

**RARE AND THREATENED PLANTS IN THE AREA OF THE WIND FARM
LOCATED IN NATURA 2000 SITE ROSCI0060 DEALURILE AGIGHIOLULUI
(ROMANIA)**

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Abstract: Located in the northeastern part of Dobrogea Region, Romania, the Natura 2000 site ROSCI0060 Dealurile Agighiolului consists of several hills, where important habitats of Community interest and a diverse rare vascular flora are conserved. Previous literature data for ROSCI0060 Dealurile Agighiolului (1433 ha) indicate a number of 90 rare and threatened plant taxa. Our field research conducted around the wind turbines situated on Pietriş Hill, Pietros Hill and Căuşa Mare Hill (13.35 ha) resulted in the identification of 59 rare taxa, of which, new species for the site: *Bupleurum apiculatum*, *Crocus pallasii*, *Himantoglossum jankae*, *Iris sintenisii*, *Lathyrus cicera*, *Orchis simia*, *Ornithogalum amphibolum*, *Potentilla astracanică*, *Trigonella gladiata*, *Vicia peregrina*. Our study also provides information regarding the distribution and the conservation status of some threatened taxa identified in the wind farm area. The site ROSCI0060 Dealurile Agighiolului is still insufficiently known from a floristic point of view, with particular reference to rare or threatened flora, and requires additional research in this respect.

Keywords: Dealurile Agighiolului, Romania, wind farms, rare plants, conservation status

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Introduction

The Natura 2000 site ROSCI0060 Dealurile Agighiolului is located in the northeastern part of Dobrogea, in the area of Tulcea Hills, which geomorphologically belong to the North-Dobrogea Plateau (Fig. 1). It was legally established by Ministerial Order no. 1964/2007 and covers an area of 1433 ha, between the geographical coordinates N45°2'39" latitude and E28°48'41" longitude. The site consists of the following hills: Uzum Bair Hill (to the West), Stâncă Mare (Deşli Caira) Hill and Muchia Ţuguiaţă Hill (to the North), Pietriş (Cara Constantin) Hill (to the North-East), Piatra lui Platon Hill (to the South), Pietros Hill, Căuşa Mare Hill, Căuşa Mică Hill and Agighiol Hill (to the South-East) (OM 948/2016) (Fig. 1). The average altitude of the site is 100-150 m, with the maximum at the level of Uzum Bair Hill (223 m) (OM 948/2016). The hills are covered by a mosaic of habitats with conservative value, represented by stony habitats, steppe grasslands, shrubs and forests which correspond to three types of habitats of community interest: 91AA* Eastern white oak woods, 62C0* Ponto-Sarmatic steppes, 40C0* Ponto-Sarmatic deciduous thickets (Brînzan 2013). A rich flora develops in these habitats, consisting of significant populations of rare plants, including threatened species in Europe or at national level (*Alyssum caliacrae* Nyár.,

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Alyssum strigosum Banks & Sol., *Campanula romanica* Săvul., *Caragana frutex* (L.) K. Koch, *Convolvulus lineatus* L., *Euphorbia myrsinites* L., *Gymnospermium odessanum* (DC.) Takht., *Hedysarum grandiflorum* Pall. subsp. *grandiflorum*, *Hornungia petraea* (L.) Rchb., *Minuartia adenotricha* Schischk.) (Sârbu et al. 2007, Dihoru & Negrean 2009, Țupu 2010, Petrescu 2018).

The site also includes the Agighiol Geological Reserve (corresponding to the Agighiol Hill) with an area of 9.7 ha located in the vicinity of the village of Agighiol, Valea Nucarilor administrative territorial unit. The reserve is characterized by the presence of the stony xerophilous grasslands on which rare and threatened plants have a favourable conservation status (Sârbu et al. 2007). It is also famous for the richness of fossil fauna, especially ammonites and ichthyosaurs (Brînzan 2013).

The botanical references from the site ROSCI0060 Dealurile Agighiolului date back more than 100 years. The literature notes the Dobrogean endemite *Campanula romanica* Săvul. from Căușa Mică Hill (Săvulescu 1916 cited by Dihoru & Negrean 2009). Afterwards, Prodan (1935, 1936, 1939a, b) indicates 18 rare plant taxa from the area of Agighiol, part of them included in the Flora of Romania vol. 1-13 (red. pr. Traian Săvulescu). The Flora of Romania volumes also include mentions of rare plants in this area by other authors: Beldie 1955, Guşuleac 1957, 1961, Nyárády 1953, 1955, 1964a, 1964b, Răvăruț 1961, Todor 1958, Țopa & Nyárády 1957.

Săvulescu (1953) indicated in the Agighiol are the presence of the rare species *Caragana frutex* (L.) K. Koch as the host plant for the fungus *Uromyces genistae-tinctoriae* (Pers.) Fuckel ex G. Winter. Andreescu collected seeds from the rare species *Carex brevicollis* DC., *Dianthus nardiformis* Janka, *Paeonia peregrina* Mill., and *Scorzonera mollis* M. Bieb. in the Mandra forest (Agighiol) (Anonymous 1960). Later, the same Andreescu, but under the name Andrei (1963), also reports the rare species *Crucianella angustifolia* L. in the Mandra Forest. Oprea (2005) mentions, based on his own research and literature, 23 rare taxa, among which, he indicates for the first time the rare species *Bombycilaena erecta* (L.) Smoljan. and *Convolvulus lineatus* L. in the Agighiol area. Ciocârlan (2006) reports other new rarities in the Agighiol area: *Bufonia tenuifolia* L., *Centaurea kanitziana* D. Brândză, *Minuartia adenotricha* Schischk., *Minuartia hybrida* (Vill.) Schischk., *Scandix australis* L., *Seseli rigidum* subsp. *peucedanifolium* (Spreng.) Nyman, *Veronica multifida* subsp. *capsellicarpa* (Dubovik) Jelen.

Sârbu et al. (2007) mentions for the area of the Agighiol Geological Reserve 19 rare taxa, of which the following are reported for the first time: *Allium saxatile* M. Bieb., *Dianthus pseudarmeria* M. Bieb., *Euphorbia dobrogensis* Prodan, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Minuartia bilykiana* Klokov, *Pimpinella tragium* subsp. *lithophila* (Schischk.) Tutin.

Dr. Negrean G. in the Red Book of Vascular Plants in Romania (Dihoru & Negrean 2009) and in Addenda to "Flora Romaniae" (Negrean 2011) mentions some chorological data of rare plants on the site ROSCI0060 Dealurile Agighiolului, including geographical coordinates. His reports are mostly from Agighiol Hill, from where he mentions for the first time the species *Valerianella coronata* (L.) DC. and *Bupleurum uechtritizianum* Stoyanov (Negrean 2011). Prior to these works, Negrean & Anastasiu (2002) also reported other new species: *Alyssum caliacrae* Nyár. and *Vincetoxicum fuscatum* (Hornem.) Rchb. f. from the Pietros Hill.

Țupu (2009, 2010) offers chorological information at the level of the main hills of ROSCI0060 Dealurile Agighiolului (Uzum Bair Hill, Pietriș Hill, Pietros Hill, Stâncă Mare Hill, Muchia Țuguiață Hill), mentioning 80 rare taxa, of which, 34 are new reports. These new reports include the taxon *Hedysarum grandiflorum* Pall. subsp. *grandiflorum*, previously known in our country only from Alah Bair Hill, Constanța County. Țupu (2012) describes this taxon on the Pietriș Hill, also mentioning that its population is subject to a potential negative impact caused by the construction of a wind turbine at 15 m distance.

Recent contributions regarding the rare plants in the site ROSCI0060 Dealurile Agighiolului were published by Petrescu M. (2018), as a follow-up of his studies in this territory (Petrescu et al. 2012a, b). The author identifies 17 rare and threatened species in the site, with the following new reports: *Potentilla bornmuelleri* Borbás, *Agropyron brandzae* Panțu et Solac, *Allium siculum* subsp. *dioscoridis* (Sm.) K. Richt., *Mercurialis ovata* Sternb. & Hoppe, *Veratrum nigrum* L. Also, Petrescu (2018) mentions the species *Sternbergia colchiciflora* Waldst. & Kit., following our initial report of this plant in an abstract (Urziceanu et al. 2018). As a source of threat to the rare plants, the author mentions the degradation and fragmentation of grassland habitats caused by the wind turbines construction in the site.

Other anthropogenic threat and pressure factors on habitats and plants of conservation interest in the site, identified in the literature, include grazing, agricultural activities, tourism, artificial plantations with alien species and wind farms as the most significant (OM 948/2016).

Our study aims to assess the presence and conservation status of rare and threatened plant taxa in the area of the “Agighiol” Wind Farm in relation to the data previously reported for the Natura 2000 site ROSCI0060 Dealurile Agighiolului.

Material and methods

Investigated area

The investigated area is represented by the “Agighiol” Wind Farm located in the Natura 2000 site ROSCI0060 Dealurile Agighiolului.

The “Agighiol” Wind Farm was constructed in 2009 and comprises 17 wind turbines. Five of the turbines (CC_01 to CC_05) are located on the Pietriș hill, one (DP_10) is located on Căușa Mare Hill, and 11 turbines (DP_01 to DP_09; DP_11 to DP_12) are located on the Pietros Hill (Fig. 1). Except the turbine DP_03 located in the immediate vicinity of 91AA* *Eastern white oak woods* habitat, all the other turbines are located inside 62C0* *Ponto-sarmatic steppe grasslands* habitat.

Data collection and analysis

For a proper assessment of the status of the rare and threatened plants in the “Agighiol” Wind Farm area, we conducted a series of field investigations in the period 2015-2019, on a monthly basis, during the vegetation period (March-October). Field investigations were carried out around each wind turbine, in a circular plot with a radius of 50 m. The plot includes areas that are both disturbed and undisturbed by the construction of the wind farm. The disturbed area is represented by the technological platforms and the edge of the access road to the turbine, and the undisturbed area includes the habitats in the immediate vicinity. The investigated area totals 13.35 ha.

Also, our data were analysed in relation to the vast literature studied regarding the rare and threatened plants indicated for the Natura 2000 site ROSCI0060 Dealurile Agighiolului.

