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## MACROMYCETES IN MOUNTAIN VELEBIT (CROATIA)

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Macromycetes identified up to now in Mt. Velebit (a few also in Lička Plješevica) are presented, in all 192 species. The difference in the composition of the mycoflora on the land and sea sides of Velebit is pointed out. Because of the scarcity of the present data the necessity for further thorough mycological investigations is emphasized.

### Introduction

Velebit mountain is situated along the eastern coast of the Adriatic Sea and reaches from Vratnik above Senj in NW to the river Zrmanja in SE, in a length of about 145 km. Its breadth varies from 30—10 km and the altitude of many of its peaks reaches 1600 m and more, up to the highest, Vaganski vrh, 1758 m.

The geological substrate is limestone, with marked carstic characters.

The climate of its seaside is Mediterranean and at the land side (the region of Lika) continental. This results in the difference in the plant cover. At the land side, large forests are developed, mostly beech and beech and fir, also spruce, whilst the seaside is rocky, covered by forests only at some places in higher altitudes, but mostly only with scarce vegetation in which many thermophilous plants occur.

The flora is rich and varied and includes many endemic species. For that reason this mountain was very attractive to botanists, who investigated its plants already at the beginning of the last century. In 1938 all the species known up to then were presented in »Flora Velebitica« by A. Degen. Finds from some parts of the region of Lika, as well as from the mountain Lička (or Gola) Plješevica were included in this work.

Of course, the flora of Velebit was further studied by many other botanists and the number of known plants is near 2000.

The first fungus find on Velebit, *Craterellus cornucopioides* at Brušane, was published by Gjurašin (1898). Škorić (1928) in his list mentions a dozen macromycetes as occurring in Velebit, without precisely determining any locality except for three species at Senjska Draga.

In »Flora Velebitica«, in addition to higher plants, chapters about algae (a few *Charophyta*), fungi, lichens and mosses are also included. Whilst lichens and mosses are treated on 81 and 103 pages, respectively, which shows that they were rather thoroughly investigated, there are only 17 pages on fungi, written by G. Moesz. He presented in all about 240 species, mostly belonging to micromycetes: *Ustilaginales*, *Uredinales*, *Fungi imperfecti* and small *Ascomycetes*; only less than 50 species with large carpophores (mostly *Basidiomycetes*, a few *Ascomycetes*) are listed, several determined only up to the genus.

Later, too, some mycological investigations were made in this area. A quite respectable collection by V. Lindtner is preserved at the Natural History Museum in Beograd (BEO), but as he died suddenly soon afterwards, most of the exsiccata remained unidentified, or determined only up to the genus. At the sea side, Dr. F. Kotlaba (Prague) collected mainly lignicolous *Aphyllphorales* and kindly sent many specimens as well as notes about his finds to the author. His collections are partly at the National Museum, Prague (PRM), partly also at the Department of Botany, Faculty of Science, Zagreb (ZA).

The present author had the opportunity to study fungi at Velebit a few times, not in the best season for the development of carpophores, i. e. in July and August. A number of species could not be collected for herbarium for various reasons; others are at ZA.

Some interesting finds made during those later investigations were published, as cited in the list at appropriate places.

Even taking into account all the data obtained, the number of fungi known in Velebit is very small, the more so in comparison with that of higher plants. For that reason the author felt it necessary to present here all the known finds of larger fungi in Velebit up to now. Some species collected or noted in Plješevica by Lindtner and the author are added, since the flora of this large mountain was also partly included in »Flora Velebitica«, although only two larger fungi are mentioned there. Published names were updated where necessary.

Here are given in short localities and dates of visits of the collectors after »Flora Velebitica«.

#### V. Lindtner

Upper part of the Velika Paklenica valley in Velebit, at the sea side, mainly localities Ivine Vodice and Brezimenjača, alt. about 800–850 m, beech forests, also stands of *Pinus nigra*, 10–22 V 1963. In the list cited as Paklenica.

Raduč and Bunovac near Medak, at the land side of Velebit, 600 resp. 1170 m, beech forests, 16–24 VII 1963.

Plješevica Mt., Bijeli Potoci, 1100 m, beech and fir forest with spruce, 17 IX–3 X 1963.

Some specimens were identified by the collector; polypores and corticia were revised by the author.

