24.384', E29°16.519', 10.10.2009; Câmpul Chilieii, grassland, N45°23.606',

E29°17.148', 08.10.2009; Tătaru channel, ruderal places near the channel, N45°24.321', E29°16.152', 10.10.2009; Chilia Veche S, dam, N45°24.640', E29°16.845', 10.10.2009. Actually, *Erigereron annuus* subsp. *annuus*, with native distribution in America, is a very spread plant, but not reported previously from the Romanian part of the Danube Delta.

***Euphorbia humifusa* Willd.** (Fig. 2)

Dobrogea: Constanța County, Cernavodă, dam, N44°20.940', E28°01.457', alt. 129 m, 05.08.2008. It is an Asian species known only from Drașov, Alba County, Transylvania (Ciocârlan 2000, 2009).



Fig. 2 *Euphorbia humifusa* on dam to Cernavodă, Constanța County, 05.08.2008.

***Iva xanthifolia* Nutt.**

Muntenia: Buzău County, Gherăseni, N45°01.677', E26°48.147', ruderal places, 29.07.2008;

Dobrogea: Constanța County, Adamclisi, N44°05.602', E27°56.002', ruderal places, 10.08.2008;

Danube Delta: Sf. Gheorghe, ruderal places, N44°53.690', E29°35.772', 27.09.2007, 26.09.2009; Sulina, ruderal places, N45°08.818', E29°40.728', 24.07.2009, 20.08.2009.

Iva xanthifolia is an invasive species spread over almost all the country: Maramureș, Transilvania, Moldova, Dobrogea. Previously it was reported from the Danube Delta only from Crapina, canal Lata (Oprea 2005).

***Lemna minuta* Kunth.**

Dobrogea: Constanța County, Constanța harbour, in permanent pools, N44°09'44.66", E28°38'09.49", 3 m alt., 15.07.2008, 03.07.2009. It is a North American species previously reported from the Danube Delta, Nebunu Lake (Ciocârlan 2009).

***Petunia parviflora* Juss.**

Danube Delta: Periprava, ruderal places, N45°24.296', E29°32.467', 09.10.2009. It is an American species known in the Danube Delta since 1881 (Kanitz 1879-1881), but only from two localities: Sulina and Sf. Gheorghe.

***Polygonum orientale* L.**

Muntenia: Ilfov County, Mogoșoaia, ruderal places, N44°31'48.29", E25°59'42.45", 96 m alt., 11.06.2009.

Danube Delta: Sulina, ruderal places, N45°09.349', E29°38.941', 0 m alt., 23.07.2009, 21.08.2009.

This taxon was reported as subsponaneous from the Crișana, Transilvania, Muntenia and Moldova (Oprea 2005). In 2005 we recorded it in ruderal places from the Danube Gorge (Anastasiu P. & Negrean G., comm. pers.). Previously records for Ilfov County are Bucharest and Vidra localities (Oprea 2005).

***Sycios angulatus* L.**

Dobrogea: Constanța harbour, embankment of railway to 30-34 berths, N44°09'37.12", E28°38'31.81", 1 m alt., 15.10.2009. This North American species is reported for Romania only from the Transilvania, Moldova, Muntenia (Ciocârlan 2009).

Acknowledgements

I am indebted to James Robert Hager for correcting English. The fieldwork in Danube Delta was funded by CNCSIS PNII-IDEI 611/2008 grant to Paulina Anastasiu, while the fieldwork in Dobrogea was funded by CNCSIS PNII-IDEI 273/2007 grant to Dan Cogălniceanu.

References

1. ANASTASIU P., PASCALE G., CRISTUREAN I. 2008. Regarding grasslands between Sărățelului Valley and Slănicului Valley, Buzău County. *Analele Univ. din Craiova. Agricultură, Montanologie, Cadastru* **38/B**: 11-25.
2. CIOCÂRLAN V. 1994. *Flora Deltei Dunării*. București: Edit. Ceres. 116 pp. + XII pl.
3. CIOCÂRLAN V. 2000. *Flora Ilustrată a României. Pteridophyta et Spermatophyta*. București: Edit. Ceres. Ediția a II-a revăzută și adăugită. 1139 pp.
4. CIOCÂRLAN V. 2009. *Flora Ilustrată a României. Pteridophyta et Spermatophyta*. București: Edit. Ceres. Ediția a III-a. 1141 pp.
5. DIHORU G., SÂRBU A. 1998. *Eclipta prostrata* (fam. Asteraceae), neophyte in Romanian flora. *Acta Horti Bot. Bucurest.* /**1996-1997**/: 95-99.
6. DIHORU G., NEGREAN G. 2009. *Cartea roșie a plantelor vasculare din România*. București: Edit. Academiei Române, 630 pp.
7. FILIPAȘ L., CRISTEA V. 2006. New "guests" among cormophyte species of Cluj-Napoca. *Contribuții Botanice* **41**(2): 17-21.
8. KANITZ A. 1879-1881. *Plantas Romaniae hucusque cognitae enumeratae*. MNL, Cluj.

9. NYÁRÁDY A., BELDIE A. 1972. Genul 759. *Ophrys* L. Pp. 655-662. In: SĂVULESCU T. (ed.), *Flora României*, vol. 12. București: Edit. Academiei Române.
10. OLTEAN M., NEGREAN G., POPESCU A., ROMAN N., DIHORU G., SANDA V., MIHĂILESCU S. 1994. Lista roșie a plantelor superioare din România. In: M. OLTEAN (coord.), *Studii, sinteze, documentații de ecologie*, Acad. Română, *Institutul de Biologie*, **1**: 1-52.
11. OPREA A. 2005. *Lista critică a plantelor vasculare din România*. Iași: Edit. Univ. "A.I. Cuza", 668 pp.
12. RICHARDSON D.M., PYŠEK P., REJMÁNEK M., BARBOUR M.G., PANETTA F.D., WEST C.J. 2000. Naturalization and invasion of alien plants: concepts and definitions. *Diversity and Distribution* **6**: 93-107.
13. ȘERBĂNESCU I. 1939. *Flora și vegetația Masivului Penteleu*. Teză de doctorat. București: Universitatea din București.
14. ȘTEFAN N. 1980. *Cercetarea florei și vegetației din bazinul superior și mijlociu al râului Râmnicu Sărat*. Teză de doctorat. Iași: Universitatea "A.I. Cuza".
15. TUTIN T.G., BURGESS N.A., CHATER A.O., EDMONDSON J.R., HEYWOOD V.H., MOORE D.M., VALENTINE D.H., WALTERS S.M., WEBB D.A. (eds., assist. by J.R. Akeroyd & M.E. Newton; appendices ed. By R.R. Mill) 1993. *Flora Europaea. 2nd ed. Vol. 1. Psilotaceae to Platanaceae*. Cambridge: Cambridge University Press.
16. TUTIN T.G., HEYWOOD V.H., BURGESS N.A., MOORE D.M., VALENTINE D.H., WALTERS S.M., WEBB D.A. (ed.) 1964-1980. *Flora Europaea. Vols. 1-5*. Cambridge: Cambridge University Press.

CONTRIBUȚII COROLOGICE LA FLORA ROMÂNIEI

Rezumat: Lucrarea prezintă date corologice noi pentru 16 taxoni. Șase sunt specii și subspecii native, zece sunt specii și subspecii alohtone întâlnite în Muntenia, Dobrogea și Delta Dunării.

Cuvinte cheie: corologie, floră, specii alohtone, România