# CONTRIBUTIONS TO THE KNOWLEDGE OF THE EPIPHYTIC LICHENS FROM PĂUŞEŞTI AREA

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**Abstract.** A list of 43 lichen taxa, including mainly epiphytic, is reported from Păuşeşti-Vâlcea area. One taxa is newly recorded for România.

**Keywords:** lichenized fungi, diversity, epiphytic, Păuşeşti-Vâlcea, Romania.

**Rezumat. Contribuţii la cunoaşterea lichenilor epifitici din zona Păuşeşti.** Lucrarea prezintă 43 taxoni licheni epifitici, identificaţi în zona Păuşeşti. Un taxon este nou pentru lichenoflora României.

**Cuvinte cheie:** licheni, diversitate, epifitic, Păuşeşti-Vâlcea, România.

## INTRODUCTION

The study area, Păuşeşti Village, is located in Vâlcea County, on both sides of the Otăsău River, a tributary of the Bistriţa River, near Govora Town. The village is delimited by the next localities: Pietrari in the north, Frânceşti in the south, Govora in the west, and Foleşti in the east. Because of its position between hills and also along of a relatively big river, the seasons succeed normally, without suddenly changes, not being very hot in summer or too cold in winter. The fruit trees are spread on large areas and also the forests find adequate conditions on the hills and along the river, all of these facts moderating the influences of each season. The average temperature of the year is 9.5ºC.

Some studies about vascular flora have been made by POPESCU (1968, 1974) mentioning also a few lichen species but without considering thoroughly them.

This paper comes to complete some other studies about the lichens from Oltenia (CIURCHEA, 1969; 1970; BARTÓK, 1990; COSTACHE et al., 2007; ÇOBANOĞLU et al., 2009).

## MATERIALS AND METHODS

**Collecting materials.** Lichens can be collected in each month of the year, because they do not have buds or flowers in their life cycle.

In the field, there were used a lot of instruments, that made the work easier and certain:

- The coordinates and altitudes of the stations established by means of a GPS receiver;
- Using an X10 zoom camera, the lichen samples and the aspect of the stations were photographed in the field;
- Knife, for cutting the substrate of the species (bark, branch or even soil);
- Paper bags for putting the collected species and plastic bags for grouping the paper bags from each station;
- Pencil, marker, and notebook to note the stations, substrate and other useful information about the stations (area, county, km from the nearest map town, habitat type, elevation, latitude, longitude, date).

The lichen species were collected together with the substrate (branches or bark). In the herbarium, the specimens were cleaned by excess, sorted and prepared for processing (gluing). The fruticose and foliose species were prepared for immediate packeting. The specimens were cleaned by excesses and put on paper towels for drying. The big samples can be pressed. After that, the specimens were placed (one collection number per sheet) between newspapers. The newspapers were marked with collection number and include slip as well. The newspapers were placed between two blotters, and separated using cardboards. The blotters and cardboards were changed at each 24 hours, until the specimens were completely dry. The last step was preparing the study packets. The specimens were put in some special paper bags, glued, on the paper bags being written the area of collection, the number of stations, the date, and the substrate. After that, the specimens were classified and put in special boxes, being ready for identification.

**Identification of taxa.** Lichen material was examined by using different methods for identification, sometimes necessarily fewer steps, sometimes more. First of all, the general appearance of the thallus was analyzed to observe the growth forms for each specimen: crustose, foliose or fruticose. Different morphological aspects such as the shape of the lobes, their size or colour, the presence or the absence of some properties on the upper surface or on the lower surface, were analyzed with free eye and with the microscope. For instance, the presence of some sexual reproduction structures like apothecia, vegetative parts such as isidia, soredia, soralia, root-like attachment organs like cilia or rhizines, different type of air-pores as cyphellae or pseudocyphellae, all of them being very important in the steps of identification. But even these morphological aspects are not enough for identification. In most of the cases, sections are taken with a sharp razor blade, from different layers of the thallus, for analyzing the microscopic structures. Taking sections from the apothecia, to analyze different layers or size and shape of ascospores, is one of the most useful techniques. The sections have been made by hand, using a sharp razor blade, under a dissecting microscope, fitted with a strong focused light. The section should be measured less than 20 µm thick. For better results, some sections were cleared using KOH. The dried specimens were first

