

## THE GENUS *Milesina* Magnus (FUNGI, BASIDIOMYCOTA) IN ROMANIA

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**Abstract:** In this paper are inserted 55-chorological information, out of which herbarium specimens double 44. G. NEGREAN collected 39 of them. The species of the genus *Milesina* are found on ferns of the families: Blechnaceae, Dryopteridaceae, Polypodiaceae and Aspleniaceae. In Romania, until present, were reported eight species on 12 host plants.

**Key words:** *Milesina*, Fungi, Basidiomycota, Romania

### Introduction

The genus *Milesina* Magnus (Fungi, Basidiomycota) belongs to the Pucciniastraceae family (Uredinales, Teliomycetes), is heteroecious and parasites species of the genus *Abies* Hill. (0, I) and ferns of the families: Blechnaceae, Dryopteridaceae, Polypodiaceae and Aspleniaceae (II, III).

T. SĂVULESCU notes six species in the Monograph of Uredinales (1953), and Vera BONTEA (1985) includes eight parasite species on 11 species of ferns.

Aurelia CRIȘAN (1968) studies the taxonomy and the ecology of *Milesia vogesiaca* species.

G. NEGREAN is concerned by the preservation of the diversity and of the chorology of the species belonging to this genus and has collected 39 combinations from different regions of Romania.

### Material and methods

The species of genus *Milesina* is after MAJEWSKI (1977) and the host plants after Romanian Flora (SĂVULESCU 1952-1976) and Flora Europaea (TUTIN & al. 1964 -1980, 1993). International herbarium abbreviations are after HOLMGREN et al. (1990), and the publications after BRIDSON et SMITH (1991) and the one the taxons authors after KIRK et ANSEL (1992).

### Results and discussions

In this paper are inserted 55-chorological information, out of which herbarium specimens double 44. Host plants species are strictly mountain and mentioned by mountains range. All the collected material of deposited in the Mycotheca of the Biological Institute of Bucharest. The list of the species is alphabetically structured, and the localities

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are geographical ordered from North to South by county in alphabetically order. The counties names are abbreviated according with official use in Romania. The herbarium samples and exsiccates are mentioned between other parentheses [BUC; BUCM; HMR].

***Milesina* Magnus**

*Milesina* Magnus *Ber. deutsch. Bot. Ges.* **27**: 325. 1909

*Milesia* White, *Scott. Nat.* **4**: 1878 ii)

***Milesina blechni* (P. & H. Syd.) P. & H. Syd.**

*Melampsorella blechni* P. & H. Syd. *Ann. myc.* **1**: 537. 1903. - *Milesina blechni* (P. & H. Syd.) P. & H. Syd. *Ann. myc.* **8**: 491. 1910. – *Milesia blechni* (P. & H. Syd.) Arth. ex Faull, *Contrib. Arnold Arbor.* **2**: 37. 1932.

**0, I** on the *Abies* species; **II, III** on the *Blechnum* species

*Blechnum spicant* (L.) Roth – **AG**: Cumpăna on Caprei Valley, 16 VI 1936 (SĂVULESCU & SĂVULESCU O. 1941; SĂVULESCU 1953). **BH**: Stâna de Vale Basin, Iadului Valley, 1955-1957 [CL] (BECHET, RATIU & SILAGHI 1968). **BV**: Făgăraș Mountains, Sâmbetei Valley, Sâmbetei N Chalet, in *Piceetum* 45°38'20"N, 24°47'38"E, alt. 1200 m, 17 VIII 1983, GN [BUCM 83.027; HMR 3044] (NEGREAN 1984).

***Milesina carpatorum* Hyl., Jørst. & Nannf.**

*Milesina carpatorum* Hyl., Jørst. & Nannf. *Opera Bot. Lund* **1**(1): 28. 1953. – *Milesina carpatica* Wróbl., *Spraw. Kom. Fizyogr. Pol. Akad. Um. Kraków* **47**: 178. 1913 (nomen confusum). *Milesia carpatica* (Wróbl.) Faull, *Contrib. Arnold Arbor.* **2**: 56. 1932.

