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NATURA 2000 SITE DEALURILE STREHAIA-BÂTLANELE - UPDATED INFORMATION ON SPECIES AND HABITATS OF COMMUNITY INTEREST

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Abstract

Situated in south-west Romania (Mehedinți County), with a temperate-continental with sub-Mediterranean influences climate, the protected area Dealurile Strehaia-Bâtlanele (Natura 2000 code ROSCI0405 and ROSAC0405) is a small area (803,9 ha) designated on the basis of the presence of Hermann`s tortoise (Testudo hermanni) and two forest habitats (91M0 Pannonian-Balkanic turkey oak –sessile oak forests and 91Y0 Dacian oak & hornbeam forests). There is very little information about this site (standard forms and national & international websites). Following field trips (summers 2018-2019), our assessment of plant, herpetofauna and invertebrate species and habitats highlighted the existence of species listed in the Habitats Directive, some of them having here a new distribution locality in Romania. The human impact (trash, habitat fragmentation, agricultural field development, forest clearcutting, distribution of invasive species, etc.) is increasing in recent years, and thus this protected area is threatened as a whole. This study highlights the high biological value of the site. The increasing intensity of human pressures poses a major threat to ecosystem integrity, emphasising the need for appropriate conservation and management measures.

Key words*: Natura 2000 site, community interest species and habitats, high biological value.*

INTRODUCTION

The Natura 2000 network represents the cornerstone of the European Union's biodiversity conservation policy, established under the Habitats Directive 92/43/EEC and the Birds Directive 2009/147/EC (Evans, 2012). This European network of protected areas aimed at conserving habitats and species of high ecological value (EEA, 2025). Its main objective is to ensure the long-term survival of Europe's most valuable and threatened species (Trochet & Schmeller, 2013) and habitats by designating protected areas such as Sites of Community Interest (SCI) and Special Protection Areas (SPA) (Mücher et al., 2009; Popescu et al., 2014).

In Romania, sites coded ROSCI and ROSAC are part of Natura 2000, the European ecological network created to conserve biodiversity across the European Union. This network operates under the Habitats Directive 92/43/EEC and the Birds Directive 2009/147/EC (H.D., 1992; B.D., 2009).

Within the Romanian classification system, ROSCI (Romanian Sites of Community Importance) designate areas proposed and approved at the European level as Sites of Community Importance because they host habitat types and species listed in the annexes of the Habitats Directive. After the establishment of conservation measures and management plans, many of these sites are formally designated as ROSAC (Romanian Special Areas of Conservation), representing the final conservation status under the directive (EEA, 2020; ANANP, 2022; M.O., 2023a).

The transition from ROSCI to ROSAC reflects the implementation stage of conservation policy, indicating that concrete management measures are in place to maintain or restore the favourable conservation status of protected habitats and species. Together, these sites represent an essential component of Romania's protected area system and contribute to biodiversity conservation and ecological

connectivity within the Natura 2000 network (M.O., 2023b).

Standard forms (Standard Data Forms - SDFs), are official documents used to describe and report key information about each Natura 2000 site. They include data on site location, area, habitat types, species presence, conservation status, and threats (H.D., 1992). Specifically, SDFs cover habitat classifications following the EU Habitats Directive, population estimates of protected species, and human pressures affecting the site. The role of these forms is threefold: firstly, they provide a consistent framework for reporting across EU member states; secondly, they support the monitoring and assessment of site conservation status; and thirdly, they serve as a legal and management tool for planning conservation measures (EEA, 2020; Spiliopoulou et al., 2023). By standardising data collection, SDFs facilitate decision-making, help identify priority conservation actions, and ensure compliance with EU environmental legislation. Thus, Natura 2000 standard forms are essential for effective biodiversity management and long-term ecological sustainability.

In Romania, the implementation of Natura 2000 network has played a crucial role in the conservation of biodiversity, particularly in regions characterised by high ecological diversity and unique habitat types (Gafta & Mountford, 2008; Stancioiu et al., 2010; Manolache et al., 2017).