wetted with water, the section were made after half a minute. Sections were taken from the middle part of apothecia, the most mature portion, where all the elements are well developed, for instance, the ascospores. Because they are small, asci and hamathecia typically are hard to be seen clearly even when they are viewed under a good-quality microscope. Therefore, the microscope image was improved either by staining the sections or by altering the optics of the microscope. Lichens produce a wide array of both primary and secondary metabolites. Because of this, chemical spot tests, classic spot tests, were used in the identification of almost all the levels of taxa. Two substances were used particularly: NaHClO (Clorox) (C) and KOH (K). These substances were applied on different component parts of the thallus, cortex, medulla (exposed by cutting the upper cortex with a sharp razor blade), apothecia, soralia, isidia, etc., using a needle and touching carefully the portions with test solution. The colours appeared after reactions, praised the different substances containing in those structures, making the work, in this way, much easier.

All these methods were applied following the keys for identification (BRODO et. al., 2001; DOBSON, 1992; PURVIS et al., 1999). The nomenclature follows mainly the Index Fungorum and Checklist of lichens and lichenicolous fungi of Romania (CIURCHEA, 2007, 2009). The names of the authors are abbreviated according to BRUMMITT & POWELL (1992).

The lichen specimens are preserved in the Herbarium of the Faculty of Horticulture, Craiova University, Romania, with numbers: CRA 701-873.

## RESULTS AND DISCUSSIONS

Each identified lichen taxa is listed below in alphabetical order, including 43 taxa, which belong to 24 genera (42 species, 1 subspecies, 2 varieties, 1 form), following with the types of substrata, coordinates and Herbarium number (Table 1).

Table 1. List of Taxa epiphytic lichens.
Tabel 1. Lista taxonilor lichenilor epifitici.

| No. | Epiphytic Taxa | Substrata, Coordinates and Herbarium Number |
|---|---|---|
| 1. | *Anaptychia ciliaris* (L.) KÖRB. | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 701; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 702; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 703. |
| 2. | *Candelaria concolor* (DICKS.) STEIN | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 704; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 705; **(*M.d.*):** Alt. 456 m; N- 45º04´477´´ E- 24º09´257´´ CRA- 706; Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 707; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 708; **(*P.c.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 709; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 710; **(*Py.c.*):** Alt. 333 m; N- 45º04´176´´ E- 24º08´657´´ CRA- 711; **(*C.a.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 712. |
| 3. | *Candelariella reflexa* (NYL.) LETTAU | **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 713; Alt. 456 m; N- 45º04´477´´ E- 24º09´257´´ CRA- 714; Alt. 444 m; N- 45º03´205´´ E- 24º07´391´´ CRA- 715; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 716; **(*R.p.*):** Alt. 321 m; N- 45º04´911´´ E- 24º08´566´´ CRA- 717; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 718; **(*A.g.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 719; **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 720; **(*M.d.*):** Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 721; **(*Q.r.*):** Alt. 409 m; N- 45º04´326´´ E- 24º09´076´´ CRA- 722; **(*Py.c.*):** Alt. 333 m; N- 45º04´176´´ E- 24º08´657´´ CRA- 723; **(*C.v.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 724; **(*T.c.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 725. |
| 4. | *Candelariella vitellina* f. *vitellina* (EHRH.) MÜLL. ARG. | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 726; Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 727. |
| 5. | *Cladonia coniocraea* (FLÖRKE) SPRENG | **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E-24º06´847´´ CRA- 728. |
| 6. | *Cladonia fimbriata* (L.) FR. | **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E-24º06´847´´ CRA- 729. |
| 7. | *Cladonia subulata* (L.) WEBER ex F.H. WIGG. | **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E-24º06´847´´ CRA- 730. |
| 8. | *Evernia prunastri* (L.) ACH. | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 731; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 732; **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 733; Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 734; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 735; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 736. |
| 9. | *Flavoparmelia caperata* (L.) HALE | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 737; Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 738; **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 739; Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 740; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 741; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 742; **(*Py.c.*):** Alt. 333 m; N- 45º04´176´´ E- 24º08´657´´ CRA- 743; **(*P.c.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 744; **(*C.a.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 745; **(*R.p.*):** Alt. 321 m; N- 45º04´911´´ E- 24º08´566´´ CRA- 746. |
| 10. | *Hypogymnia farinacea* ZOPF | **(*J.r.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 747; **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 748. |
| 11. | *Hypogymnia physodes* (L.) NYL. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 749; Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 750; **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 751; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 753; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 754; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 755; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 756. |
| 12. | *Hypogymnia tubulosa* (SCHAER.) HAV. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 757; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 758. |

