

Contribution to the flora of the Rhodopes and the Thracian plain

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Abstract. New chorological data for 21 species are reported. New for the Rhodopes floristic region are 7 taxa, while there are 4 new ones for the Eastern Rhodopes subregion. New for the Thracian plain floristic region are 3 species, other 2 species are confirmed for this region. Two of them, Mediterranean ones (*Silene lydia* Boiss. and *Logfia gallica* (L.) Coss. et Germ.), are rare for Bulgaria. Altogether, data on 8 rare or protected species are given.

Key words: Flora, Chorology, Eastern Rhodopes, Thracian plain

Introduction

Data from different field visits in the Eastern Rhodopes and Thracian plain carried out in 2001 – 2004 have been summarized. Reports are included for new and confirmed taxa for the regions as well as data on new localities of rare species. We consider this important with a view to a planned new edition of the Red Data Book of Bulgaria and evaluation of the species according to the criteria of IUCN.

The names of the taxa follow the nomenclature accepted in KOZHUHAROV (1992) and are preceded by the numbers of the taxa from the same publication. Localities are referred to the UTM grid system with 10-km square sides. For some localities geographical coordinates are reported as well. The herbaria samples are kept in the Herbaria of the Institute of Botany (SOM).

Results and discussion

32205. *Silene lydia* Boiss., 1. LG 82 (AP,VT), SOM 158565 2. LG 93, P, VT), SOM 158933.

Thracian plain. 1. A pasture south of Zhalti bryag village, Haskovo district, June, 28th, 2003, with fruits; 2. A pasture east of Krivo pole village, Haskovo district, June, 29th, 2003, with fruits. In both localities the populations are not numerous, with dispersed structure.

A new species for the region. *Silene lydia* is a rare and protected species in Bulgaria, up to now known from single localities in the Western (KURTTO, 1985) and Eastern Rhodopes (PETROVA & al., 1999).

15850. *Gypsophylla glomerata* Pallas ex Bieb. MF 28, SC (AP, DV) SOM 158525.

Eastern Rhodopes. A limestone pasture at Dupkata hill near Ivaylovgrad town, July, 12th, 2003, with flowers.

A new species for the Eastern Rhodopes floristic subregion.

20720. *Lunaria annua* L. 1. MF 28, SC (AP, DV, DS) SOM ; **2.** MG 11, SV (AP, DV).

Eastern Rhodopes: **1.** Kolibarya locality near Ivaylovgrad town, April, 18th, 2002, with flowers; **2.** At the edges of an oak forest along the road to Ivaylovgrad, about 4 km south of Dabovets village, April, 12th, 2001, with flowers.

These finds confirm the presence of *Lunaria annua* in the Eastern Rhodopes (ASSENOV, 1970).

21450. *Medicago praecox* DC. LG 80, SC (AP) SOM 158545.

Eastern Rhodopes. A pasture near Potochnitza village, Kardzhali district, May, 24th, 2003, with fruits.

The species was reported for the Eastern Rhodopes from the areas of Gorno Lukovo village and Momchilgrad town (BONDEV & al., 1967), but this information was neglected by KOZHUHAROV (1992), so our data confirm the presence of *Medicago praecox* in the area.

04890. *Bisserula pelecinus* L. LF 89, SC (AP), SOM 15856.

Eastern Rhodopes. A pasture near Dolna Kula village, Kardzhali district, May, 24th, 2003, with fruits.

This Mediterranean element is comparatively rare in Bulgaria. KOZHUHAROV (1992) reported it only for the Struma valley region. It was reported for the Eastern Rhodopes first by BONDEV & LJUBENOVA (1984) in the area of Belopolyane village and this is the second known locality.

34810. *Trifolium dalmaticum* Vis. LG 80, SC (AP), SOM 158529.

Eastern Rhodopes. A pasture near Stari Chal village, Kardzhali district, June, 5th, 2003, with flowers.

A new species for the Rhodopes region.

37370. *Viola elatior* Fries MF 28, SC (AP, DS, DV), SOM 159627.

Eastern Rhodopes. Among shrubs of *Carpinus orientalis* Mill. at Dupkata hill locality near Ivaylovgrad town, April, 12th, 2002, with flowers.