The SDF (2020) states that the protected area ROSCI0405 Dealurile Strehaia-Bâtlanele is a Site of Community Interest located in Mehedinți County, in southwestern Romania, within the Continental biogeographical region. The site covers approximately 803.90 hectares and occupies parts of the administrative territories of the town of Strehaia and the commune of Greci, representing approximately 5.1% and 6.3% of their respective areas. Although relatively small in size, the site plays an important role in maintaining regional biodiversity (M.P., 2019; M.O., 2023a; 2023b).

From a biogeographical perspective, the area is characterised by a temperate-continental climate with sub-Mediterranean influences, which creates favourable conditions for the development of thermophilous habitats and species that reach their northern or eastern distribution limits in this region. The ecological value of the site is primarily associated with two forest habitat types of community interest: **Habitat 91M0 - Pannonian-Balkanic turkey oak-sessile oak forests**, dominated by species such as *Quercus cerris* and *Quercus frainetto*, covering approximately 385 hectares, and **Habitat 91Y0 - Dacian oak-hornbeam forests**, characterised by *Carpinus betulus* and *Quercus robur*, which occupy around 325 hectares. The site was designated primarily for the conservation of the Hermann's tortoise, *Testudo hermanni boettgeri*, a species listed in Annex II of the Habitats Directive and considered one of the flagship species of this protected area (SDF, 2020).

The site is legally protected through national regulations (M.O., 2023b), its management is currently coordinated by the National Agency for Natural Protected Areas (ANANP), which implements conservation measures through officially approved management plans. These measures aim to maintain favourable conservation conditions for protected species and habitats, including the preservation of open clearings required for tortoise thermoregulation and the control of invasive species.

Biodiversity inventories and long-term ecological monitoring are essential components of effective management within protected areas. As a member state of the European Union, Romania has the obligation to maintain or restore the favourable conservation status of habitats and species of community interest. Reliable data on species distribution, population dynamics, and ecological pressures are therefore necessary to define appropriate management objectives and evaluate the effectiveness of conservation actions. Previous information regarding the biodiversity of the ROSCI0405 site was relatively limited and often derived from general surveys or standard reporting forms, which frequently focused on mountainous regions while overlooking hilly landscapes such as those found in the Strehaia area. In the Management Plan of the protected area (M.P., 2019), within the section 'Species of conservation interest for which the protected natural area was designated', the subsections regarding lower and higher plants, invertebrates, ichthyofauna, and other flora and fauna species

relevant to the protected area are empty (not filled).

In this context, the present study aimed to conduct an updated inventory of flora and fauna within the ROSCI0405 Dealurile Strehaia-Bâtlanele site, to identify species of community interest and other important species that had not been previously recorded in the area, and to perform a quantitative assessment of habitat conservation status and of the population status of the flagship species *Testudo hermanni*. By integrating field observations with multivariate statistical analyses, this research seeks to provide a robust scientific basis for improving conservation strategies and supporting the implementation of the recently approved management plan for the protected area.

MATERIALS AND METHODS

The ROSCI0405 Dealurile Strehaia-Bâtlanele site is situated in south-western Romania, forming part of the South-West Oltenia Development Region. The site lies entirely in the Continental biogeographical region and encompasses the Strehaia Hills, a subunit of the Getic Plateau, located in the north-western section of the Wallachian Platform (Figure 1).

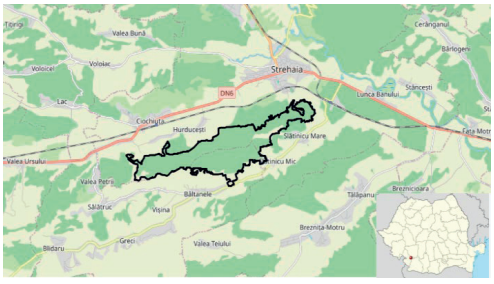


Figure 1. Location of the studied area in Romania and its position in the region (After EEA, 2024)

The topography is dominated by hills with elevations ranging between 200 and 310 metres, with slopes of 5 to 20 degrees and varying orientations. The abiotic environment is characterised by mean annual temperatures of approximately 6.43-11.52°C and mean annual precipitation between 48.33 and 74.83 mm. The forest administration is handled by the Strehaia Forest District (M.O., 2023b).