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| 13. | *Lecanora albella* (PERS.) ACH. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 759; **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 760. |
| 14. | *Lecanora argentata* (ACH.) MALME | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 761; Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 762; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 763; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 764; **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 765; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 766 |
| 15. | *Lecanora campestris* (SCHAERER) HUE | **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E- 24º07´252´´ CRA- 767 |
| 16. | *Lecanora carpinea* (L.) VAIN. | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 768; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 769; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 770. |
| 17. | *Lecanora conizaeoides* NYL. ex CROMBIE | **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 771 |
| 18. | *Lecanora intumescens* (REBENT.) RABENH. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 772; **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 773; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 774; **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 775; **(*P.c.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 776; **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E- 24º07´252´´ CRA- 777. |
| 19. | *Lecanora symmicta* (ACH.) ACH. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 778; **(*M.d.*):** Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 779; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 780. |
| 20. | *Melanelixia fuliginosa* subsp. *glabratula* (LAMY) J. R. LAUNDON | **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 781; Alt. 456 m; N- 45º04´477´´ E- 24º09´257´´ CRA- 782; Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 783; **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 784; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 785; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 786; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 787; **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 788; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 789; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 790. |
| 21. | *Melanelia subargentifera* (NYL.) ESSL. | **(*M.d.*):** Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 791; **(*Q.r.*):** Alt. 409 m; N- 45º04´326´´ E- 24º09´076´´ CRA- 792. |
| 22. | *Melanelia subaurifera* (NYL.) ESSL. | **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 793 |
| 23. | * *Ochrolechia dalmatica* (ERICHSEN) BONQUERAS | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 794; **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 795; **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 796. |
| 24. | *Parmelia sulcata* TAYLOR | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 797; Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 798; **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 799; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 800; Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 801; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 802; **(*Py.c.*):** Alt. 333 m; N- 45º04´176´´ E- 24º08´657´´ CRA- 803. |
| 25. | *Parmelina pastillifera* (HARM.) HALE | **(*Q.d.*):** Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 804; **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 805. |
| 26. | *Parmelina tiliacea* (HOFFM.) ACH. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 806; Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 807; **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 808; Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 809; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 810; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 811; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 812; **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 813; **(*Py.c.*):** Alt. 333 m; N- 45º04´176´´ E- 24º08´657´´ CRA- 814. |
| 27. | *Parmotrema perlatum* (HUDS.) ACH. | **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E-24º06´847´´ CRA- 815. |
| 28. | *Pertusaria amara* (L.) ARNOLD | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E-24º08´801´´ CRA- 816. |
| 29. | *Physcia adscendens* (TH. FR.) H.OLIVIER | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 817; Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 818; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 819; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 820; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 821; **(*Q.r.*):** Alt. 409 m; N- 45º04´326´´ E- 24º09´076´´ CRA- 822; **(*R.p.*):** Alt. 321 m; N- 45º04´911´´ E- 24º08´566´´ CRA- 823; **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E- 24º07´252´´ CRA- 824; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 825. |
| 30. | *Physcia aipolia* (EHRH. ex HUMB.) FÜRNR. | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 826; **(*Q.r.*):** Alt. 409 m; N- 45º04´326´´ E- 24º09´076´´ CRA- 827; **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E- 24º07´252´´ CRA- 828. |
| 31. | *Physcia leptalea* (ACH.) DC.. | **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E-24º07´252´´ CRA- 829. |
| 32. | *Physcia stellaris* (L.) NYL. | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 830; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´ CRA- 831. |
| 33. | *Physconia distorta* (WITH.) J.R. LAUNDON | **(*Q.d.*):** Alt. 456 m; N- 45º04´477´´ E- 24º09´257´´ CRA- 832; Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 833; **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 834; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 835; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 836; Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 837; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 838. |
| 34. | *Physconia enteroxantha* (NYL.) POELT | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 839; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 840; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 841; Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 842; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 843; **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E-24º07´252´´ CRA- 844. |
| 35. | *Platismatia glauca* (L.) W.L. CULB. & C.F. CULB. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E-24º08´801´´ CRA- 845. |
| 36. | *Pleurosticta acetabulum* (NECK.) ELIX & LUMBSCH | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E-24º07´251´´ CRA- 846; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 847. |
| 37. | *Pseudevernia furfuracea* var. *ceratea* (ACH.) D. HAWKSW. | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E-24º08´801´´ CRA- 848; **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 849; **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E-24º12´210´´ CRA- 850 |
| 38. | *Pseudevernia furfuracea* var. *furfuracea* (L.) ZOPF | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 851; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 852; **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 853. |