**0, I** unknown; **II, III** on the *Dryopteris* species

*Dryopteris filix-mas* (L.) Schott - **BN**: Căliman Mountains, Șoimul de Jos Valley, 47°09'03"N, 24°49'05"E, alt. 930 m, 15 IX 1988, GN [BUCM 111.315]. **HD**: Parâng Mountains, Izvorul Valley, 45°21'07"N, 25°23'52"E, alt. 632 m, 11 VIII 1988, GN [BUCM 109.792]. **HR**: Lacul Roșu, Suhardul Mare Mountain, 46°48'02"N, 25°47'02"E, alt. 1300 m, 21 X 1986, GN [BUCM 101.512]. Cheile Bicașului, Cheile Lapoșului, 46°49'02"N, 25°48'28"E, alt. 1120 m, 23 X 1986, GN [BUCM 101.685]. **NT**: Bistrița N, Mare Valley, 46°57'42"N, 26°17'17"E, alt. 410 m, 1 IX 1985, GN [BUCM 90.482]. **SV**: Obcina Mare Mountains, Clit Valley, 47°45'03"N, 25°50'02"E, alt. 480 m, 24 X 1993, GN [BUCM 127.902]. Poiana-Stampeii – Căsoi, Dorna Mică Valley, 47°17'57"N, 25°07'15"E, alt. 920 m, 9 IX 1986, GN [BUCM 101.005]. **VL**: Cozia Mountain, Bulzul, 29 VI 1976, GN & OC [BUCM 55.341; HMR 2554] (CONSTANTINESCU & NEGREAN 1978).

***Milesina dieteliana* (P. & H. Syd.) Magnus**

*Melampsorella dieteliana* P. & H. Syd. *Ann. myc.* **1**: 537. 1903. – *Milesina dieteliana* (P. & H. Syd.) Magnus, *Ber. deutsch. Bot. Ges.* **27**: 325. 1909.

*Milesia polypodii* White ex Faull, *Contrib. Arnold Arbor.* **2**: 81. 1932.

**0, I** on the *Abies* species; **II, III** on the *Polypodium* species

*Polypodium vulgare* L. - **HD**: Retezat Mountains, Şesele Valley, 45°23'12"N, 22°46'53"E, alt. 900 m, 1 VIII 1993, GN [BUCM 129.518]; Aradeş Valley, 45°21'32"N, 22°45'45"E, alt. 1090 m, 8 VIII 1993, GN [BUCM 129.844]; Zlătuia Valley, CMN Chalet, 45°23'29"N, 22°46'32"E, alt. 790 m, 3 VIII 1993, GN [BUCM 129.845]. **HR**: Băile Tuşnad, Vârful Cetăţii Mountain, 46°08'52"N, 25°52'47"E, alt. 900 m, 8 VI 1985, GN [BUCM 88.663]. **NT**: Tarcău Valley, 46°42'28"N, 26°11'52"E, alt. 740 m, 22 VI 1986, GN [BUCM 98.585]. **PH**: Bucegi Mountain, Jepii Mici, Seacă Valley, 11 X 1981, GN [BUCM 67.395]. Cheia, Cheiţei Valley, prope confines cum Babeşului Valley, 11 VII 1982, GN [BUCM 71.451]. **VL**: Cozia Mountain, Omul, 1 VII 1976, GN & OC [BUCM 55.342; HMR 2555] (CONSTANTINESCU & NEGREAN 1978).

***Milesina feurichii* (Magnus) Magnus**

*Melampsorella feurichii* Magnus *Ber. deutsch. Bot. Ges.* **20**: 609. 1902. *Milesina feurichii* (Magnus) Magnus, *Ber. deutsch. Bot. Ges.* **27**: 325. 1909. *Milesia feurichii* (Magnus) Faull, *Contrib. Arnold Arbor.* **2**: 27. 1932

**0, I** unknown; **II, III** on the *Asplenium* species

*Asplenium septentrionale* (L.) Hoffm. – **BN**: Săn Georgiu, I 1944, I 1945 (SĂVULESCU 1953). **HD**: Geoagiu (MOESZ 1941). **PH**: Sinaia, 25 VIII 1930 (SĂVULESCU & SĂVULESCU O. 1941; SĂVULESCU 1953).

***Milesina kriegeriana* (Magnus) Magnus**

*Melampsorella kriegeriana* Magnus *Ber. deutsch. Bot. Ges.* **19**: 581. 1901. *Milesina kriegeriana* (Magnus) Magnus, *Ber. deutsch. Bot. Ges.* **27**: 325. 1909. *Milesia kriegeriana* (Magnus) Arth. *Mycologia* **7**: 176. 1915.