Biodiversity data were collected during two vegetation seasons (2018-2019), for developing the management plan.

Vegetation assessment was carried out using two complementary methods: transect itineraries and phytosociological relevés. Relevés were performed in plots distributed to cover the homogeneity and diversity of the forest habitats (91M0 and 91Y0) (Figure 2).

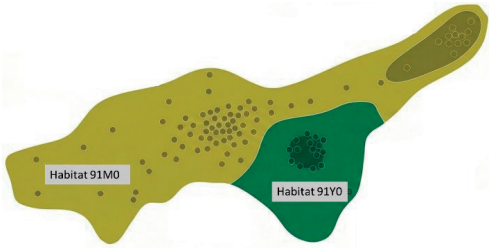


Figure 2. The map of the habitats and inventorying plots' distribution in ROSCI0405 Dealurile Strehaia-Bâtlanele

Plant species abundance-dominance was recorded using the Braun-Blanquet scale (5 = 75-100%; 4 = 50-75%; 3 = 25-50%; 2 = 10-25%; 1 = 1-10%; + = 0.1-1%). Identification of plants and habitats followed standard Romanian floras and manuals (Doniță et al., 2005; Gafta and Mountford, 2008; Ciocârlan, 2009; Sârbu et al., 2013). The characteristics of the plant species follow Oltean et al. (1994), Ciocârlan (2009), Sârbu et al. (2013), IAS (2025). The community interest species *Ruscus aculeatus* distribution and density were recorded in 5 x 5 m plots established along areas where relevés were performed.

Using software package PAST (Hammer et al., 2001), we grouped sites based on plant species abundance (Bray-Curtis Similarity Index), analysed groupings based on plant species presence-absence (Jaccard Similarity Index) and identified associations between specific plant species and sampling locations (Principal Component Analysis - PCA).

Surveys for herpetofauna targeted 10 designated open areas preferred by reptiles for thermoregulation and foraging. The studies were conducted between July and October 2019 to coincide with peak activity and avoid hibernation periods. For each observation, GPS coordinates, species, number of individuals, sex, and reproductive state were recorded.

Observations for community interest invertebrates were conducted concurrently with habitat assessments in the forest sectors.

RESULTS AND DISCUSSIONS

The study confirmed the two main forest habitats within the ROSCI0405 Dealurile Strehaia-Bâtlanele site, which play a key role in regional biodiversity conservation, particularly for the Hermann's tortoise (*Testudo hermanni*), as it is specified in SDF (2020) and M.O. (2023a; 2023b).

Habitat 91M0 (Pannonian-Balkanic turkey oak-sessile oak forests) is the dominant habitat, covering about 369.92 ha. It occurs at altitudes of 200-300 m on sunny, moderately dry slopes (5-20°). The tree layer (50-80% cover) is formed mainly by *Quercus petraea*, *Quercus cerris*, *Quercus frainetto*, and *Tilia tomentosa*. The shrub layer includes species such as *Crataegus monogyna* and *Cornus mas*, while the herb layer (10-60% cover) is dominated by species like *Helleborus odorus* and *Melica uniflora*.

Habitat 91Y0 (Dacian oak-hornbeam forests) covers 162.31 ha, occurring at 200-310 m on mainly west-facing slopes (5-15°). The canopy includes *Quercus robur*, *Fraxinus angustifolia* ssp. *oxycarpa*, and *Carpinus betulus*, with a diverse herb layer dominated by *Ornithogalum pyrenaicum* and *Scutellaria altissima*.

Both habitats are in generally favourable conservation condition, although affected locally by invasive species such as *Ambrosia artemisiifolia* and the spread of *Robinia pseudoacacia* from nearby plantations.