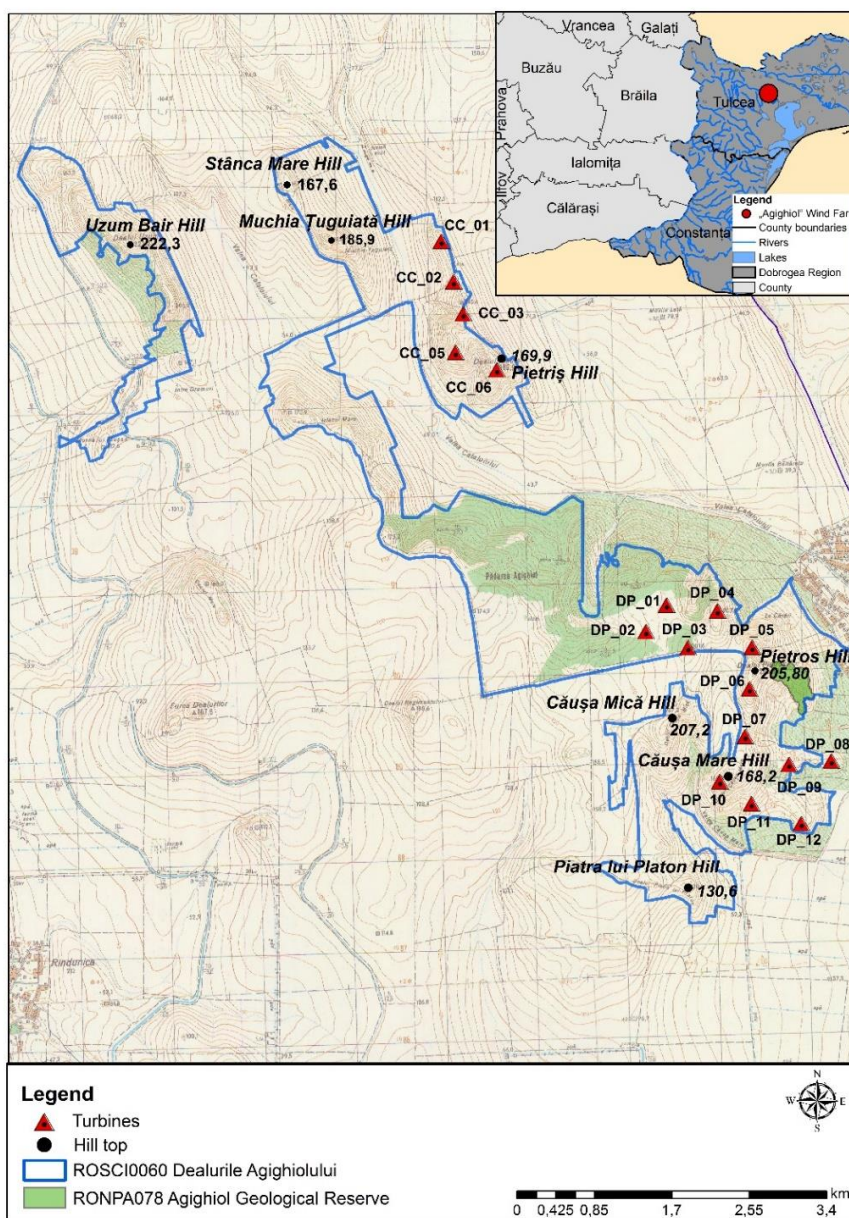


Fig. 1. Map of the ROSCI0060 Dealurile Agighiolului Natura 2000 Site showing the corresponding hills and associated turbines (compiled by Claudia Tomescu)

Based on the data from the scientific literature and our own contributions, an update of the floristic rarities of the site ROSCI0060 Dealurile Agighiolului was compiled. For the taxa previously reported in the scientific literature we mention the place, the author and the year of reporting. For the rare and threatened taxa inventoried around the turbines, the name of the hill corresponding to the turbines was specified. For the taxa with endangered (EN) and critically endangered (CR) status (Dihoru & Negrean 2009), as well as for newly reported taxa in the site, we discussed the distribution and the conservation status in the areas around the wind turbines.

The nomenclature is in accordance with Euro+Med PlantBase website and Sârbu et al. (2013). The zoological status of the rare plant species is in accordance with the National Red Book (Dihoru & Negrean 2009) and the National Red Lists (Oltean et al. 1994, Dihoru & Dihoru 1994, Boşcaiu et al. 1994).

The conservation status was evaluated according to a methodological guideline (Combroux & Schwoerer 2007), based on three-level scale as follows: - Favourable conservation status; - Unfavourable conservation status; - Totally inadequate unfavourable conservation status. This method is normally used for species and habitats of community interest, but also for other rare and threatened species (Jianu & Făgăraş 2015). To determine the abundance, a Braun - Blanquet scale was used: + = few individuals, low cover, 1 = abundant individuals with reduced cover or few individuals with greater cover (up to $\frac{1}{10}$ of the surface); 2 = very abundant individuals or with a cover of $\frac{1}{10}$ to $\frac{1}{4}$ of the surface; 3 = cover $\frac{1}{4}$ - $\frac{1}{2}$ of the surface, irrespective of the number of individuals; 4 = cover $\frac{1}{2}$ - $\frac{3}{4}$ of the surface, irrespective of the number of individuals; 5 = high cover of $\frac{3}{4}$ of the surface, irrespective of the number of individuals; r = 1-5 individuals with negligible cover.

Results and discussion

Data reported in the scientific literature indicated a number of 90 rare and threatened vascular plant taxa in the entire Natura 2000 site ROSCI0060 Dealurile Agighiolului. Our research focused on wind turbines on the Pietriş, Pietros and Căuşa Mare hills revealed a number of 59 rare and threatened taxa (table 1). Of these, 10 taxa have not been previously reported for the Dealurile Agighiolului site: *Bupleurum apiculatum* Friv., *Crocus pallasii* Goldb., *Himantoglossum jankae* Somlyay, Kreutz & Óvári, *Iris sintenisii* Janka, *Lathyrus cicera* L., *Orchis simia* Lam., *Ornithogalum amphibolum* Zahar., *Potentilla astracanică* Jacq., *Trigonella gladiata* M. Bieb., *Vicia peregrina* L. Their distribution around the wind turbines is shown in the Fig. 2.

Thus, on an area of about 1% (13.35 ha) of the total area of the site (1,433 ha), we have inventoried more than half of the number of rare and threatened vascular plant taxa previously found in the site ROSCI0060 Dealurile Agighiolului. The complete inventory of rare and threatened plant taxa previously mentioned in the scientific papers for the flora of ROSCI0060 Dealurile Agighiolului and of those found by us around the wind turbines is shown in Annex no. 1.

In respect of the three hills on which the wind turbines are located (Pietriş, Pietros and Căuşa Mare), the scientific papers mention 11 rare taxa for Pietriş Hill, 17 rare taxa for Pietros Hill and no taxa for Căuşa Mare Hill. We found 29 rare taxa for Pietriş Hill, 52 rare taxa for Pietros Hill and 19 taxa for Căuşa Mare Hill (Fig. 3). In some scientific papers the Pietros Hill is synonymous with the Agighiol Hill, or the hills

were given local names [e. i. Oii Hill (Oprea 2005)], therefore the location of some taxa is difficult to identify.

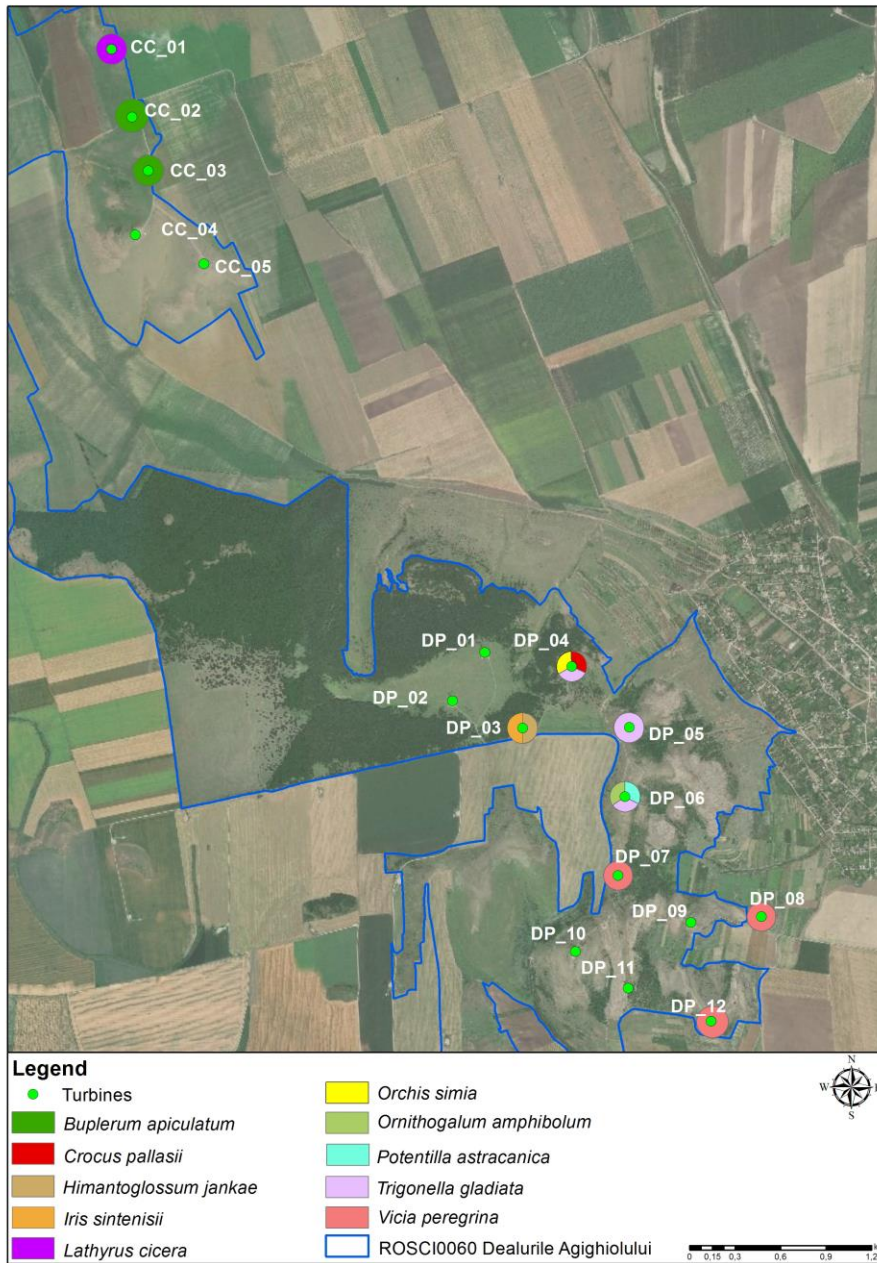


Fig. 2. Distribution of the new taxa recorded for the ROSCI0060 Dealurile Agighiolului site (compiled by Claudia Tomescu)