**0, I** on the *Abies* species; **II, III** on the *Dryopteris* species

*Dryopteris carthusiana* (Vill.) H.P. Fuchs (*D. spinulosa* Watt; *Aspidium spinulosum* L.) - **SV**: Poiana-Stampeii – Căsoi, prope rivulum Dornişoara (Dorna Mică), 47°17'48"N, 25°05'55"E, alt. 920 m, 6 IX 1983, GN [BUCM 78.663]. Broşteni, 20 VIII 1943 (SĂVULESCU 1944; SĂVULESCU 1953). Bârnarului Valley, 26 VIII 1943 (SĂVULESCU 1953).

***Milesina murariae* (Faull) P. & H. Syd. ex Hirats. f.**

*Uredo murariae* Magnus, *Ber. deutsch. Bot. Ges.* **20**: 611. 1902 (ii). *Milesina murariae* (Magnus) P. & H. Syd. *Monogr. Ured.* **3**: 477. 1915 (ii, iii). – *Milesina murariae* ("Magnus") Faull *Contrib. Arnold Arbor.* **2**: 34. 1932 (iii). – *Milesina murariae* (Magnus) P. & H. Syd. ex Hirats. f., *Mem. Agric. Coll.* **4**: 128. 1936.

**0, I** unknown; **II, III** on the *Asplenium* species

*Asplenium lepidum* C. Presl - **GJ**: Piatra Cloşani Mountain, under "Marele Abrupt", in saxosis calcareis, 45°06'11"N, 22°46'16"E, alt. 1080 m, 30 IX 1983, GN [BUCM 83.028; HMR 3045] (NEGREAN 1984).

*Asplenium ruta-muraria* L. - **BV**: Postăvarul Mountain, 1 IX 1930 (SĂVULESCU & SĂVULESCU O. 1941; SĂVULESCU 1953). **CS**: Mehedinți Mountain, Țesnei Valley, in saxosis, 44°58'15"N, 22°30'09"E, alt. 580 m, 27 VII 1984, GN [BUCM 84.343]; Băile-Herculane (BUBÁK 1907; MOESZ 1941), prope Roman Hotel, 44°53'43"N, 22°25'44"E, alt. 160 m, 26 VII 1984, GN [BUCM 84.246]. **GJ**: in saxosis calcareis ad Ciuceava Frasinului, prope izvorul Cernei, 14 VIII 1966, leg. NB, det. GN [BUCM 90.202]. Piatra Cloșani Mountain, "Marele Grohotiș", 45°06'10"N, 22°46'15"E, alt. 1060 m, 30 IX 1983, GN [BUCM 79.847]. Cloșani Cave, 45°04'22"N, 22°48'09"E, alt. 400 m, 22 VI 1987, GN [BUCM 103.742]. Cloșani, ad muros, 45°03'56"N, 22°48'08"E, alt. 370 m, 10 VII 1984, GN [BUCM 84.048], 26 VII 1986, GN [BUCM 99.889]; Cloșani, Izvoarele Valley, 45°04'24"N, 22°47'48"E, alt. 500 m, 11 VII 1984, GN [BUCM 84.080]. Cloșani E, Calul Valley, 45°04'04"N, 22°48'58"E, alt. 500 m, 30 VII 1986, GN [BUCM 100.346]. Motrul Sec S, Lupșa Valley, 45°03'30"N, 22°47'46"E, alt. 400 m, 13 V 1984, GN [BUCM 82.320]. **HD**: Geoagiu-Băi, 45°56'01"N, 23°09'32"E, alt. 360 m, 7 VI 1986, GN [BUCM 98.067]. **MS**: Sighișoara, Cetate, in coemeterio, ad muros, 46°13'01"N, 24°47'32"E, alt. 420 m, 19 X 1991, GN [BUCM 123.329]. **PH**: Sinaia, Furnica, 45°21'23"N, 25°32'33"E, alt. 945 m, 24 VIII 1991, GN [BUCM 121.629].

*Milesina scolopendrii* (Arth. ex Faull) Henders.

*Ascospora scolopendrii* Fuckel, *Jahrb. nassau. Ver. Naturk.* **27-28**: 19. 1873. *Uredo scolopendrii* (Fuckel) Schröter, *Krypt. - fl. Schles.* **3**(1): 374. 1887 (ii). - *Milesia scolopendrii* (Fuckel) Arth., *Bull. Torrey Bot. Cl.* **51**: 52. 1924 (ii) - *Milesia scolopendrii* Arth. ex Faull, *Contrib. Arnold Arbor.* **2**: 113. 1932 (iii). - *Milesina scolopendrii* (Arth. ex Faull) Henders., *Notes. Roy. bot. Gard. Edinb.* **23**: 504. 1961.