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| 39. | *Punctelia subrudecta* (NYL.) KROG | **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 854; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 855; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 856; **(*Q.d.*):** Alt. 455 m; N- 45º03´227´´ E- 24º06´847´´ CRA- 857; **(*P.d.*):** Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 858; **(*P.c.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 859. |
| 40. | *Ramalina farinacea* (L.) ACH. | **(*M.d.*):** Alt. 381 m; N- 45º10´209´´ E- 24º12´210´´ CRA- 860. |
| 41. | *Ramalina fraxinea* (L.) ACH. | **(*J.r.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 861; **(*F.s.*):** Alt. 491 m; N- 45º04´446´´ E- 24º09´363´´ CRA- 862. |
| 42. | *Usnea subfloridana* STIRT | **(*P.d.*):** Alt. 366 m; N- 45º04´223´´ E- 24º08´801´´ CRA- 863; Alt. 490 m; N- 45º04´347´´ E- 24º09´342´´ CRA- 864; **(*M.d.*):** Alt. 377 m; N- 45º04´159´´ E- 24º09´203´´ CRA- 865. |
| 43. | *Xanthoria parietina* (L.) TH. FR. | **(*Q.d.*):** Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 866; **(*J.r.*):** Alt. 474 m; N- 45º03´461´´ E- 24º07´251´´ CRA- 867; Alt. 368 m; N- 45º04´250´´ E- 24º08´857´´ CRA- 868; Alt. 400 m; N- 45º03´318´´ E- 24º06´962´´ CRA- 869; **(*M.d.*):** Alt. 322 m; N- 45º04´186´´ E- 24º08´598´´ CRA- 870; **(*R.p.*):** Alt. 321 m; N- 45º04´911´´ E- 24º08´566´´ CRA- 871; **(*P.n.*):** Alt. 474 m; N- 45º03´655´´ E- 24º07´252´´ CRA- 872; **(*S.f.*):** Alt. 377 m; N- 45º04´141´´ E- 24º09´152´´ CRA- 873. |

Abbreviations: *Juglans regia* (***J.r.***); *Quercus robur* (***Q.r.***); *Q. dalechampii* (***Q.d.***); *Robinia pseudoacacia* (***R.p.***); *Tilia cordata* (***T.c.***); *Populus canescens* (***P.c.***); *P. nigra* (***P.n.***); *Salix fragilis* (***S.f.***); *Fraxinus excelsior* (***F.e.***); *Cydonia oblonga* (***C.o.***); *Pyrus communis* (***Py.c.***); *Prunus domestica* (***P.d.***); *Armeniaca vulgaris* (***A.v.***); *Cerasus avium* (***C.a.***); *C. vulgaris* (***C.v.***); *Malus domestica* (***M.d.***); *Alnus glutinosa* (***A.g.***); *Coryllus avelana* (***C.a.***); *Fagus sylvatica* (***F.s.***); * = New record for România.

## CONCLUSIONS

There were identified 43 lichen taxa, which belong to 24 genera, 5 crustose with 12 species, 15 foliose with 24 species and 4 fruticose with 7 species. The species were found on 15 different substrata, collected mainly from *Quercus dalechampii*, as wild species and from *Juglans regia*, *Prunus domestica,* and *Malus domestica* as cultivated species. Although, the study area is small, there was identified one new species for the Romanian lichen Mycota.

Many identified taxa are known as clean area bioindicators, the area being seen in this way as a place with a very small level of pollution. The most sensitive species are: *Ramalina fraxinea, Anaptychia ciliaris, Physconia distorta, Parmelina pastillifera, Parmotrema perlatum*, *Physcia stellaris, P. aipolia, Lecanora argentata, Candelaria concolor, Usnea subfloridana.*

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