Table 1. Rare and threatened plant taxa inventoried in the plots around wind turbines

Taxa	Taxa
No	No
1. <i>Adonis flammea</i> Jacq.	31. <i>Hornungia petraea</i> (L.) Rchb.
2. <i>Adonis vernalis</i> L.	32. <i>Hyacinthella leucophaea</i> (K. Koch) Schur
3. <i>Allium flavum</i> subsp. <i>tauricum</i> (Besser ex Rchb.) K. Richt.	33. <i>Hyoscyamus niger</i> L.
4. <i>Allium guttatum</i> Steven	34. <i>Iris sintenisii</i> Janka
5. <i>Allium saxatile</i> M. Bieb.	35. <i>Koeleria lobata</i> (M. Bieb.) Roem. & Schult.
6. <i>Alyssum caliacrae</i> Nyár.	36. <i>Lathyrus cicera</i> L.
7. <i>Alyssum hirsutum</i> M. Bieb.	37. <i>Minuartia adenotricha</i> Schischk.
8. <i>Asparagus verticillatus</i> L.	38. <i>Minuartia hybrida</i> (Vill.) Schischk.
9. <i>Astragalus glaucus</i> M. Bieb.	39. <i>Muscari neglectum</i> Guss. ex Ten.
10. <i>Astragalus ponticus</i> Pall.	40. <i>Onobrychis gracilis</i> Besser
11. <i>Bombacilaena erecta</i> (L.) Smoljan.	41. <i>Orchis simia</i> Lam.
12. <i>Bupleurum apiculatum</i> Friv.	42. <i>Ornithogalum amphibolum</i> Zahar.
13. <i>Calepina irregularis</i> (Asso) Thell.	43. <i>Ornithogalum sigmoideum</i> Freyn & Sint.
14. <i>Campanula romanica</i> Săvul.	44. <i>Paeonia peregrina</i> Mill.
15. <i>Carex brevicollis</i> DC.	45. <i>Paronychia cephalotes</i> (M. Bieb.) Besser
16. <i>Centaurea kanitziana</i> D. Brândză	46. <i>Piptatherum virescens</i> (Trin.) Boiss.
17. <i>Cerastium gracile</i> Dufour	47. <i>Potentilla astracanică</i> Jacq.
18. <i>Colchicum triphyllum</i> Kunze	48. <i>Salvia nutans</i> L.
19. <i>Corydalis solida</i> subsp. <i>slivenensis</i> (Velen.) Hayek	49. <i>Scorzonera mollis</i> M. Bieb.
20. <i>Crocus danubensis</i> Kernd., Pasche, N. Randjelovic & V. Randjelovic	50. <i>Scutellaria orientalis</i> L. var. <i>pinnatifida</i> Rchb.
21. <i>Crocus pallasii</i> Goldb.	51. <i>Seseli rigidum</i> subsp. <i>peucedanifolium</i> (Spreng.) Nyman
22. <i>Cyanus thirkei</i> (Sch. Bip.) Holub	52. <i>Silene supina</i> M. Bieb.
23. <i>Daucus guttatus</i> subsp. <i>zahariadii</i> Heywood	53. <i>Sternbergia colchiciflora</i> Waldst. & Kit.
24. <i>Dianthus nardiformis</i> Janka	54. <i>Tanacetum millefolium</i> (L.) Tzvelev
25. <i>Echinops ritro</i> subsp. <i>ruthenicus</i> (M. Bieb.) Nyman	55. <i>Thymus zygioides</i> Griseb.
26. <i>Euphorbia myrsinites</i> L.	56. <i>Trigonella gladiata</i> M. Bieb.
27. <i>Euphorbia dobrogensis</i> Prodán	57. <i>Valerianella coronata</i> (L.) DC.
28. <i>Galanthus plicatus</i> M. Bieb.	58. <i>Vicia peregrina</i> L.
29. <i>Hedysarum grandiflorum</i> Pall. subsp. <i>grandiflorum</i>	59. <i>Vincetoxicum fuscatum</i> (Hornem.) Rchb. f.
30. <i>Himantoglossum jankae</i> Somlyay, Kreutz & Óvári	

According to the the National Red Book, 5 taxa from ROSCI0060 Dealurile Agighiolului are critically endangered (CR) (5%), 6 taxa are endangered (EN) (6%), 22 taxa are vulnerable (VU) (22%) and 5 taxa are Least Concern (LR) (5%). (Fig. 4).

The five critically endangered taxa identified in the site ROSCI0060 Dealurile Agighiolului are: *Alyssum caliacrae* Nyár., *Alyssum strigosum* Banks & Sol., *Convolvulus lineatus* L., *Gymnospermium odessanum* (DC.) Takht., *Hedysarum grandiflorum* Pall. subsp. *grandiflorum*. Of these, around the wind turbines we found the taxa *Alyssum caliacrae* Nyár. and *Hedysarum grandiflorum* Pall. subsp. *grandiflorum*.

The six endangered taxa identified in the site ROSCI0060 Dealurile Agighiolului are: *Campanula romanica* Săvul., *Caragana frutex* (L.) K. Koch, *Crocus pallasii* Goldb., *Euphorbia myrsinites* L., *Hornungia petraea* (L.) Rchb., *Minuartia adenotricha*

Schischk.. The species *Caragana frutex* (L.) K. Koch is not present around the turbine and *Crocus pallasii* Goldb. is reported by us for the first time.

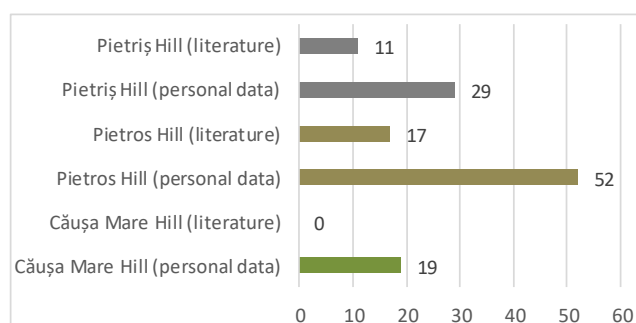


Fig. 3. Comparative analysis of the number of rare and threatened taxa reported in the literature and personal data from wind turbines at the level of the Pietriş, Pietros and Căușa Mare hills

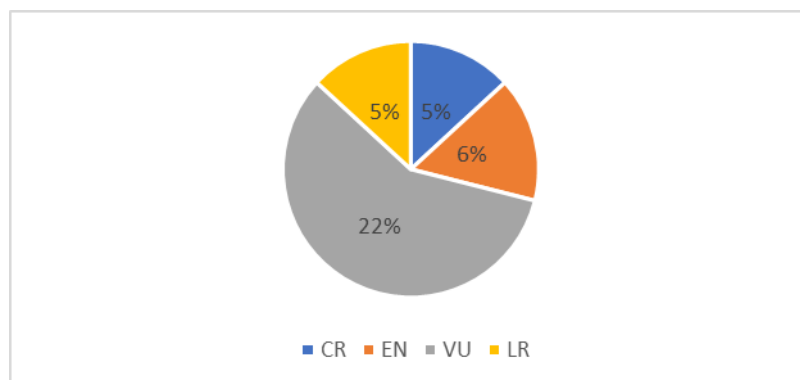


Fig. 4. IUCN Red Data categories spectrum of plants from ROSCI0060 Dealurile Agighiolului

Alyssum caliacrae Nyár. In the study area we identified the species within 62C0* habitat and on disturbed areas around wind turbines DP_06, DP_12 on Pietros Hill and DP_10 on Căușa Mare Hill. In the literature, this species is reported in the area of the Pietros Hill (Negrean & Anastasiu 2002, Dihoru & Negrean 2009) and Agighiol Hill (Sârbu et al. 2007, Petrescu 2018). Petrescu (2018) indicates a reduced abundance of *Alyssum caliacrae* Nyár. (+) on Agighiol Hill, considering it a threatened taxon at the site level. In the study area, we found the species with over 100 individuals per plot, and an abundance from (1) on undisturbed areas to (3) on disturbed areas. The plant has proved to be well adapted and has a high abundance on the technological platforms and on the edge of access roads (Fig. 5).

The main accompanying species of *Alyssum caliacrae* Nyár., identified within 62C0* habitat are: *Achillea setacea* Waldst. & Kit., *Adonis vernalis* L., *Agropyron ponticum* Nevski, *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Allium*

rotundum L., *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Colchicum triphyllum* Kunze, *Crocus danubensis* Kernd., Pasche, N. Randjelovic & V. Randjelovic, *Dianthus nardiformis* Janka, *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Eryngium campestre* L., *Euphorbia myrsinites* L., *Euphorbia dobrogensis* Prodán, *Euphorbia seguieriana* Neck., *Festuca valesiaca* Gaudin, *Hyacinthella leucophaea* (K. Koch) Schur, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Marrubium peregrinum* L., *Muscari neglectum* Guss. ex Ten., *Ornithogalum sigmoideum* Freyn & Sint., *Sanguisorba minor* Scop., *Scorzonera mollis* M. Bieb., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sternbergia colchiciflora* Waldst. & Kit., *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb., *Xeranthemum annuum* L.

The conservation status of the species under the influence of wind turbines is Favourable because the species population is stable and adapted even on disturbed areas. The pressures on its habitat are related to the presence of invasive species *Elaeagnus angustifolia* and *Ailanthus altissima* that come from old plantations in the area (OM 948/2016) and the intensive grazing.

Hedysarum grandiflorum Pall. subsp. ***grandiflorum***. In the study area we identified the species within 62C0* habitat around CC_05 wind turbine on Pietriș Hill (Fig. 6). Țupu (2012) describes a small population on a slope of the Pietriș Hill at an altitude of 145 m and at coordinates N45°03'44" E28°48'59" which correspond to about 95 m distance from the turbine CC_04. We identified a population of *Hedysarum grandiflorum* Pall. subsp. *grandiflorum* with about 50 individuals at about 15 m distance from the turbine CC_05 on Pietriș Hill, at an altitude of 155 m and coordinates N45°3'37.17" E28°49'24.54". The plant species that accompany *Hedysarum grandiflorum* Pall. subsp. *grandiflorum* in the location found by us, are similar to the species found by Țupu (2012), such as: *Achillea nobilis* subsp. *neilreichii* (A. Kern.) Velen., *Adonis vernalis* L., *Agropyron ponticum* Nevski, *Ajuga chamaepitys* subsp. *chia* (Schreb.) Arcang., *Bothriochloa ischaemum* (L.) Keng, *Crataegus monogyna* Jacq., *Digitalis lanata* Ehrh., *Dianthus nardiformis* Janka, *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Eryngium campestre* L., *Euphorbia dobrogensis* Prodán, *Festuca valesiaca* Gaudin, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Marrubium peregrinum* L., *Onosma visianii* Clementi, *Paeonia peregrina* Mill., *Sanguisorba minor* Scop., *Senecio leucanthemifolius* subsp. *vernalis* (Waldst. & Kit.) Greuter, *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Thymus zygioides* Griseb., *Vinca herbacea* Waldst. & Kit. etc.