**0, I** on the *Abies* species; **II, III** on the *Asplenium* species

*Asplenium scolopendrium* L. (*Phyllitis scolopendrium* (L.) Newman) - **AG**: Cheile Dâmboviței, Urșilor Cave, 6 VII 1981, GN [BUCM 59.623]. Podul Dâmboviței, Crovului Valley, 45°23'52"N, 25°16'49"E, alt. 1200 m, 21 X 1981, GN [BUCM 83.029; HMR 3046] (NEGREAN 1984). **BC**: Slănic-Moldova, 24 VIII 1934 (SĂVULESCU & SĂVULESCU O. 1941; SĂVULESCU 1953). **CS**: Cheile Nerei, 6 V 1976, GN & OC [BUCM 46.557]. Mehedinți Mountains, Șușcul Mountain, Șaua Padina Valley, 44°53'56"N, 22°26'52"E, alt. 800 m, 15 VI 1994, GN [BUCM 130.602]. **GJ**: Vâlcan Mountains, 'Gropul Sec', Pleșcioara Valley, 45°11'51"N, 23°06'51"E, alt. 580 m, 15 VI 1984, GN [BUCM 83.697]. **VL**: Buila Mountain, Cheile Văii Cheia, 6 I 1986, leg. V. Câdea, det. GN [BUCM 93.934].

*Milesina vogesiaca* (Faull) P. & H. Syd. ex Hirats. f.

*Milesina vogesiaca* P. & H. Syd. *Ann. myc.* **8**: 491 1910. (ii). - *Milesina vogesiaca* Faull, *Contrib. Arnold Arbor.* **2**: 103. 1932 (iii). - *Milesina vogesiaca* (Faull) P. & H. Syd. ex Hirats. f., *Mem. Tottori Agric. Coll.* **4**: 96. 1936.

**0, I** on the *Abies* species; **II, III** on the *Polystichum* species

*Abies alba* Miller - **BN**: Rodnei Mountains, Vinului Valley, VIII 1955, AC [BUCM 128.317] (CRIȘAN 1968).

*Polystichum aculeatum* (L.) Roth (*P. lobatum* (Hudson) Chevall. - **AG**: Piatra Craiului Mountain, Dragoslăvenilor Valley, 22 X 1981, GN [BUCM 87.532]. **PH**: Ciucaș Mountains, under Gropșoare, 44°28'51"N, 25°58'59"E, alt. 1275 m, 18 X 1982, GN [BUCM 74.042]. **SB**: Făgăraș Mountains, Doamnei Valley, ESZ [CL] (SZÁSZ 1977).

*Polystichum lonchitis* (L.) Roth - **DB**: Bucegi Mountains, Cheile Horoabei, (dextra), 44°23'55"N, 25°25'12"E, alt. 1820 m, 30 IX 1982, GN [BUCM 72.129]. **PH**: Bucegi Mountains, Caraiman Mountain, 3 IX 1928, ICC (SĂVULESCU 1953). **SB**: Făgăraș Mountains, Doamnei Valley, ESZ [CL] (SZÁSZ 1977).

*Polystichum setiferum* (Forskål) Woynar - **AR**: Zarand Mountain, Highiș Valley, IX 1971 & Milova Valley, IX 1978 (CRIȘAN & al. 1978).

*Matteuccia struthiopteris* (L.) Tod. (*Struthiopteris filicastrum* All.; *S. germanica* Willd.) - **BN**: Rodnei Mountains, Vinului Valley, VIII 1955 (CRIȘAN 1968).

### Conclusions

The investigations on the *Milesina* genus bring new information related to the taxonomy and the chorology of the determined species.

We note for the first time in Romania the combination *Milesina murariae* - *Asplenium lepidum*.