Our records on seedlings/saplings of trees from the area showed that natural regeneration is generally very good, reaching in some areas a coverage of 50%. Some species are typical for one habitat type but there are many species common to both of them. From about 130 herbaceous plant species registered in the studied protected area, we present only the species with higher abundance in the two Natura 2000 habitats (Table 1).

The list of recorded species comprises *Ruscus aculeatus* (Figure 3)*, Ruscus hypoglossum, Asparagus verticillatus, Epipactis helleborine, Galium kitaibelianum, Neottia nidus-avis, Platanthera bifolia,* rare taxa with reduced world populations, not threatened yet but at risk (as a result of their reduced distribution area) (Oltean et al., 1994).

Table 1. The characteristics of the plant species

Species' name	Trees	Seeedling /sapling	Common	Typical for 91M0	Typical for 91Y0	I&P
Acer campestre	+	+	+			
Acer platanoides	+	+	+			
Acer tataricum	+			+		
Carpinus betulus	+				+	
Carpinus orientalis	+			+		
Cornus mas	+	+	+			
Fagus sylvatica	+	+	+			
Fraxinus excelsior	+	+	+			
Fraxinus ornus	+	+		+		
Gleditschia triacanthos		+				+
Populus tremula	+		+			
Prunus avium	+		+			
Pyrus pyraster	+	+	+			
Quercus cerris	+	+		+	+	
Quercus dalechampii	+	+		+	+	
Quercus frainetto	+	+		+	+	
Quercus petraea	+	+		+	+	
Quercus robur	+				+	
Robinia pseudoacacia	+	+				+
Sorbus aria	+	+	+			
Sorbus aucuparia	+	+	+			
Sorbus torminalis	+	+	+			
Tilia cordata	+	+	+			
Tilia platyphyllos	+	+	+			
Tilia tomentosa	+	+		+	+	
Ulmus glabra	+		+			
Ulmus laevis	+	+	+			
Cornus sanguinea			+			
Crataegus monogyna			+			
Euonymus verrucosus			+			
Ligustrum vulgare			+			
Prunus spinosa			+			
Rhamnus cathartica			+			
Rosa canina			+			
Rubus agg.			+			
Ambrosia artemisiifolia						+
Asclepias syriaca						+
Arum orientale				+	+	
Asperula taurina					+	
Campanula bononiensis					+	
Campanula persicifolia				+		
Erigeron annua						+
Galium schultesii				+	+	
Genista tinctoria				+		
Glechoma hirsuta				+		
Helleborus odorus				+	+	
Lathyrus niger				+		
Lithospermum purpurocaeruleum				+		
Lychnis coronaria				+		
Melittis melissophyllum				+		
Poa nemoralis				+		
Potentilla micrantha				+		
Pteridium aquilinum						+
Setaria viridis						+
Tanacetum corymbosum				+		

In Table 1, invasive and pest species (I & P) refer the presence of non-native flora within the

protected area. *Ambrosia artemisiifolia* and *Robinia pseudoacacia* are not currently included in the Union List of Invasive Alien Species of Union Concern (IAS, 2014; 2025), but they represent a significant ecological threat at the national level. *Ambrosia artemisiifolia* poses a major risk to public health due to its highly allergenic pollen, while *Robinia pseudoacacia* acts as an ecosystem transformer, displacing native vegetation and altering soil nitrogen levels. Furthermore, species such as *Gleditsia triacanthos* and *Erigeron annuus* show aggressive expansion in ruderal and riparian habitats, potentially compromising the structural integrity of local plant communities.

Other two species recorded in the site: *Pteridium aquilinum* (native species which, in this context, acts as a dominant taxon) indicate the degradation of local pastures, rather than being an exotic threat; *Setaria viridis* (common weed) has limited impact on the primary conservation objectives of the area. Only *Asclepias syriaca* recorded at the edge of the protected area is a IAS species under European cocern.

R. aculeatus is presented in Annex V of Habitat Directive (animal and plant species of community interest whose taking in the wild and exploitation may be subject to management measures) (H.D., 1992).