As Țupu (2012) also observed, grazing is a source of threat to the *Hedysarum grandiflorum* Pall. subsp. *grandiflorum* in the site. Although, from our annual surveys between 2015-2019, we did not notice any changes in the size of its population or in the structure of the accompanying plants, however, the area is frequented by large flocks of sheep and goats.

In terms of conservation status, the population of the species is stable, the habitat is large enough for the long-term survival of the species, and the pressures/threats do not significantly affect the population of the species. We consider the species *Hedysarum grandiflorum* Pall. subsp. *grandiflorum* in a Favourable conservation status as regards the wind turbine area.

Campanula romanica Săvul. In the study area we identified the species within 62C0* habitat, around DP_08 on Pietros Hill, at the shelter of some high stones (Fig. 7). In the literature, the presence of the species is reported in Agighiol-Căuşul Mic (Săvulescu 1916 cited by Dihoru & Negrean 2009), Oii Hill (Oprea 2005), Agighiol Hill (Sârbu et al. 2007, Țupu 2009, 2010, Petrescu 2018), Dealurile Agighiolului site (Petrescu 2018).

Petrescu (2018) indicates a reduced abundance of the *Campanula romanica* Săvul. (+) on Dealurile Agighiolului site, considering it a threatened taxon at the site level. The population around DP_08 wind turbine is about 100 individuals with the abundance (+), well conserved on the stones on which it grows. The main accompanying species are: *Achillea nobilis* subsp. *neilreichii* (A. Kern.) Velen., *Agropyron ponticum* Nevski, *Allium rotundum* L., *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Centaurea kanitziana* D. Brândză, *Dianthus nardiformis* Janka, *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Euphorbia seguieriana* Neck., *Festuca valesiaca* Gaudin, *Hyacinthella leucophaea* (K. Koch) Schur, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Minuartia adenotricha* Schischk., *Paronychia cephalotes* (M. Bieb.) Besser, *Potentilla pedata* Willd., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Thymus zygoides* Griseb., *Xeranthemum annuum* L.

The habitat of the species *Campanula romanica* Săvul. around the wind turbine is threatened with the expansion of alien invasive plant *Ailanthus altissima* (Mill.) Swingle.

In terms of conservation status, the population of the species is stable, the habitat is large enough for the long-term survival of the species, and the pressures/ threats do not significantly affect the population of the species. The species has a Favourable conservation status as regards the wind turbine area.

Euphorbia myrsinites L. In the study area we identified the species within the habitat 62C0* and on disturbed areas, around wind turbines on Pietros Hill (DP_05, DP_06, DP_07, DP_09, DP_11, DP_12) and Căușa Mare Hill (DP_10). In the literature, the presence of the species is reported in Agighiol (Prodan 1936, Ciocârlan 1997 cited by Oprea 2005, Ciocârlan 2009), Pietros Hill (Negrean & Anastasiu 2002, Dihoru & Negrean 2009), Agighiol Hill (Sârbu et al. 2007, Țupu 2009, 2010, Petrescu et al. 2012a, b, Petrescu 2018), Dealurile Agighiolului site (Petrescu et al. 2012a, Petrescu 2018). Petrescu (2018) indicates a reduced abundance of the *Euphorbia myrsinites* L. (+) on Dealurile Agighiolului site, considering it a threatened taxon at the site level. In the studied area, the size of the species population varies depending on the analyzed plot from two to ten individuals. The main accompanying species are: *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Eryngium campestre* L., *Sanguisorba minor* Scop., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sideritis montana* L., *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygoides* Griseb. etc.

The main pressures/ threats affecting the habitat of the species *Euphorbia myrsinites* L. around wind turbines are related to the expansion of alien invasive plants [*Elaeagnus angustifolia* L., *Ailanthus altissima* (Mill.) Swingle] and intensive grazing.

In terms of conservation status, the population of the species is reduced, but the habitat is suitable for the long-term survival of the species, and also the species is well

adapted to disturbed surfaces, therefore we consider the species in a Favourable conservation status as regards the wind turbine area.

Hornungia petraea (L.) Rchb. In the study area we identified the species within the habitat 62C0* around the DP_11 wind turbine on Pietros Hill. In the literature, the presence of the species is reported in Agighiol (Ciocârlan 2006, Ciocârlan 2009), Pietros Hill (Dihoru & Negrean 2009, Negrean 2011), without any population size mentioned. Negrean (2011) indicates the presence of the species at the coordinates N45°01'41", E28°51'50" which correspond to the Agighiol Hill (Geological Reservation) but presented as Pietros Hill. We have identified a population with about ten individuals at the coordinates N 45°0'59.31" E 28°51'19.61", on a stony pontosarmatic steppe grassland, accompanied by the species such as: *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Agropyron ponticum* Nevski, *Allium rotundum* L., *Bothriochloa ischaemum* (L.) Keng, *Euphorbia myrsinites* L., *Festuca valesiaca* Gaudin, *Hyacinthella leucophaea* (K. Koch) Schur, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Minuartia adenotricha* Schischk., *Muscari neglectum* Guss. ex Ten., *Paronychia cephalotes* (M. Bieb.) Besser, *Potentilla pedata* Willd., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Stachys recta* L., *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb., *Xeranthemum cylindraceum* Sm.

The main pressures/ threats affecting the habitat of the species *Hornungia petraea* (L.) Rchb. around wind turbine are related to the presence of alien invasive plants [*Elaeagnus angustifolia* L., *Ailanthus altissima* (Mill.) Swingle] and intensive grazing.

In terms of conservation status, although the habitat has a good quality and the pressures/ threats do not significantly affect the species, the population of the species is reduced, therefore the species has an Unfavourable conservation status.

Minuartia adenotricha Schischk. In the study area we identified the species within the habitat 62C0* around wind turbines CC_01, CC_03 on Pietriș Hill, DP_08, DP_09, DP_11, DP_12 on Pietros Hill and DP_10 on Căușa Mare Hill. In the literature, the presence of the species is reported in Agighiol (Ciocârlan 2006), Agighiol Hill and Stâncea Mare Hill (Țupu 2009, 2010) without any population size mentioned. The identified population of the species is restricted to about 3-4 individuals around each turbine. The main accompanying species are: *Adonis flammea* Jacq., *Adonis vernalis* L., *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Agropyron ponticum* Nevski, *Allium rotundum* L., *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Convolvulus cantabrica* L., *Eryngium campestre* L., *Festuca valesiaca* Gaudin, *Hyacinthella leucophaea* (K. Koch) Schur, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Potentilla pedata* Willd., *Sanguisorba minor* Scop., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sideritis montana* L., *Teucrium capitatum* L., *Thymus zygioides* Griseb..

The main pressures/ threats affecting the habitat of the species *Minuartia adenotricha* Schischk. around wind turbine are related to the presence of alien invasive plants [*Elaeagnus angustifolia* L., *Ailanthus altissima* (Mill.) Swingle] and intensive grazing.

The population of the species has an Unfavourable conservation status, taking into account the small population and the significant impact of the grazing.

Crocus pallasii Goldb. In the study area, we identified the species within the habitat 62C0* in areas shaded by the fragmented presence of forest habitat with *Quercus pubescens* Willd. subsp. *pubescens*, *Carpinus orientalis* Mill., *Crataegus monogyna* Jacq. (habitat 91AA*) around DP_04 wind turbine on the Pietros Hill (Fig. 8). The species has not been previously reported in the literature for ROSCI0060 Dealurile Agighiolului. The population around DP_04 wind turbine on the Pietros Hill consists of over 300 individuals in a Favourable conservation status. The main accompanying species are: *Achillea setacea* Waldst. & Kit., *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Agropyron ponticum* Nevski, *Allium rotundum* L., *Bothriochloa ischaemum* (L.) Keng, *Carpinus orientalis* Mill., *Centaurea diffusa* Lam., *Centaurea kanitziana* D. Brândză, *Colchicum triphyllum* Kunze, *Crataegus monogyna* Jacq., *Crocus danubensis* Kernd., Pasche, N. Randjelovic & V. Randjelovic, *Dianthus nardiformis* Janka, *Eryngium campestre* L., *Festuca valesiaca* Gaudin, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Marrubium peregrinum* L., *Noccaea perfoliata* (L.) Al-Shehbaz, *Poa pratensis* L., *Quercus pubescens* Willd. subsp. *pubescens*, *Sanguisorba minor* Scop., *Sternbergia colchiciflora* Waldst. & Kit., *Stipa capillata* L., *Stipa lessingiana* Trin. & Rupr., *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb.

The main pressures/ threats affecting the habitat of the species *Crocus pallasii* Goldb. around wind turbine are related to the presence of intensive grazing and easy access of tourists in the area.

Except the species *Crocus pallasii* Goldb., most of the newly reported rare and threatened plant taxa were found in a small number of individuals and with an Unfavourable conservation status, as described below:

Bupleurum apiculatum Friv. In the study area, we identified the species within the habitat 62C0* around CC_02 and CC_03 turbine on Pietriş Hill with only 1-2 individuals. The main accompanying species are: *Achillea setacea* Waldst. & Kit., *Alyssum turkestanicum* Regel & Schmalh., *Anisantha tectorum* (L.) Nevski, *Artemisia austriaca* Jacq., *Bothriochloa ischaemum* (L.) Keng, *Bromus commutatus* Schrad., *Carduus nutans* L. subsp. *nutans*, *Chondrilla juncea* L., *Convolvulus arvensis* L., *Daucus carota* L. subsp. *carota*, *Elytrigia repens* (L.) Nevski, *Galium humifusum* M. Bieb., *Herniaria incana* Lam., *Hordeum murinum* L., *Marrubium peregrinum* L., *Marrubium vulgare* L., *Petrorhagia prolifera* (L.) P. W. Ball & Heywood, *Plantago lanceolata* L., *Potentilla argentea* L., *Thymus pulegioides* subsp. *pannonicus* (All.) Kerguélen, *Vulpia myuros* (L.) C. C. Gmel. etc.