### BIBLIOGRAPHY

1. BECHET Maria, RAȚIU O. & SILAGHI G. 1968. Cercetări micofloristice în bazinul Stâna de Vale. *Contrib. Bot. Cluj* /1968/: 73-94.
2. BONTEA Vera. 1985. *Ciuperci parazite și saprofite din România*. București: Edit. Academiei Române, vol. 1: 44-46.
3. BRIDSON G.D.R. & SMITH Elizabeth R. 1991. B-P-H/S *Botanico-Periodico-Huntianum/Supplementum*. Hunt Institute for Botanical Documentation. 1-7, 1021-1068. Pittsburgh: Carnegie Mellon University.
4. BUBÁK F. 1907. Ein Beitrag zur Pilzflora von Ungarn. *Növ. Közl.* 6(4): (19) – (56).
5. CONSTANTINESCU O. & NEGREAN G. 1978. *Herbarium Mycologicum Romanicum*. Schedae. Fasc. 51-55. (nr. 2501-2750). București, octombrie 1978, 95 pp.
6. CRIȘAN Aurelia. 1968. Date noi asupra speciei *Milesia vogesiaca* (Sydow) Faull în R. S. România. (New informations concerning to the *Milesia vogesiaca* (Sydow) Faull in R. S. Rumania). *Contrib. Bot. Cluj-Napoca* /1968/: 37-41 + 1 pl.
7. CRIȘAN Aurelia, BECHET Maria, SZÁSZ Elisabeta & CSÚRÖS Margareta. 1978. Thallobionta; Myxophyta, Mycophyta. Pp. 39-68. In: I. POP (coord.), Flora și vegetația Munților Zarand. Flora und Vegetation des Zarand-Gebirges. *Contrib. Bot. Cluj-Napoca* /1978/: 3-215.
8. HOLMGREN Patricia K., HOLMGREN N.H. & BARNETT L.C. 1990. Index Herbariorum, Part I: The Herbaria of the World. 8<sup>th</sup> Ed. *Regnum Veg.* 120: 1-693.
9. KIRK P. M. & ANSELL A. E. 1992. *Authors of fungal names - a list of scientific names of fungi, with recommended standard forms of their names, including abbreviations*. Index of Fungi Supplement. Plymouth: Latimer & Co. Ltd. 94 pp.
10. MAJEWSKI T. 1977. *Grzyby (Mycota)*, T. IX, *Podstawczaki (Basidiomycetes)*, *Rdzawniko we (Uredinales)* I, *Flora Polska*, Warszawa - Kraków: Państwowe Wydawnictwo Naukowe. 396 pp.
11. MOESZ G. 1941. Fungi Hungariae IV. Basidiomycetes, Pars. I, Uredineae (Porro tractur). *Ann. Hist. Nat. Muz. Natl. Hung., Pars Bot.* 34: 72-158.

12. NEGREAN G. 1984. *Herbarium Mycologicum Romanicum*. Schedae. Fasc. 61-63. (nr. 3001-3150). București, 58 pp.
13. SĂVULESCU T. 1944. Matériaux pour la flore des Urédinées de Roumanie - Supplément, *Bull. Sect. Sci. Acad. Roumaine*, **26**(5): 308-332.
14. SĂVULESCU T. (ed.). 1952-1976. *Flora României*. București: Edit. Academiei Române. Vol. **1-13**.
15. SĂVULESCU T. 1953. *Monografia Uredinalelor din R.P.R.*, vol. **2**. București: Edit. Academiei Române: 355-362.
16. SĂVULESCU T. & SĂVULESCU Olga. 1941. Matériaux pour la flore des Urédinées de Roumanie. *Analele Acad. Române, Mem. Sect. ști.*, ser. iii, Tom. 17, Mem. 4: 113-261.
17. TUTIN T.G., BURGESS N.A., CHATER A.O., EDMONSON J.R., HEYWOOD V.H., MOORE D.M., VALENTINE D.H., WALTERS S.M. & WEBB D.A. (eds, assist. by J.R. AKEROYD & M.E. NEWTON; appendices ed. by R.R. MILL). 1993. *Flora Europaea*. 2nd ed. Vol. **1. Psilotaceae to Platanaceae**. Cambridge: Cambridge University Press xlvii, 581 pp., illus. ISBN 0-521-41007-X (HB).
18. TUTIN T.G., HEYWOOD V.H., BURGESS N.A., MOORE D.M., VALENTINE D.H., WALTERS S.M. & WEBB D.A. (eds). 1964-1980. *Flora Europaea*. Vols. **1-5**. Cambridge: Cambridge University Press.

#### ABBREVIATIONS:

AC	=	Aurelia Crișan
BUCM	=	Herb. Inst. Biol. București
ESZ	=	E. Szász
GN	=	G. Negrean
HMR	=	<i>Herbarium Mycologicum Romanicum</i>
ICC	=	I. C. Constantineanu
NB	=	N. Boșcaiu
NW	=	Nord vest
OC	=	O. Constantinescu
OS	=	Olga Săvulescu
S	=	Sud
SW	=	Sud vest
TB	=	T. Bunea
TS	=	T. Săvulescu