Figure 3. *Ruscus aculeatus*: individual with fruit (a) and local density in Str.8 (b)

In Natura 2000 Strehaia-Bâtlanele, this European interest species was found in 11 of the 31 recorded plots and distributed sometimes as rare, but having high abundance in other plots and significant cover at certain stations (Str.5 and Str.8) (Figure 4). It occurs in both main protected forest habitats: 91M0 and 91Y0. In habitat 91M0, *R. aculeatus* is a constant component of the herbaceous layer, typically developing on rocky substrates in sunny, mesoxerophilous conditions.

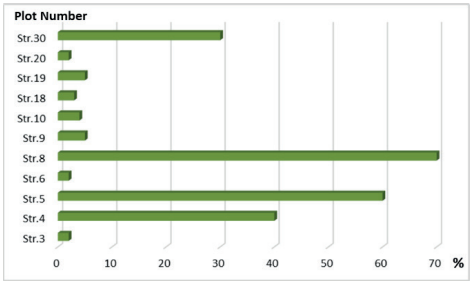


Figure 4. The distribution and density of *Ruscus aculeatus*

In habitat 91Y0, *R. aculeatus* is part of the stratified forest structure, and in some vegetation stands, *R. aculeatus* reaches remarkable ground cover values of up to 50%.

Although the species shows good local abundance, some populations may be affected by anthropogenic pressures, particularly the development of forest access roads that intersect its distribution areas.

The recorded presence of *Ruscus aculeatus* in the site represents a new distribution locality for the species in Romania.

The ordination analysis using Principal Component Analysis revealed a moderate differentiation of sampling sites based on species composition. The first axis explained 12.0% of the total variance, while the second axis accounted for 9.2% (Figure 5).

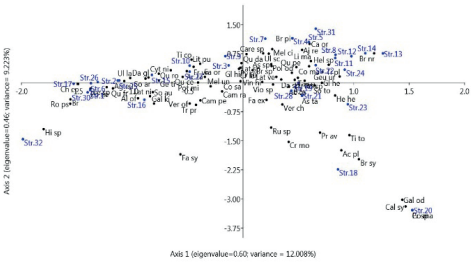


Figure 5. The ordination analysis using Principal Component Analysis of the recorded species

Sampling sites were distributed along the first axis, forming two partially separated groups. Sites located on the left side of the ordination diagram (e.g., Str.17, Str.26, Str.30) showed a particular species composition, while those positioned on the right side (e.g., Str.13, Str.14, Str.24) were associated with a different set of species.

Several species were positioned close to specific sampling sites, suggesting a stronger association with those locations. In contrast, some species occurred near the centre of the diagram, indicating a broader ecological distribution.

Two sampling sites (Str.20 and Str.32) were clearly separated from the main cluster of sites, suggesting distinct species assemblages compared with the rest of the study area.

Cluster analysis based on the Bray-Curtis similarity index and Jaccard similarity index revealed patterns of similarity among the sampling sites according to species composition (Figure 6a and 6b).

In the dendrogram based on the Bray-Curtis index (Figure 6a), the sampling sites were grouped into several clusters reflecting similarities in species abundance. A major cluster included sites such as Str.6, Str.17, Str.1, Str.2, and Str.15, which showed relatively high similarity values. Another group consisted of sites Str.11-Str.14 and Str.21-Str.23, indicating comparable species composition among these locations. Some sampling sites, such as Str.3 and Str.20, were separated from the main clusters, indicating lower similarity with other sites.

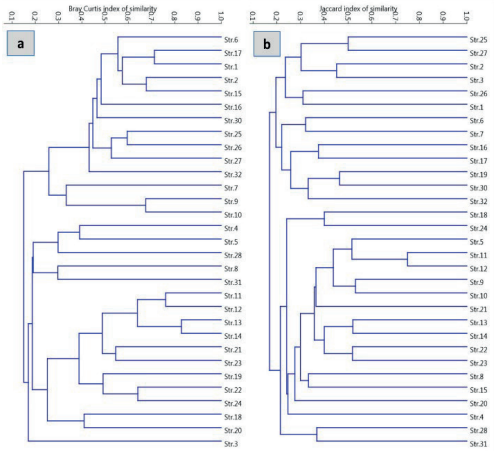


Figure 6. Cluster analysis based on the Bray-Curtis similarity index (a) and Jaccard similarity index (b)

The dendrogram based on the Jaccard index (Figure 6b), which considers species presence-absence, showed a similar overall grouping pattern, although with slight differences in cluster structure. Several sampling sites, including Str.25, Str.27, Str.2, and Str.3, formed a cluster with relatively high similarity. Other groups included sites such as Str.11-Str.12 and Str.9-Str.10, suggesting shared species composition among these locations.