A new species for the Eastern Rhodopes. According to ANCHEV (1992) it is known from North-eastern Bulgaria, Thracian plain, Tundzha hilly plain and Sredna gora region. There are old data from other parts of the Rhodopes: near Bachkovo village (URUMOV, 1913) and near Dobrostan village (VELENOVSKY, 1922) in the Central Rhodopes and Yadenitsa River valley in the Western Rhodopes (URUMOV, 1917). Our findings confirm the presence of the species in the Rhodopes.

37480. *Viola hirta* L. LG 68, SC, SOM 158 566.

Thracian plain. Oak grove alongside the road between Chirpan town and Tsenovo village, Stara Zagora district, April, 25th, 2003, with flowers.

URUMOV (1908) reported the species for the area of the Haskovo town. STOJANOV & STEFANOV (1967) considered it to be distributed throughout the country but DELIPAVLOV (1979) and ANCHEV (1992) gave it only for some regions. Our data confirmed *Viola hirta* for the Thracian plain floristic region.

21015. *Lythrum thymifolia* L. LG 82 (AP), SOM

Thracian Plain. Wet mud in a depressed place near Tsareva polyana village, (along the road to Balkan village), Haskovo district, June, 28th, 2003, with flowers.

FRIVALDSKY (1835) reported this species as collected by Hinke and Monolesku from "Rumelien, auf dem Balkan and Rhodope". With no herbaria specimens or more exact data VELENOVSKYI (1891) and STOYANOV & STEFANOV (1924) did not include it in Bulgarian flora. DELIPAVLOV (1988) confirmed the species for Bulgaria from the Eastern Rhodopes (near Borislavtsi village in the Arda River valley). Our collection is the first contemporary one for the Thracian plane and also confirms the old data of Frivaldsky. *Lythrum thymifolia* is included in the List of protected species in Bulgaria (STATE GAZETTE, 2002).

13490. *Ferulago campestris* (Besser) Grec. MG 00, SC (AP), SOM 159653; 2. MG 01, SV, SOA 8279.

1. Eastern Rhodopes. At dry rocky places on Monina skala rocky massif near Madzharovo town, June, 6th, 1996, with flowers. 2. Kara kaya locality near Arda river (south-west of Dolni Glavanak village), 1921, collected N. Stojanov & B. Stefanov.

STOJANOV & al. (1967) gave the species as locally dispersed in some regions of the country, among them the Eastern Rhodopes, possibly on the basis of the collection cited above. But the Eastern Rhodopes are not mentioned for the species in PEEV (1992) and ASSYOV et al. (2002). So, our collection confirms the species for the Rhodopes.

05420. *Bunium ferulaeaceum* Sibth. et Sm. 1. LF 78, SC (AP), SOM 159652. 2. LF 69, SC (AP), SOM 158894; 3. LG 80, SC (AP), SOM 159640; 4. LG 80, SC (AP), SOM 158496; 5. LG 71, SC (AP), SOM 160900.

Eastern Rhodopes. 1. A pasture near Ribino village, south of Krumovgrad town, July, 7th, 1995, with fruits; 2. A pasture near the cross road to Sofiytsi village (on the road from Kardzhali to Dzhebel), May, 24th, 2000, with flowers. Limestone.; 3. A pasture near Studen kladenets village, May, 27th, 2001 with fruits. Bazalt rocks.; 4. A pasture near Stari Chal village, June, 5th, 2003, with flowers and fruits; 5. A pasture near Zvezdelina village, June, 12th, 2004, with flowers and fruits. All localities are in the Kardzhali district.

The Mediterranean *Bunium ferulaeaceum* is a rare species in Bulgaria (VASILEV, 1984). There are old data from the area of Harmanli town (PODPERA, 1902) and from the area of Momchilgrad town (DAVIDOV, 1948), but there were no samples in Bulgarian Herbaria. Dozens of years afterwards there was no confirmation and the species was considered doubtful for the Bulgarian flora (STOJANOV & STEFANOV, 1924; STOJANOV & al., 1966-67; ASENOV, 1982). DELIPAVLOV & CHESHMEDZHIEV (1984) confirmed the species for the Bulgarian flora with two localities from the Eastern Rhodopes: Kardzhali town (LG 60) and Dangovo village (LG 61).

Our data show that the species is more widely distributed in the Eastern Rhodopes. The populations are usually small in numbers - only few individuals were found in three of them (localities N^o 2, 3, 4).