## F. Kotlaba

At the foot of Velebit on the sea side, Starigrad—Paklenica and vicinity: Seline, lower part of the valleys Velika and Mala Paklenica, from the sea level mostly up to 100 m alt., 22—31 VII 1966 and 5—11 VII 1968. A few of his collections from near Zadar, although not belonging any more to Velebit, are also included.

## M. Tortić

Localities are cited from north to south in Velebit.

Zavižan, 1500 m, beech forest with an occasional spruce, 1 VII 1973, 18 VIII 1974.

Near Krasno, above the village of Devčići, 700—800 m, beech and fir forest, 9 VIII 1973.

Štirovača, 1100 m, partly spruce forest, partly beech and fir forest, 13 VIII 1973, 22 VIII 1974, 12 VIII 1975.

Klepina Duliba south of Štirovača along the forest road, 1100 m, beech and fir forest with spruce, 13 VIII 1973, 22 VIII 1974, 12 VIII 1975.

Baške Oštarije (cited as Oštarije for short), 900 m, and vicinity: Stupačinovo, 1000 m, Sladovača, 1100—1200 m, Kiza, 1200 m, everywhere beech forest, 31 VII 1972, 12, 14, VIII 1973, 21, 23 VIII 1974, 13 VIII 1975.

Brušane, about 13 km SE from Oštarije along the road to Gospić, 600 m, beech and fir forest, 1 VIII 1972.

Mali Halan, along the road to Obrovac, below the pass on the land side, beech forest, ca 800—850 m and 950 m, 25 VII 1972.

Otočac, a small town at the base of Velebit on the land side, 460 m, 9 VIII 1973, 23 VII and 24 VIII 1974, every time one species.

Smiljan, a village on the land side, ca 600 m, 1 VIII 1972 (two species).

In the southern part of the Plješevica mountain the author had the opportunity to note only a few fungi in three places, near Karlovića Korita and Padališta, 1000 m, beech and fir forests, during a rapid crossing by car 8 X 1965.

In the list, collections by Lindtner and Kotlaba are marked by their initials; where no collector is mentioned the data are by the present author, who made her visits in the company of her husband, prof. S. Tortić. Dr. Maria Lisiewska (Poznań) who identified many agarics also took part in some of their excursions. A number of critical collections were revised by some specialists, as noted at the appropriate places in the list.

The localities by M o e s z (1938) are here cited as published; for some he also gave the altitudes. They are from various parts of Velebit, those at Oštarije and Raduč are apparently quite near or the same as the ones visited by the author or by V. Lindtner.

## List of species

*Ascomycetes*

## Helotiaceae

*Bulgaria inquinans* (Pers.): Fr. Bunjevačka Draga above Raduč, on rotten wood (Moesz 1938 as *B. polymorpha*)

## Helvellaceae

*Gyromitra infula* (Schaeff.: Fr.) Quél. Plješevica, on rotten wood, leg. V. L., BEO (2 collections).

## Xylariaceae

- Hypoxylon fragiforme* (Pers.: Fr.) Kickx. Brušane, branch of *Fagus*. — Velebit, on *Fagus* (Škorić 1928 as *H. coccineum*). — Near Senj and at the Plitvice Lakes, on branches of *Fagus* (Moesz 1938 as *H. variolosum*).
- H. rubiginosum* (Pers.: Fr.) Fr. Velebit, on *Fagus* (Škorić 1928)
- Ustulina deusta* (Hoffm.: Fr.) Lind. Zavižan, a few specimens on a stump of *Fagus*, conidial stage. — Beli Vrh above Priboj, on roots of *Fagus* (Moesz 1938 as *U. vulgaris*).
- Xylaria hypoxylon* (L.: Fr.) Grev. In the valley of Crni Potok near Oštarije and in forests at Sveto Brdo, on rotten wood (Moesz 1938).
- X. polymorpha* (Pers.: Fr.) Grev. Brušane, a small group at the base of living *Fagus*.

*Basidiomycetes*

## Auriculariaceae

- Auricularia mesenterica* (Dicks.: Fr.) Pers. Smiljan, log of *Fagus*, ZA.
- Hirneola auricula-judae* (Bull.: Fr.) Berk. Medarije at Senj, on trunks of *Morus alba* (Moesz 1938 as *Auricularia auricula judae*).