Overall, both similarity indices indicated the presence of multiple clusters of sampling sites with comparable species composition, while a few sites appeared more distinct from the main groups.

Field research regarding herpetofauna revealed that the distribution of main target species, Hermann's tortoise (*Testudo hermanni*) (Figure 7), is highly localised to open glades.



Figure 7. *Testudo hermanni*
(the pattern of the shell design)

The total population of tortoises within the site is estimated at 179-182 individuals, with an average density of 2.88-2.93 individuals per hectare, significantly lower than densities recorded in more favourable habitats. Only adult individuals were observed, with no juveniles recorded during the hatching period. However, the conservation status of the Hermann's Tortoise (*T. hermanni*) is highly concerning. The "Unfavourable-Bad" assessment is driven by low population density and a lack of recruitment (juveniles). The high proportion of forest cover (over 80%) in the site limits the available habitat for tortoises, which require open meadows for foraging and nesting. Current management focuses on non-intervention in forest sectors, but for tortoises, this policy may lead to the "closing" of glades as the canopy density increases, further reducing habitat availability.

Several additional amphibian and reptile species that were newly recorded during this study had previously been absent from the official site documentation. Among amphibians, the *Pelophylax kl. esculentus* (edible frog) (Figure 8) was observed in ruderalised meadows with active springs and small water bodies, which provide suitable feeding and breeding conditions.



Figure 8. *Pelophylax kl. esculentus* recorded in a pond

Four new reptile species were also recorded (Figure 9). The most common was *Lacerta viridis* (European green lizard), a thermophilous species frequently observed in open habitats and on sunny slopes, with at least seven individuals recorded during surveys. *Natrix natrix* (grass snake) was identified in areas where springs and ponds provide abundant amphibian prey. Two additional species were considered rare within the site: *Coronella austriaca* (smooth snake), was recorded only once inside forest habitats, and *Zamenis longissimus* (Aesculapian snake), a semi-arboreal species typically associated with forest interiors and edges.



Figure 9. The new reptile species recorded in the studied site

Comparison with regional studies indicates that while ROSCI0405 has stable forest habitats (91M0 and 91Y0 are currently in "Favourable" status), the herpetofauna faces increasing pressure. Human impacts identified during the study - such as heavy vehicle traffic causing road gullying, the distribution of illegal waste, and sheep/goat grazing - are degrading the fragile meadow-forest ecotones.

Several invertebrate species of community interest (Figure 10) have been recorded in the ROSCI0405 Dealurile Strehaia-Bâtlanele site, highlighting the ecological importance of its forest and edge habitats.

Thus, *Lucanus cervus* (stag beetle), listed in Annex II of the EU Habitats Directive, was identified here as a new locality in its Romanian distribution. This saproxylic species is closely associated with deciduous forests, particularly oak-dominated habitats such as 91M0 and 91Y0 within the site. Its presence depends largely on mature *Quercus* trees and the availability of dead wood, which provides essential breeding microhabitats.

Another species of conservation interest is *Cerambyx cerdo* (great capricorn beetle), which inhabits old deciduous forests and shows a strong preference for mature or declining oak trees such as *Quercus petraea*, *Quercus cerris*, and *Quercus frainetto*. The species was directly observed during field surveys conducted in 2018-2019, and its occurrence is linked to the presence of standing and fallen dead wood.