The main pressures/ threats affecting the habitat of the species *Bupleurum apiculatum* Friv. around wind turbines are related to the intensive grazing of sheep and goats, ruderalization of the grassland as a result of the interconnection with agricultural lands, practice of burning vegetation in the area.

The population of the species has a Totally inadequate unfavourable conservation status, considering the small population, the significant pressures/threats of the grazing and poor quality of the habitat affected by ruderalization.



Fig. 5. *Alyssum caliacrae* Nyár. - at the edge of access road to the DP_10 wind turbine



Fig. 6. *Hedysarum grandiflorum* Pall. subsp. *grandiflorum* – population on the steppe grassland (habitat 62C0*) around CC_05 wind turbine, Pietriș Hill



Fig. 7. *Campanula romanica* Săvul. – on the stony steppe grassland (habitat 62C0*) around DP_08 wind turbine, Pietros Hill



Fig. 8. *Crocus pallasii* Goldb. – on the steppe grassland (habitat 62C0*) around DP_04 wind turbine, Pietros Hill

Himantoglossum jankae Somlyay, Kreutz & Óvári. In the study area, we identified the species in the forest habitat with *Carpinus orientalis* Mill. and *Quercus pubescens* Willd. subsp. *pubescens* (91AA*) around DP_03 wind turbine. In May 2018 we identified two individuals of this species, in the early stages of flowering. Two weeks after the first observation, in June 2018, we found only a single individual in a good condition, and the other one withered and lying on the ground, as if it had been trampled by animals or people. At the end of June 2018 the two individuals were no longer found, and in the respective locations the soil seemed to have been dug up. The area is frequented by tourists, shepherds with sheep and goats, but also by wild boars, which leads us to the assumption that one of the three forms of impact could have contributed to the disappearance of the two specimens.

The main accompanying species are: *Ajuga genevensis* L., *Ajuga laxmannii* (Murray) Benth., *Anemone ranunculoides* L., *Arum orientale* M. Bieb., *Asparagus verticillatus* L., *Carex brevicollis* DC., *Corydalis solida* subsp. *slivenensis* (Velen.) Hayek, *Crataegus monogyna* Jacq., *Crocus danubensis* Kernd., Pasche, N. Randjelovic

& V. Randjelovic, *Cruciata pedemontana* (Bellardi) Ehrend., *Festuca valesiaca* Gaudin, *Fragaria viridis* Weston subsp. *viridis*, *Galanthus plicatus* M. Bieb., *Geranium columbinum* L., *Isopyrum thalictroides* L., *Noccaea perfoliata* (L.) Al-Shehbaz, *Piptatherum virescens* (Trin.) Boiss., *Poa pratensis* L., *Scilla bifolia* L., *Stachys recta* L., *Teucrium chamaedrys* L., *Thymus pulegioides* subsp. *pannonicus* (All.) Kerguélen, *Veronica austriaca* subsp. *teucrium* (L.) D. A. Webb, *Vinca herbacea* Waldst. & Kit.

The population of the species has a Totally inadequate unfavourable conservation status, the species was not found again in 2019, the population found is very small and the threats/ pressures identified have a significant impact on it.

Iris sintenisii Janka In the study area, we identified the species on the forest habitat with *Carpinus orientalis* Mill. and *Quercus pubescens* Willd. subsp. *pubescens* (91AA*), around DP_03 wind turbine, at the edge of the access road. The size of the population ranged from 3 to 10 individuals depending on the specific climatic conditions of each year. The main accompanying species are: *Achillea setacea* Waldst. & Kit., *Agrimonia eupatoria* L., *Ajuga genevensis* L., *Ajuga laxmannii* (Murray) Benth., *Allium rotundum* L., *Alyssum alyssoides* (L.) L., *Anemone ranunculoides* L., *Carex brevicollis* DC., *Clinopodium acinos* (L.) Kuntze, *Corydalis solida* subsp. *slivenensis* (Velen.) Hayek, *Crataegus monogyna* Jacq., *Dactylis glomerata* L. subsp. *glomerata*, *Festuca valesiaca* Gaudin, *Fragaria viridis* Weston subsp. *viridis*, *Galanthus plicatus* M. Bieb., *Geranium columbinum* L., *Inula oculus-christi* L., *Isopyrum thalictroides* L., *Marrubium peregrinum* L., *Muscari neglectum* Guss. ex Ten., *Noccaea perfoliata* (L.) Al-Shehbaz, *Orlaya grandiflora* (L.) Hoffm., *Ornithogalum orthophyllum* subsp. *kochii* (Parl.) Maire & Weiller, *Piptatherum virescens* (Trin.) Boiss., *Plantago lanceolata* L., *Poa pratensis* L., *Potentilla argentea* L., *Scilla bifolia* L., *Stachys recta* L., *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus pulegioides* subsp. *pannonicus* (All.) Kerguélen, *Vinca herbacea* Waldst. & Kit.

The main pressures/ threats on the species are the easy access of the tourists in the area. In terms of conservation status, the population of the species has an Unfavourable conservation status, taking into account the small population and the potential threat of being picked up by tourists in the area.

Lathyrus cicera L. In the study area, we identified the species within the habitat 62C0* around CC_01 turbine on Pietriş Hill with only 2-3 individuals. The main accompanying species are: *Achillea nobilis* subsp. *neilreichii* (A. Kern.) Velen., *Achillea setacea* Waldst. & Kit., *Allium flavum* subsp. *tauricum* (Besser ex Rchb.) K. Richt., *Alyssum hirsutum* M. Bieb., *Alyssum turkestanicum* Regel & Schmalh., *Androsace maxima* L., *Anisantha tectorum* (L.) Nevski, *Artemisia austriaca* Jacq., *Berteroa incana* (L.) DC., *Bothriochloa ischaemum* (L.) Keng, *Bromus commutatus* Schrad., *Cota tinctoria* (L.) J. Gay, *Cynanchum acutum* L., *Daucus carota* L. subsp. *carota*, *Daucus guttatus* subsp. *zahariadii* Heywood, *Dianthus nardiformis* Janka, *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Elytrigia intermedia* (Host) Nevski, *Erodium cicutarium* (L.) L'Hér., *Erysimum diffusum* Ehrh., *Euphorbia dobrogensis* Prodán, *Festuca valesiaca* Gaudin, *Gagea pratensis* (Pers.) Dumort., *Gagea villosa* (M. Bieb.) Sweet, *Galium humifusum* M. Bieb., *Heliotropium europaeum* L., *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Lamium amplexicaule* L., *Linum tenuifolium* L., *Marrubium peregrinum* L., *Medicago minima* (L.) L., *Melica ciliata* L. subsp. *ciliata*, *Melilotus officinalis* (L.) Lam., *Minuartia adenotricha* Schischk.,

Minuartia glomerata (M. Bieb.) Degen, *Muscari neglectum* Guss. ex Ten., *Myosotis arvensis* (L.) Hill, *Ornithogalum refractum* Kit. ex Schldl., *Ornithogalum sigmoideum* Freyn & Sint., *Potentilla argentea* L., *Potentilla pedata* Willd., *Ranunculus illyricus* L., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sideritis montana* L., *Stachys recta* L., *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thalictrum minus* L., *Thymus pulegioides* subsp. *pannonicus* (All.) Kerguélen, *Thymus zygioides* Griseb., *Tragopogon dubius* Scop., *Trifolium arvense* L., *Trifolium campestre* Schreb., *Viola kitaibeliana* Schult., *Xeranthemum annuum* L.

The main pressures/ threats affecting the habitat of the species around the wind turbines are related to intensive grazing, ruderalization of the grassland as a result of the interconnection with agricultural lands, practice of burning vegetation in the area.

The population of the species has a Totally inadequate unfavourable conservation status, taking into account the small population and the significant pressures/ threats of the grazing and poor quality of the habitat affected by ruderalization.

Orchis simia Lam. In the study area, we identified the species in habitat 62C0* in areas shaded by the fragmented presence of forest habitat with *Quercus pubescens* Willd. subsp. *pubescens*, *Carpinus orientalis* Mill., *Crataegus monogyna* Jacq. (habitat 91AA*) around DP_04 wind turbine on the Pietros Hill. A single individual of the species was observed in 2018, at the end of the vegetation period. The main accompanying species are: *Achillea setacea* Waldst. & Kit., *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Agropyron ponticum* Nevski, *Allium rotundum* L., *Bothriochloa ischaemum* (L.) Keng, *Carpinus orientalis* Mill., *Centaurea diffusa* Lam., *Centaurea kanitziana* D. Brândză, *Colchicum triphyllum* Kunze, *Crataegus monogyna* Jacq., *Crocus danubensis* Kernd., Pasche, N. Randjelovic & V. Randjelovic, *Dianthus nardiformis* Janka, *Eryngium campestre* L., *Festuca valesiaca* Gaudin, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Marrubium peregrinum* L., *Noccaea perfoliata* (L.) Al-Shehbaz, *Poa pratensis* L., *Quercus pubescens* Willd. subsp. *pubescens*, *Sanguisorba minor* Scop., *Sternbergia colchiciflora* Waldst. & Kit., *Stipa capillata* L., *Stipa lessingiana* Trin. & Rupr., *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb.

The population of the species has a Totally inadequate unfavourable conservation status, the population is very small and the species was not found again in 2019.

Ornithogalum amphibolum Zahar. In the study area, we identified the species within the habitat 62C0* around turbine DP_06 with only 3 individuals. The main accompanying species are: *Adonis vernalis* L., *Agropyron ponticum* Nevski, *Allium rotundum* L., *Alyssum caliacrae* Nyár., *Alyssum hirsutum* M. Bieb., *Bombycilaena erecta* (L.) Smoljan., *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Centaurea kanitziana* D. Brândză, *Colchicum triphyllum* Kunze, *Consolida regalis* Gray, *Crepis foetida* subsp. *rhoeadifolia* (M. Bieb.) Čelak., *Crocus danubensis* Kernd., Pasche, N. Randjelovic & V. Randjelovic, *Cruciata pedemontana* (Bellardi) Ehrend., *Dianthus nardiformis* Janka, *Digitalis lanata* Ehrh., *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Eryngium campestre* L., *Euphorbia myrsinites* L., *Euphorbia dobrogensis* Prodán, *Euphorbia seguieriana* Neck., *Festuca valesiaca* Gaudin, *Gagea pratensis* (Pers.) Dumort., *Galium verum* L., *Haplophyllum suaveolens* (DC.) G. Don,

Hyacinthella leucophaea (K. Koch) Schur, *Hypericum elegans* Willd., *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Linaria genistifolia* (L.) Mill., *Linum tenuifolium* L., *Marrubium peregrinum* L., *Medicago falcata* L., *Melica ciliata* L. subsp. *ciliata*, *Muscari neglectum* Guss. ex Ten., *Ornithogalum sigmoideum* Freyn & Sint., *Potentilla pedata* Willd., *Scorzonera mollis* M. Bieb., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sideritis montana* L., *Silene supina* M. Bieb., *Stachys recta* L., *Sternbergia colchiciflora* Waldst. & Kit., *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb..