## Tremellaceae

- Exidia glandulosa* (Bull.): Fr. Senjska Draga and Stolac near Senj, on the bark of dead branches (Moesz 1938)
- Exidiopsis* cf. *effusa* (Bref. ex Sacc.) Möll. Filip-Jakov, dead branches of *Prunus spinosa* in a garden, leg. F. K., det. K. Hjortstam, ZA.
- Pseudohydnum gelatinosum* (Scop.: Fr.) P. Karst. Brušane, stumps of *Abies*, Štirovača, stumps of *Abies* or *Picea*, both at ZA.
- Tremella simplex* Jacks. & Mart. in G. W. Mart. Krasno, on *Aleurodiscus amorphus* growing on *Abies* branch, ZA.
- Tremiscus helvelloides* (DC.: Fr.) Donk. Brušane, wood of probably *Abies*, one specimen. — Plješevica, leg. V. L., BEO.

## Dacrymycetaceae

- Calocera cornea* (Batsch: Fr.) Fr. Brušane, stump of *Fagus*.
- C. viscosa* (Pers.: Fr.) Fr. Brušane, wood of *Abies*, ZA.

## Schizophyllaceae

- Schizophyllum commune* Fr.: Fr. Brušane, log of *Fagus*. — Velika Paklenica on *Fagus* trunk, leg. et det. F. K. — Ružanski Vrh above Alan, Prislup above Devčići, Počiteljska Draga, Bunjevačka Draga, Sveto Brdo (Moesz 1938 as *S. alneum*).

## Corticiciaeae s. l.

- Aleurodiscus amorphus* (Pers.: Fr.) Schroet. Krasno, Štirovača, branches of *Abies*, prostrate or attached to a living tree, both at ZA; at Krasno parasitized by *Tremella simplex*.
- A. cerussatus* (Bres.) Höhn. & Litsch. Starigrad—Paklenica, dead trunk of *Paliurus aculeatus*, leg. F. K., ZA (Tortić 1980)
- Amylocorticium subincarnatum* (Pers.) Pouz. Štirovača, prostrate trunk of *Picea*, ZA (Tortić 1980)
- Athelia* cf. *neuhoffii* (Bres.) Donk. Paklenica, trunk of *Pinus nigra*, leg. V. L., det. K. Hjortstam, BEO, ZA.
- Athelopsis subinconspicua* (Litsch.) Jülich. Paklenica, rotten logs of *Fagus*, leg. V. L., det. K. Hjortstam, BEO (Tortić 1981)