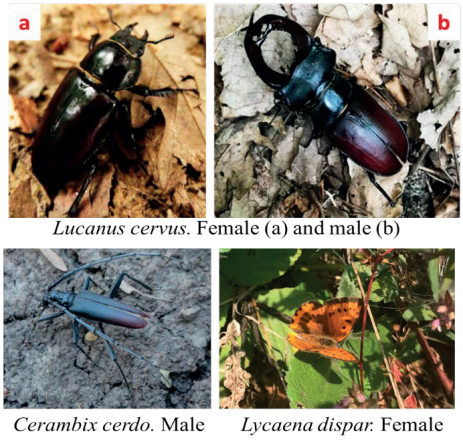


Figure 10. Invertebrate species of community interest

The site also hosts *Lycaena dispar* (large copper butterfly), typically found in humid grasslands, forest edges, and open clearings. In the area, it was recorded mainly in forest margins and glades, where herbaceous vegetation is well developed.

Conservation measures recommended for these invertebrates include maintaining native forest structure, preserving dead wood, and avoiding the use of insecticides in forest ecosystems.

Despite the relatively good conservation status of the forest habitats, the ecological integrity of the site is threatened by several anthropogenic pressures. One of the most significant threats is the spread of invasive plant species, which alters the structure and functioning of natural ecosystems. Species such as *Ambrosia artemisiifolia, Asclepias syriaca, Pteridium aquilinum*, and *Erigeron annuus* frequently colonise disturbed areas, especially along forest roads or degraded clearings. These plants can form dense stands that reduce floristic diversity and replace native vegetation communities. For example, *Ambrosia artemisiifolia* often forms monocultures that significantly degrade the tortoise's feeding grounds by replacing the diverse herbaceous flora required for its diet.

Another major ecological pressure is the expansion of the non-native tree species *Robinia pseudoacacia* (black locust). This species spreads aggressively from nearby plantations into natural forest habitats, where it alters soil conditions and promotes the dominance of nitrophilous plants such as *Urtica dioica*. As a result, the floristic diversity characteristic of oak and hornbeam forests is reduced, and open grassland areas necessary for thermophilous reptiles gradually disappear. Because *Testudo hermanni* depends on sunny habitats for thermoregulation and feeding, the spread of black locust represents a significant long-term threat to the survival of the species in the site.

Human activities also contribute to habitat degradation. The development of forest roads and uncontrolled access by off-road vehicles can damage vegetation, create erosion channels, and facilitate the spread of invasive species. In addition, illegal waste dumping and uncontrolled tourism can negatively affect the ecological quality of the habitats. Illegal collection of tortoises for the pet trade is considered one of the most serious direct threats to the species, as it primarily affects adult individuals that are essential for maintaining population stability.

Grazing activities also influence the ecological dynamics of the site. Sheep grazing is generally considered to have a relatively low impact on forest habitats, as animals mainly use the forest as a transit route toward surrounding grasslands. However, grazing may still cause trampling of vegetation and disturbance of tortoise feeding areas, particularly when herds are accompanied by dogs. Goat grazing is considered much more destructive, as goats selectively consume vegetation, promote soil erosion, and facilitate the spread of invasive plants through seed dispersal in their fur.

Another ecological issue affecting the site is the gradual closure of open glades due to natural vegetation succession. In the absence of traditional land management practices such as controlled grazing or selective clearing, shrubs and young trees gradually invade grasslands and forest clearings. This process leads to canopy closure and the transformation of sunny habitats into shaded forest environments that are unsuitable for thermophilous reptiles such as *Testudo hermanni*.

Because of these cumulative pressures, the conservation status of the Hermann's tortoise population in the site is currently assessed as "unfavourable-bad". Consequently, several management measures have been proposed in order to improve the conservation status of the species and protect the ecological integrity of the habitats.

One of the most important measures involves active habitat management, particularly maintaining open habitats suitable for the tortoise. This includes cutting shrubs and young trees that threaten to close forest clearings and grasslands, especially in the main observation areas. Maintaining these open areas ensures adequate sunlight exposure necessary for the species' thermoregulation and nesting behaviour.