The main pressures/ threats affecting the habitat of the species are related to intensive grazing and easy access of tourists in the area. Also, the habitat is affected by the presence of the alien plant species *Ailanthus altissima* (Mill.) Swingle. The population of the species has an Unfavourable conservation status, taking into account the small population and the significant pressures/threats of the grazing.

Potentilla astracanica Jacq. In the study area, we identified the species within the habitat 62C0* around turbine DP_06, with 4 individuals. Also we found individuals of the species on the technological platform. The main accompanying species are those presented for *Ornithogalum amphibolum* Zahar. that are found in the same type of habitat.

The main pressures/ threats affecting the habitat of the species are related to the presence of intensive grazing. Also, the habitat is affected by the presence of the alien plant species *Ailanthus altissima* (Mill.) Swingle. The population of the species has a Totally inadequate unfavourable conservation status, taking into account the small population and the significant pressure of grazing.

Trigonella gladiata M. Bieb. In the study area, we identified the species within the habitat 62C0* around turbine DP_4, DP_05 and DP_06, with about 10 individuals. The main accompanying species are: *Adonis vernalis* L., *Agropyron ponticum* Nevski, *Agropyron cristatum* subsp. *pectinatum* (M. Bieb.) Tzvelev, *Allium rotundum* L., *Alyssum caliacrae* Nyár., *Alyssum hirsutum* M. Bieb., *Bombacilaena erecta* (L.) Smoljan., *Bothriochloa ischaemum* (L.) Keng, *Centaurea diffusa* Lam., *Centaurea kaniiziana* D. Brândză, *Colchicum triphyllum* Kunze, *Crocus danubensis* Kernd., Pasche, N. Randjelovic & V. Randjelovic, *Dianthus nardiformis* Janka, *Digitalis lanata* Ehrh., *Echinops ritro* subsp. *ruthenicus* (M. Bieb.) Nyman, *Eryngium campestre* L., *Euphorbia myrsinites* L., *Euphorbia dobrogensis* Prodán, *Euphorbia seguieriana* Neck., *Festuca valesiaca* Gaudin, *Gagea pratensis* (Pers.) Dumort., *Haplophyllum suaveolens* (DC.) G. Don, *Hyacinthella leucophaea* (K. Koch) Schur, *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Marrubium peregrinum* L., *Melica ciliata* L. subsp. *ciliata*, *Muscari neglectum* Guss. ex Ten., *Ornithogalum sigmoideum* Freyn & Sint., *Potentilla pedata* Willd., *Scorzonera mollis* M. Bieb., *Sedum urvillei* DC. subsp. *hillebrandtii* (Fenzl) D. A. Webb, *Sideritis montana* L., *Stachys recta* L., *Sternbergia colchiciflora* Waldst. & Kit., *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygioides* Griseb.

The main pressures/ threats affecting the habitats of the species are related to the presence of intensive grazing. Also, the habitat is affected by the presence of the alien plant species *Ailanthus altissima* (Mill.) Swingle. The population of the species has an Unfavourable conservation status, taking into account the small population and the significant pressure of grazing.

Vicia peregrina L. In the study area, we identified the species on the disturbed areas of three turbines (DP_07, DP_08 and DP_12) on Pietros Hill. In each plot we found 3-4 individuals. The main accompanying species are: *Achillea nobilis* subsp. *neilreichii* (A. Kern.) Velen., *Achillea setacea* Waldst. & Kit., *Aegilops cylindrica* Host, *Ajuga chamaepitys* subsp. *chia* (Schreb.) Arcang., *Alyssum hirsutum* M. Bieb., *Alyssum turkestanicum* Regel & Schmalh., *Anisantha sterilis* (L.) Nevski, *Anisantha tectorum* (L.) Nevski, *Artemisia absinthium* L., *Artemisia austriaca* Jacq., *Ballota nigra* L. subsp. *nigra*, *Bothriochloa ischaemum* (L.) Keng, *Buglossoides arvensis* (L.) I. M. Johnst., *Cannabis sativa* L., *Carduus nutans* L. subsp. *nutans*, *Centaurea diffusa* Lam., *Cichorium intybus* L., *Convolvulus arvensis* L., *Crepis foetida* subsp. *rheadifolia* (M. Bieb.) Čelak., *Crepis nicaeensis* Pers., *Erodium cicutarium* (L.) L'Hér., *Eryngium campestre* L., *Erysimum diffusum* Ehrh., *Festuca valesiaca* Gaudin, *Galium humifusum* M. Bieb., *Hypericum elegans* Willd., *Koeleria lobata* (M. Bieb.) Roem. & Schult., *Lamium amplexicaule* L., *Lepidium draba* L. subsp. *draba*, *Linaria genistifolia* (L.) Mill., *Marrubium peregrinum* L., *Medicago minima* (L.) L., *Melilotus officinalis* (L.) Lam., *Nigella arvensis* L., *Noccaea perfoliata* (L.) Al-Shehbaz, *Papaver rhoeas* L., *Plantago lanceolata* L., *Potentilla argentea* L., *Potentilla pedata* Willd., *Reseda lutea* L., *Sanguisorba minor* Scop., *Securigera varia* (L.) Lassen, *Senecio leucanthemifolius* subsp. *vernalis* (Waldst. & Kit.) Greuter, *Sideritis montana* L., *Sisymbrium orientale* L., *Stipa capillata* L., *Tanacetum millefolium* (L.) Tzvelev, *Teucrium capitatum* L., *Teucrium chamaedrys* L., *Thymus zygoides* Griseb., *Torilis arvensis* (Huds.) Link, *Tragopogon dubius* Scop., *Xeranthemum annuum* L.

The species was found only in disturbed areas, respectively in the vegetation that is recovering on the technological platforms. The population of the species has a Totally inadequate unfavourable conservation status, as the vegetation on the technological platforms is sometimes removed, in order to place machines used for the maintenance of wind turbines.

According to our observations, the Natura 2000 site ROSCI0060 Dealurile Agighiolului is under various pressures and threats of anthropogenic factors such as tourism, extension of agricultural land on the habitat 62C0*, practice of burning dry vegetation and expansion of invasive plant species *Ailanthus altissima* (Mill.) Swingle and *Elaeagnus angustifolia* L. from old plantations in the site. Tourists' access is very easy to the site. Mostly in April and May, the presence of tourists on the site is increased, as they are especially looking for the species *Paeonia peregrina* Mill.. We observed the practice of flower picking in the population of *Paeonia peregrina* Mill. around the turbine CC_04 on the Pietriș Hill. As Pickering & Hill (2007) noticed, the consequences of tourism prove to be very severe on rare plants, and picking or collecting flowers is among the most significant threats to rare plants in protected areas (Kelly et al. 2003). The extension of agricultural land on natural grasslands was observed mainly at the level of Pietros Hill (turbines DP_08 and DP_09), but also on Pietriș Hill (CC_01-CC_03). Also, the practice of burning dry vegetation in the early spring (carried out by landowners) is very common on the grasslands of Pietriș Hill and Pietros Hill.

Conclusions

The area of the “Agighiol” Wind Farm holds more than half of the floristic rarities reported in the Natura 2000 site ROSCI0060 Dealurile Agighiolului, including new taxa firstly mentioned in this protected area. According to our observations for five years around the wind turbines, the presence of wind farm does not significantly affect rare and threatened plant populations in the adjacent natural habitats. However, the rare and threatened plants installed on the technological platforms are affected, when the vegetation is removed for maintenance operations of wind turbines. The other anthropic factors that are manifested in the area, especially the tourism, the excessive grazing, the extension of agricultural lands and the fires of vegetation seem to have a higher impact on the floristic rarities in the site.

It is a certainty that the Natura 2000 site ROSCI0060 can still offer many undiscovered rare taxa, thus more thorough research is needed, including population studies. Also, adequate management measures of the negative factors are needed in order to avoid the potential losses of the floristic rarities and to conserve the naturalness of the site.

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Annex no. 1 Rare and threatened plants in the site ROSCI0060 Dealurile Agighiolului and in the area of "Agighiol" Wind Farm

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boscaiu et al. 1994)	Status NRL (Dihoru & Negrean 1994)	Status NRL (Oltan et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
1.	<i>Achillea ochroleuca</i> Ehrh.			V	V	Agighiol Hill (Tupu 2009)	-
2.	<i>Adonis flammea</i> Jacq.			R	R	Stanca Mare Hill, Pietriș Hill (Tupu 2009)	Pietriș Hill, Pietros Hill
3.	<i>Adonis vernalis</i> L.			V	V	Agighiol Hill, Uzum Bair Hill (Tupu 2009, 2010)	Pietriș Hill, Pietros Hill, Căușa Mare Hill
4.	<i>Agropyron brandzae</i> Panțu et Solac.	VU		R	B V/R	Agighiol Hill (Petrescu et al. 2012a, b)	-
5.	<i>Allium flavum</i> subsp. <i>tauricum</i> (Besser ex Rechb.) K. Richt.				R	Stanca Mare Hill (Tupu 2009, 2010), Agighiol (Ciocărlan unpublished cited by Tupu 2009)	Pietriș Hill, Pietros Hill
6.	<i>Allium guttatum</i> Steven			V	R	Agighiol Hill (Tupu 2009, 2010)	Pietros Hill
7.	<i>Allium saxatile</i> M. Bieb.			R	R	Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010, Petrescu et al. 2012a, b), Stanca Mare Hill (Tupu 2009, 2010)	Pietriș Hill
8.	<i>Allium siculum</i> subsp. <i>dioscoridis</i> (Sm.) K. Richt.			R	R	Dealurile Agighiolului site (Petrescu et al. 2012)	-
9.	<i>Alyssum caliacrae</i> Nyár.	CR			B R	Pietros Hill (Negrean & Anastasiu 2002), Agighiol Hill (Sârbu et al. 2007, Petrescu 2018), Agighiol W, Pietros Hill, 45°01'41" N, 28°51'50" E (Dihoru & Negrean 2009)	Pietros Hill, Căușa Mare Hill
10.	<i>Alyssum hirsutum</i> M. Bieb.			R		Agighiol (Prodan 1935, Nyárady 1955), Agighiol Hill (Sârbu et al. 2007, Tupu 2009), Stanca Mare Hill, Uzum Bair Hill (Tupu 2009)	Pietriș Hill, Pietros Hill, Căușa Mare Hill
11.	<i>Alyssum strigosum</i> Banks & Sol.	CR		E	E/R	Agighiol (Ciocărlan 2000, 2009)	-
12.	<i>Asparagus verticillatus</i> L.				R	Agighiol Hill, Stanca Mare Hill (Tupu 2009, 2010), Dealurile Agighiolului site (Petrescu et al. 2012a)	Pietros Hill