03610.0640. *Asperula aristata* L.f. subsp. *nestia* (Reichb.f.) Ehrend. et Krendl. MG 00, SC (AP), SOM 158526.

Eastern Rhodopes. At Patronka rocky massif near Madzharovo town, about 500 m alt., June, 5th, 2003.

A new subspecies for the flora of Eastern Rhodopes, known also from Slavyanka Mt., Pirin Mt., Western and Central Rhodopes (ANCHEV, 1989). The new locality is at a lower altitude than the other known ones.

14480. *Gallium spurium* L. MG 00, SC (AP), SOM 159646.

Eastern Rhodopes. An oak forest near Madzharovo town, May 27th, 2003 with fruits.

A new species for the Rhodopes region.

02310. *Anchusa hybrida* Ten. MF 29, SC, SOM 160210.

Eastern Rhodopes. A limestone pasture above Ivaylovgrad town, May, 15th, 2004, with flowers.

A new species for the Eastern Rhodopes (KOZHUHAROV, 1989; ASSYOV et al., 2002).

20500. *Logfia gallica* (L.) Coss. et Germ. LG 93, SC (AP), SOM 158923.

Thracian plain. A pasture near Krivo pole village, Haskovo district, June, 29th, 2003.

A new species for the region. This rare for Bulgaria Mediterranean species (VELCHEV, 1984) according to PEEV (1992) is distributed in the Struma valley, Southern Black Sea coast and Strandzha Mt. floristic regions. There are data also for the Eastern Rhodopes near Delvino village and Momchilgrad (BONDEV & al., 1967) and Tundzha Hilly plain, near Dimitrovche village (VELCHEV, 1984). There is a sample, collected by Krusheva from the Thracian plain: "Along the road between Koren and Malak izvor villages, June, 16th, 1964, (SOA s.n.)". This locality is not far from the new one.

18060. *Hypochaeris cretensis* (L.) Bory et Chaub. MF 28

Eastern Rhodopes. On slopes along the road from Odrintsi to Mandritsa villages, Ivaylovgrad region, May, 18th, 2001, with flowers. Single individuals.

This Mediterranean species is new for the Rhodopes. It is known only from Struma valley (PEEV, 1992).

21480. *Melica transsilvanica* Schur., 1. MG 00, SC (SH), SOM 155818; **2.** LG 80, SC (SH, AP), SOM 157947.

Eastern Rhodopes: **1.** At the rocky massive "Patronka" near Madzharovo town, about 500 m alt., May, 28th 2001. **2.** In stony places near the road between Studen kladenetz and Potochnitsa villages, Kurdzhali district, May, 25th, 2002.

A new species for the Eastern Rhodopes. Visual observations show that it is comparatively common in the Eastern Rhodopes.

19710. *Lemna gibba* L. LF 89, SC (AP).

Eastern Rhodopes. A small water body near a fountain along the road to Dolna Kula village, Kardzhali region, May, 24th, 2003.

This new species for the Rhodopes floristic region is included in the Red Data Book where it is considered "rare" (KOCHEV, 1984).

23760. *Ornithogallum montanum* Cyr. LG 80, SC (AP), SOM 158530.

Eastern Rhodopes. A pasture near Potochnitsa village, Kardzhali district, May, 24th, 2003, with flowers and fruits.

Ornithogallum montanum was first found in the region by YORDANOV and YANEV (1968) but this report was neglected in the later general sources for the Bulgarian flora. Our data confirmed it for the Eastern Rhodopes.

23740. *Ornithogallum fimbriatum* Willd. MF 28, SC (AP, DV, DS), SOM 157941.

Eastern Rhodopes. Among shrubs of *Prunus spinosa* L. near Ivaylovgrad town, April, 17th, 2002, with flowers.

A new species for the Rhodopes region. A Pontic floristic element, known from the eastern part of the country - Black sea coast, North-eastern Bulgaria, Eastern Stara Planina and Tundzha hilly plain (ASYOV & al., 2002).

23570. *Orchis papilionaceae* L. LG 34, SV (DV).

Thracian plain. In pastures in "40-te izvora" locality near Assenovgrad town, June, 2nd, 2003, with flowers. Single individuals.

Orchis papilionaceae is a rare species in Bulgaria (STANEV, 1984). It is known from the Thracian plain, from a single locality near Harmanly town (SO 100790, DIMITROV & TSONEV, 2001).