Another recommended action is the modification and expansion of the site boundaries. Field observations revealed that several individuals of *Testudo hermanni* occur in adjacent south-facing grasslands located outside the current limits of the protected area. Expanding the site to include these habitats would improve the protection of the species and increase the ecological connectivity of the landscape (ANANP, 2020).

The control and eradication of invasive species also represent a major priority. Management plans propose regular monitoring and mechanical removal of invasive plants such as *Ambrosia artemisiifolia* and *Asclepias syriaca*, particularly along forest roads and disturbed areas that serve as dispersal corridors. In addition, the expansion of *Robinia pseudoacacia* should

be limited through removal of invasive stands and replacement with native tree species characteristic of the local forest ecosystems.
Regulation of human activities is another key component of conservation management. Measures proposed include restricting unauthorised vehicle access through the installation of barriers, controlling waste disposal, and prohibiting the collection of tortoises from the wild. Grazing activities should also be regulated by establishing sustainable stocking limits based on the ecological carrying capacity of the habitats.

CONCLUSIONS

The Natura 2000 site ROSCI0405 Dealurile Strehaia-Bâtlanele, located in the hilly region of Mehedinți County, represents an important biodiversity reservoir despite its relatively small surface area. The field studies significantly expanded the knowledge of the site's biological diversity, demonstrating that its ecological value is considerably higher than previously documented in the official Standard Data Form. The research identified new occurrences of species of community interest and confirmed the presence of several rare plants and animals, emphasising the conservation importance of this protected area within Romania's Natura 2000 network.
One of the most important botanical findings was the identification of *Ruscus aculeatus*, a species listed in Annex V of the EU Habitats Directive. Its presence in the site represents a new distribution locality in Romania. The species occurs in both main forest habitats of the site - 91M0 (Pannonian - Balkanic turkey oak-sessile oak forests) and 91Y0 (Dacian oak-hornbeam forests) - where it forms part of the shrubs layer and, in some stands, reaches ground cover values of up to 50%.
The faunal component of the site also includes several species of European conservation interest. Among invertebrates, the presence of *Lucanus cervus* (stag beetle) was recorded as a new locality, further emphasising the importance of the site for saproxylic insect conservation. Other protected species observed during the surveys include *Cerambyx cerdo* (great capricorn beetle) and *Lycaena dispar* (large copper butterfly), all species listed in Annex II of the Habitats Directive. These species are closely associated with mature deciduous forests and structurally complex habitats containing old trees and dead wood, conditions that are still partially preserved in the forest ecosystems of the site.
Additional herpetofauna species not previously included in the official documentation of the site were also recorded: *Pelophylax kl. esculentus* (edible frog), *Lacerta viridis* (European green lizard), *Natrix natrix* (grass snake), *Coronella austriaca* (smooth snake), *Zamenis longissimus* (Aesculapian snake).
Long-term monitoring and research programs are essential for assessing the effectiveness of these conservation measures. Monitoring protocols should focus on key periods in the tortoise's life cycle, including migration to breeding areas, egg-laying, and movement toward hibernation sites. Cooperation between forest managers and protected area administrators is also necessary to ensure effective surveillance and protection of the habitats.
Public awareness and environmental education represent additional important tools for conservation. Informational panels and educational programmes for local communities and schools can help increase awareness of the ecological importance of the site and promote responsible behaviour within the protected area.
Overall, the results of this research demonstrate that the ROSCI0405 Dealurile Strehaia-Bâtlanele site has a much higher biological value than previously recognised. The discovery of new distribution localities for species of community interest such as *Ruscus aculeatus* and *Lucanus cervus*, together with the presence of numerous rare plants and vertebrates, highlights the importance of this area for regional biodiversity conservation. This increased knowledge as to the value of Dealurile Strehaia-Bâtlanele should contribute not only to the Natura 2000 network in Europe, but also to national biodiversity planning and implementation in Romania. These findings provide an important scientific basis for the implementation of the site's management plan and establish a baseline for the five-year monitoring cycles required under the EU Habitats Directive, ensuring that conservation actions can be effectively evaluated and adapted in the future.

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