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boşatin et al. 1994)	Status NRL (Dihoru & Dihoru 1994)	Status NRL (Olean et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
13.	<i>Astragalus dasycanthus</i> Pall.			R	R	Stânca Mare Hill, Uzum Bair Hill (Tupu 2009)	-
14.	<i>Astragalus glaucus</i> M. Bieb.		R	K	B R	Agighiol (Prodan 1936)	Pietros Hill, Căușa Mare Hill
15.	<i>Astragalus ponticus</i> Pall.			R	V/R	Stânca Mare (Tupu 2009, 2010)	Pietriș Hill
16.	<i>Bombycilaena erecta</i> (L.) Smoljan.			R (V)		Oii hill (Oprea 2005), Agighiol Hill (Sârbu et al. 2007, Tupu 2009), Stânca Mare Hill (Tupu 2009), Agighiol (Ciocârlian unpublished cited by Tupu 2009)	Pietriș Hill, Pietros Hill
17.	<i>Bufoia tenuifolia</i> L.	VU		R	R	Agighiol (Ciocârlian 2006)	-
18.	<i>Bupleurum apiculatum</i> Friv.			R	R	-	Pietriș Hill
19.	<i>Bupleurum uechritzianum</i> Stoyanov	VU	R	E	R	Agighiol W, Mandra Forest, 45°02'32"N, 28°49'58"E (Negrean 2011)	-
20.	<i>Calepina irregularis</i> (Asso) Thell.		R			Agighiol (Ciocârlian unpublished cited by Tupu 2009)	Pietros Hill
21.	<i>Campanula romanica</i> Săvul.	EN		V	A V/R	Agighiol-Căușul Mic (Săvulescu 1916 cited by Dihoru & Negrean 2009), Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010, Petrescu 2018), Oii hill (Oprea 2005), Dealurile Agighiolului site (Petrescu 2018)	Pietros Hill
22.	<i>Caragana frutex</i> (L.) K. Koch	EN		E	R	Agighiol (Săvulescu 1953, Vișțelaru 1968 cited by Oprea 2005), Dealul Agighiol (Tupu 2009)	-
23.	<i>Carex brevicollis</i> DC.			R (I)	I	Agighiol – Mandra Forest (Andreescu cited by Anonymous 1960), Agighiol Hill (Tupu 2009)	Pietros Hill
24.	<i>Celtis planchoniana</i> K. I. Chr.	VU			R	Stânca Mare Hill (Tupu 2009), Agighiol Hill (Petrescu et al. 2012a, b)	-

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boşatin et al. 1994)	Status NRL (Dihoru & Dihoru 1994)	Status NRL (Olean et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
25.	<i>Centaurea kanitziana</i> D. Brândză	VU				Agighiol (Ciocărlan 2006), Agighiol Hill (Sârbu et al. 2007)	Pietros Hill, Căușa Mare Hill
26.	<i>Cerastium gracile</i> Dufour			R	R	Agighiol (Ciocărlan unpublished cited by Tupu 2009)	Pietros Hill
27.	<i>Chaerophyllum nodosum</i> (L.) Crantz				R	Agighiol Hill (Tupu 2009)	-
28.	<i>Colchicum triphyllum</i> Kunze				R	Agighiol Hill, Uzum Bair Hill (Tupu 2009, 2010)	Pietros Hill, Căușa Mare Hill
29.	<i>Convolvulus lineatus</i> L.	CR		R	R	Oii hill (Oprea 2005), Agighiol (Ciocărlan 2006), Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010), Stânca Mare Hill, Pietriș Hill (Tupu 2009, 2010), Pietros Hill (Negrean 2011)	-
30.	<i>Corydalis solida</i> subsp. <i>slivenensis</i> (Velen.) Hayek				bR	Agighiol Hill, Pietriș Hill (Tupu 2009) Dealurile Agighiolului site (Petrescu et al. 2012, Petrescu 2018)	Pietros Hill
31.	<i>Crocus danubensis</i> Kerd., Pasche, N. Randjelovic & V. Randjelovic				V	Agighiol Hill, Uzum Bair Hill (Tupu 2009, 2010), Dealurile Agighiolului (Petrescu et al. 2012, Petrescu 2018)	Pietriș Hill, Pietros Hill, Căușa Mare Hill
32.	<i>Crocus pallasi</i> Goldb.	EN	R	V	R	-	Pietros Hill
33.	<i>Crucianella angustifolia</i> L.		R	R	R	Agighiol – Mandra Forest (Andrei 1963), Pietriș Hill (Tupu 2009, 2010), Agighiol (Ciocărlan 2009 cited by Tupu 2009)	-
34.	<i>Cyanus thirkei</i> (Sch. Bip.) Holub	VU	R	R	R	Agighiol Hill, Stânca Mare Hill (Tupu 2009), Dealurile Agighiolului site (Petrescu et al. 2012)	Pietros Hill
35.	<i>Daucus guttatus</i> subsp. <i>zahariadii</i> Heywood				R	Agighiol (Ciocărlan unpublished cited by Tupu 2009)	Pietriș Hill
36.	<i>Dianthus leptopetalus</i> Willd.			V	R	Agighiol Hill (Tupu 2009, 2010)	-

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boşcaiu et al. 1994)	Status NRL (Dihoru & Dîhoru 1994)	Status NRL (Oltean et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
37.	<i>Dianthus nardiformis</i> Janka	VU		V	B V/R	Agighiol (Prodan 1935, Ciocărlan unpublished cited by Ţupu 2009), Agighiol – Mandra Forest (Andrescu cited by Anonymous 1960), Agighiol Hill (Sârbru et al. 2007, Ţupu 2009, 2010, Petrescu et al. 2012a, b, Petrescu 2018), Pietriş Hill, Stâncea Mare Hill (Ţupu 2009, 2010)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
38.	<i>Dianthus pseudarmeria</i> M. Bieb.	LR		R	R	Agighiol Hill (Sârbru et al. 2007, Ţupu 2009)	-
39.	<i>Echinops ritro</i> subsp. <i>ruthenicus</i> (M. Bieb.) Nyman				R	Pietriş Hill (Ţupu 2009, Petrescu et al. 2012a), Stâncea Mare Hill, Uzum Bair Hill (Ţupu 2009)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
40.	<i>Ephedra distachya</i> L.				R	Agighiol Hill, Stâncea Mare Hill (Ţupu 2009, 2010)	-
41.	<i>Euphorbia myrsinites</i> L.	EN	R	R	V/R	Agighiol (Prodan 1936, Ciocărlan 1997 cited by Oprea 2005, Ciocărlan 2009), Pietros Hill (Negrean & Anastasiu 2002), Agighiol Hill (Sârbru et al. 2007, Ţupu 2009, 2010, Petrescu et al. 2012a, b, Petrescu 2018), Agighiol W, Pietros Hill, 45°02'01,32" N, 28°51'34,01" E (Dîhoru & Negrean 2009), Dealurile Agighiolului (Petrescu et al. 2012a, Petrescu 2018)	Pietros Hill, Căuşa Mare Hill
42.	<i>Euphorbia dobrogensis</i> Prodan				bR	Agighiol Hill (Sârbru et al. 2007), Stâncea Mare Hill, Uzum Bair Hill (Ţupu 2009, 2010)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
43.	<i>Festuca callieri</i> (Hack.) Markgr.			R	R	Agighiol (Ciocărlan unpublished cited by Ţupu 2009), Stâncea Mare Hill (Ţupu 2010), Agighiol Hill (Petrescu et al. 2012a, b, Petrescu 2018), Dealurile Agighiolului (Petrescu 2018)	-

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRT (Bogdan et al. 1994)	Status NRT (Dihoru & Dihoru 1994)	Status NRT (Oltean et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
44.	<i>Galanthus plicatus</i> M. Bieb.	VU	R	V	R	Agighiol Hill (Tupu 2009, 2010), Dealurile Agighiolului site (Petrescu et al. 2012a, Petrescu 2018)	Pietros Hill
45.	<i>Galium verticillatum</i> Danthoine	VU		E	R	Agighiol (Prodan 1939a, b, Ciocărlan 2006), Pietros Hill (Negrean & Anastasiu 2002, Oprea 2005), Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010), Agighiol W, Pietros Hill, 45°01'41" N, 28°51'50" E (Dihoru & Negrean 2009)	-
46.	<i>Gymnospermium odessanum</i> (DC.) Takht.	CR		E	R	Agighiol (Prodan 1935), Agighiol (Beldie 1955), Stâncă Mare Hill (Tupu 2009, 2010)	-
47.	<i>Hedysarum grandiflorum</i> Pall. subsp. <i>grandiflorum</i>	CR	R	E	R	Pietriș Hill (Tupu 2009, 2010, 2012)	Pietriș Hill
48.	<i>Hierochloa repens</i> (Host) P.Beauv.				R	Agighiol (Prodan 1934 cited by Tupu 2009), Agighiol Hill (Tupu 2009)	-
49.	<i>Himantoglossum jankae</i> Somlyay, Kreutz & Óvári		E	R	R	-	Pietros Hill
50.	<i>Hornungia petraea</i> (L.) Rechb.	EN		R	R	Agighiol (Ciocărlan 2006, Ciocărlan 2009), Agighiol W, Pietros Hill, 45°01'41" N, 28°51'50" E (Dihoru & Negrean 2009)	Pietros Hill
51.	<i>Hyacinthella leucophaea</i> (K. Koch) Schur		R	R	R	Agighiol (Ciocărlan unpublished cited by Tupu 2009), Agighiol Hill (Petrescu et al. 2012, Petrescu 2018)	Pietros Hill, Căușa Mare Hill
52.	<i>Hyoscyamus niger</i> L.		R			Agighiol Hill (Tupu 2009)	Pietros Hill
53.	<i>Iris sintenisii</i> Janka	LR	R	R (V)	R	-	Pietros Hill
54.	<i>Jurinea glycacantha</i> Sibth. Et Sm., DC				R	Stâncă Mare Hill (Tupu 2009, 2010)	-
55.	<i>Knaulia macedonica</i> Griseb.				R	Agighiol Hill (Tupu 2009, 2010)	-