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Принос към флората на Родопите и Тракийската низина

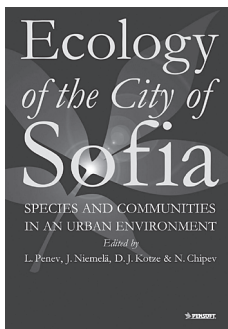
Антоанета ПЕТРОВА, Диана ВЕНКОВА, Десислава СОПОТЛИЕВА

(Резюме)

Съобщават се нови хорологични данни за 21 вида растения. Нови за флористичен район Родопи са 7 вида: *Trifolium dalmaticum* Vis., *Ferulago campestris* (Besser) Grec., *Viola elatior* Fries, *Galium spurium* L., *Hypochaeris cretensis* (L.) Bory & Chaub., *Lemna gibba* L. и *Ornithogallum fimbriatum* Willd. Нови за Източни Родопи са *Gypsophylla glometata* Pallas ex Vieb., *Anchusa hybrida* Ten. *Melica transilvanica* Schur. и *Asperula aristata* L.f. subsp. *nestia* (Reichb.f.) Ehrend. Други три вида са потвърдени за Източни Родопи: *Lunaria annua* L., *Medicago praecox* DC. и *Ornithogallum montanum* Сур. Нови за Тракийската низина са 3 вида: *Silene lydia* Boiss., *Logfia gallica* (L.) Coss. et Germ. и *Viola hirta* L. Първите два от тях са редки за България. Потвърдени за Тракийската низина са два вида, от тях за *Lythrum thymifolia* L. се съобщава второто известно находище за страната.

Монография върху екологията на София

Петър БЕРОН



PENEV L., NIEMELA J., KOTZE D. J., CHIŞEV N. (Eds). 2004. Ecology of the City of Sofia - species and communities in an urban environment. Pensoft, Sofia, 456 pp.

Едно великолепно издание украси българската книжнина – изследването върху екологията на софийските растения и животни. Двама от редакторите са видните деятели на Централната лаборатория по обща екология при БАН г-р Любомир Пенев и г-р Нешо Чипев, а другите двама са финландски специалисти. Книгата съдържа три раздела – общ (ландшафт, климат, качество на водата, зелени системи), растения (главно екологични проблеми) и животни (нематоди, многоножки, охлюви, опилиони, паяци, листни въшки, бръмбари, мравки, мухи и птици). Общо 27 статии дават добра представа за различните аспекти на животинското и растителното население на един бързо растящ град. Тази моментна снимка е важна, защото след години положението ще бъде друго и ще се установи какви са тенденциите за изменение на природната среда и нейните обитатели. Интересно е да се сравнят получените данни с тези, вече налични за други големи градове. София се отличава много от останалите европейски столици по голямата си надморска височина, по близостта на високи планини и по бързото си развитие – от няколко десетки хиляди жители и полуселска обстановка преди стотина години до милион и половина и силна урбанизация днес. Разбира се, тази книга може да бъде последвана от друга с данни за много други незастъпени в нея групи растения и животни. Могат да се разгледат и други от многото проблеми на големия град. Сътрудничеството с GLOBENET и с други международни проекти би дало възможност за допълнителни проучвания. Интересно е и да се проследи историческото развитие на биотата и на природната среда в София от времето, когато по софийските пазари са се продавали уловени на Витоша мечета, когато глутници вълци се скитали в трънсалото поле около Докторския паметник до днес. Времето, когато по сърветата в Софийско се наброявали десетки гнезда на орли, а по баирите на Курубазлар (Лозенец) г-р Буреш ловел пепелянки. Времето на София с файтоните и с рилската вода. Новото време носи друг комфорт, но всяко нещо се плаща и е добре от време-навреме да си даваме сметка за цената.

В написването на книгата са включени добри специалисти, което е гаранция за достоверността и пълнотата на данните. Между тях има и сътрудници на Националния природонаучен музей (макар че това не е отразено в предговора).

Както по съдържание, така и в полиграфско отношение (в най-добрите традиции на утвърденото вече в цяла Европа издателство “Пенсофт”), новата “Екология на София” прави чест на авторите и издателите и ще бъде добра основа за по-нататъшни изследвания. Тя е и образец за екологично проучване и на други наши градове.