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boşcaiu et al. 1994)	Status NRL (Dihoru & Dihoru 1994)	Status NRL (Oltcan et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
56.	<i>Koeleria lobata</i> (M. Bieb.) Roem. & Schult.	VU		R (V)	R	Agighiol Hill (Sârbu et al. 2007, Petrescu et al. 2012a, b, Petrescu 2018), Stâncea Mare Hill (Tupu 2009, 2010)	Pietriş Hill, Pietros Hill
57.	<i>Lappula patula</i> (Lehm.) Gürke		R			Stâncea Mare Hill (Tupu 2009, 2010)	-
58.	<i>Lathyrus cicera</i> L.	VU	R	R			Pietriş Hill
59.	<i>Lathyrus setifolius</i> L.		R	I		Stâncea Mare Hill (Tupu 2009)	-
60.	<i>Mercurialis ovata</i> Sternb. & Hoppe				R	Dealurile Agighiolului site (Petrescu et al. 2012a)	-
61.	<i>Minuartia adenotricha</i> Schischk.	EN		I	R	Agighiol (Ciocârlan 2006), Agighiol Hill, Stâncea Mare Hill (Tupu 2009, 2010)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
62.	<i>Minuartia bilykiana</i> Klokov	LR		E	bR	Agighiol Hill (Sârbu et al. 2007), Pietros Hill (Dihoru & Negrean 2009), Pietros Hill, 45°01'41"N, 28°51'50"E (Negrean 2011)	-
63.	<i>Minuartia hybrida</i> (Vill.) Schischk.			K (R)		Agighiol (Ciocârlan 2006)	Pietros Hill, Căuşa Mare Hill
64.	<i>Muscari neglectum</i> Guss. ex Ten.				R	Stâncea Mare Hill, Uzum Bair Hill (Tupu 2009), Dealurile Agighiolului site, Agighiol Hill (Petrescu et al. 2012a, b, Petrescu 2018)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
65.	<i>Onobrychis gracilis</i> Besser		R	R	R	Agighiol Hill, Stâncea Mare Hill, Uzum Bair Hill (Tupu 2009, 2010)	Pietros Hill
66.	<i>Orchis simia</i> Lam.			V	R	-	Pietros Hill
67.	<i>Ornithogalum amphibotum</i> Zahar.	VU		V	V/R	-	Pietros Hill
68.	<i>Ornithogalum sigmoideum</i> Freyn & Sint.			R		Stâncea Mare (Tupu 2009, 2010)	Pietriş Hill, Pietros Hill

No.	Taxa	Status NRB (Negrean & Dîhorn & Dîhorn 2009)	Status NRT (Boscaiu et al. 1994)	Status NRT (Dîhorn & Dîhorn 1994)	Status NRT (Oltcan et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
69.	<i>Paeonia peregrina</i> Mill.			V	V/R	Agighiol (Nyárády 1953), Agighiol – Mandra Forest (Andrescu cited by Anonymous 1960), Stâncea Mare Hill, Agighiol Hill, Uzum Bair Hill, Pietriş Hill (Tupu 2009, 2010), Dealurile Agighiolului site (Petrescu et al. 2012, Petrescu 2018)	Pietriş Hill, Pietros Hill
70.	<i>Paronychia cephalotes</i> (M. Bieb.) Besser		R		R	Agighiol (Prodan 1935), Agighiol (Ciocârlean unpublished cited by Tupu 2009), Agighiol Hill (Sârbru et al. 2007, Tupu, 2009, 2010, Petrescu 2018) Stâncea Mare Hill (Tupu 2009, 2010)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
71.	<i>Pimpinella tragium</i> subsp. <i>lithophila</i> (Schischk.) Tutin		R		R	Agighiol Hill (Sârbru et al. 2007)	-
72.	<i>Piptatherum virescens</i> (Trin.) Boiss.				R	Agighiol (Ciocârlean unpublished cited by Tupu 2009), Agighiol Hill (Tupu 2009), Dealurile Agighiolului site (Petrescu et al. 2012)	Pietros Hill
73.	<i>Platanthera bifolia</i> (L.) Rich.				R	Agighiol Hill (Tupu 2009, 2010)	-
74.	<i>Potentilla astracantha</i> Jacq.				R	-	Pietros Hill
75.	<i>Potentilla hornmuelleri</i> Borbás			R	R	Agighiol Hill (Petrescu et al. 2012, 2018)	-
76.	<i>Prunus tenella</i> Batsch				V	Stâncea Mare Hill (Tupu 2009)	-
77.	<i>Salvia aethiopsis</i> L.				E/R	Uzum Bair Hill, Stâncea Mare Hill, Agighiol Hill, Pietriş Hill (Tupu 2009, 2010)	-
78.	<i>Salvia nutans</i> L.			V		Agighiol (Prodan 1939) Uzum Bair Hill, Stâncea Mare Hill (Tupu 2009, 2010)	Pietriş Hill, Pietros Hill
79.	<i>Scandix anstralis</i> L.	VU	R	V	R	Agighiol (Ciocârlean 2006)	-
80.	<i>Scandix pecten-veneris</i> L.	VU			R	Agighiol (Prodan 1939, Todor 1958, Oprea 2005), Stâncea Mare Hill (Tupu	-

No.	Taxa	Status NRB (Dihoru & Negraru 2009)	Status NRL (Boscaiu et al. 1994)	Status NRL (Dihoru & Dihoru 1994)	Status NRL (Oftan et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
81.	<i>Scorzonera mollis</i> M. Bieb.	VU		R	R	2009) Agighiol - Mandra Forest (Andreescu cited by Anonymous 1960)	Pietriş Hill, Pietros Hill
82.	<i>Scutellaria orientalis</i> L. var. <i>pinnatifida</i> Rehb.		R	R	R	Agighiol (Prodan 1938 cited by Tupu, 2009), Uzum Bair Hill, Agighiol Hill (Tupu 2009, 2010)	Pietriş Hill
83.	<i>Seseli rigidum</i> subsp. <i>peucedanifolium</i> (Spreng.) Nyman	VU		R	R	Agighiol (Ciocărlan 2006, Ciocărlan unpublished cited by Tupu 2009), Agighiol Hill (Sârbu et al. 2007)	Pietros Hill
84.	<i>Silene italica</i> (L.) Pers.			K		Agighiol Hill (Tupu 2009, 2010)	-
85.	<i>Silene supina</i> M. Bieb.			V	R	Agighiol (Oprea 2005, Ciocărlan unpublished cited by Tupu 2009) Agighiol Hill (Tupu 2009)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
86.	<i>Sisymbrium polymorphum</i> Murray, Roth				R	Stânca Mare Hill (Tupu 2009)	-
87.	<i>Stachys angustifolia</i> M. Bieb.	VU	R	R	R	Agighiol (Prodan 1939a, b), Răvăruţ 1961), Stânca Mare Hill (Tupu 2009, 2010)	-
88.	<i>Sternbergia colchiciflora</i> Waldst. & Kit.	LR	R	E	R	Dealurile Agighiolului (Petrescu 2018)	Pietriş Hill, Pietros Hill
89.	<i>Stipa ucrainica</i> P. A. Smirn.			V	R	Stânca Mare Hill, Uzum Bair Hill (Tupu 2009)	-
90.	<i>Symphytum tauricum</i> Willd.	VU	R	R	R	Agighiol Hill (Tupu 2009)	-
91.	<i>Tanacetum millefolium</i> (L.) Tzvelev				R	Agighiol (Nyárády 1964), Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010), Stânca Mare Hill, Uzum Bair Hill, Pietriş Hill (Tupu 2009, 2010), Dealurile Agighiolului site (Petrescu et al. 2012a), Agighiol Hill (Petrescu 2018)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill

No.	Taxa	Status NRB (Dihoru & Negrean 2009)	Status NRL (Boscaiu et al. 1994)	Status NRL (Dihoru & Dihoru 1994)	Status NRL (Oltan et al. 1994)	Reports from the scientific literature (place/hill, author, year)	Present on the hills where the wind turbines are located
92.	<i>Thymus zygioides</i> Griseb.				R	Agighiol (Guşuleac 1961), Agighiol Hill (Sârbu et al. 2007, Tupu 2009, 2010, Petrescu et al. 2012, Petrescu 2018), Stânca Mare Hill, Uzum-Bair, Pietriş Hill (Tupu 2009, 2010), Dealurile Agighiolului site (Petrescu et al. 2012, Petrescu 2018)	Pietriş Hill, Pietros Hill, Căuşa Mare Hill
93.	<i>Trigonella gladiata</i> M. Bieb.	VU		R	R	-	Pietros Hill
94.	<i>Valerianella coronata</i> (L.) DC.			R	R	Stânca Mare Hill (Tupu 2009), Dealul Pietros (Negrean 2011)	Pietros Hill
95.	<i>Veratrum nigrum</i> L.				R	Dealurile Agighiolului site (Petrescu et al. 2012)	-
96.	<i>Verbascum ovalifolium</i> Sims				R	Agighiol (Nyárády 1935 cited by Oprea 2005)	-
97.	<i>Veronica multifida</i> subsp. <i>capsellitcarpa</i> (Dubovik) Jelen.	VU		V	R	Agighiol (Ciocărlan 2006)	-
98.	<i>Vicia narbonensis</i> L.	VU	R	R	R	Agighiol (Prodan 1936 cited by Tupu 2009), Agighiol (Topa & Nyárády 1957)	
99.	<i>Vicia peregrina</i> L.				R	-	Pietros Hill
100.	<i>Vincetoxicum fuscatum</i> (Hornem.) Rehb. f.	VU		R	R	Pietros Hill (Negrean & Anastasiu 2002), Agighiol (Ciocărlan 2009), W Agighiol, Pietros Hill 45°01'41"N, 28°51'50"E (Dihoru & Negrean, 2009, Negrean 2011)	Pietriş Hill, Pietros Hill