- Botryobasidium angustisporum* (Boid.) John Erikss. Paklenica, rotten logs of *Fagus*, leg. V. L., BEO (2 collections) (Tortiĉ 1983).
- Byssomerulius corium* (Pers.: Fr.) Parm. Filip-Jakov near Zadar, dead trunk of *Laurus nobilis*, Zadar, on branch of *Celtis australis* in a garden, both leg. et det. F. K., PRM.
- Cystostereum murratii* (Berk. & Curt.) Pouz. Klepina Duliba, trunk of *Picea*, ZA.
- Hyphoderma litschaueri* (Burt) John Erikss. & Strid. Paklenica, on rotten trunks of *Fagus*, leg. V. L. BEO (three collections, one det. by K. Hjortstam), ZA (Tortiĉ 1980).
- H. sambuci* (Pers.) Jülich. Velika Paklenica, branches of *Acer campestre*, leg. F. K., ZA.
- Hyphodermella corrugata* (Fr.) John Erikss. & Ryv. Velika Paklenica, stump of *Pistacia terebinthus* and branch of *Ficus carica*, leg. F. K., det. K. Hjortstam, both at ZA.
- Hyphodontia breviseta* (P. Karst.) John Erikss. Velika Paklenica, on bark of a semi-living trunk of *Ostrya carpinifolia*, leg. F. K., det. Z. Pouzar, PRM.
- H. juniperi* (Bourd. & Galz.) John Erikss. & Hjortst. Velika Paklenica, branches of *Clematis vitalba*, leg. F. K., ZA.
- Laeticorticium polygonioides* (P. Karst.) Donk. Mala Paklenica, dead branch of *Quercus pubescens* on a living tree, leg. F. K., ZA.
- L. roseum* (Pers.: Fr.) Donk. Starigrad—Paklenica, dead branches of *Amygdalus communis*, leg. F. K., det. Z. Pouzar, PRM, dead branch of *Celtis australis*, dead branches and prostrate trunk of *Paliurus aculeatus*, leg. et det. F. K., some at ZA.
- Peniophora cinerea* (Pers.: Fr.) Cooke. Starigrad—Paklenica, Mala Paklenica, stump of *Olea europaea* and branch of *Acer monspessulanum*, leg. F. K., ZA.
- P. incarnata* (Pers.: Fr.) P. Karst. Starigrad—Paklenica, Velika Paklenica, branch of *Ficus carica*, branch of *Pyrus amygdaliformis*, small trunk of *Paliurus aculeatus* and wood probably of *Quercus* sp.; Zadar, in a garden, on *Euonymus* sp., all leg. F. K., four collections at ZA.
- P. lycii* (Pers.) Höhn. & Litsch. Starigrad—Paklenica, small trunk of *Vitis vinifera*, branch of *Paliurus aculeatus*, branch of *Pistacia terebinthus*, branch of *Acer campestre*, leg. F. K., two collections at ZA.
- P. cf. nuda* (Fr.) Bres. Starigrad—Paklenica, stump of *Carpinus orientalis*, leg. F. K., ZA.
- P. piceae* (Pers.) John Erikss. Krasno, branches of *Abies*, ZA.
- P. quercina* (Pers.: Fr.) Cooke. Seline near Starigrad, dead branches of *Quercus petraea*, leg. et det. F. K.
- Phlebia merismoides* (Fr.): Fr. Stolac above Senj, on bark of *Fagus* (Moesz 1938 as *Ph. aurantiaca*).
- Phlebiella vaga* (Fr.) P. Karšt. Paklenica, on logs of *Fagus*, leg. V. L., BEO.
- Phlebiopsis gigantea* (Fr.: Fr.) Jülich. Štirovača, stump of *Picea*, on bark, ZA.
- Ph. roumegueri* (Bres.) Jülich & Stalpers. Mala Paklenica and Murvice near Zadar, both times in a cavity of a living *Quercus pubescens* trunk, leg. F. K., both at ZA.
- Radulomyces confluens* (Fr.: Fr.) M. P. Christ. Starigrad—Paklenica, dead branch of *Ostrya carpinifolia*, leg. F. K., det. Z. Pouzar, PRM, also small trunk of *Crataegus* sp., leg. F. K., ZA.
- R. molaris* (Chaill.: Fr.) M. P. Christ. Seline, dead branch of *Quercus petraea*, leg. et det. F. K.

- Steccherinum fimbriatum* (Pers.: Fr.) John Erikss. Paklenica, rotten trunks of *Fagus*, leg. V. L., BEO (very young, sterile specimen); above Raduč near Medak, on branches probably of *Prunus avium* together with remains of *Pycnoporus cinnabarinus*, leg. V. L., BEO.
- Stereum gausapatum* (Fr.) Fr. Seline near Starigrad—Paklenica, on dead branch of *Quercus petraea*, leg. et det. F. K., rev. Z. Pouzar, PRM.
- S. hirsutum* (Willd.: Fr.) Pers. Oštarije, Brušane, on branches of *Fagus*, in Oštarije abundant. — Starigrad—Paklenica, on a stump of *Pistacia terebinthus*, stump of *Carpinus orientalis*, also Murvice near Zadar, on a stump of *Quercus cerris*, all leg. et det. F. K., PRM. — Senjska Draga, on *Quercus* (Škorić 1928). — Sv. Mihovil above Senj, Takalica valley between Oštarije and Brušane, Liščani Bunari below Sveto Brdo (Moesz 1938).
- S. insignitum* Qué!., Mali Halan, log of *Fagus*, ZA, Klepina Duliba, prostrate trunk of *Fagus*. — Velika Paklenica, dead wood of *Ostrya carpinifolia*, leg. et det. F. K., PRM (Tortić & Jelić 1972). — Ružanski Vrh above Alan (Moesz 1938).
- S. rugosum* (Pers.: Fr.) Fr. Zavižan, stump of *Fagus*.
- S. sanguinolentum* (Alb. & Schw.: Fr.) Fr. Štirovača, prostrate trunk of *Picea*, together with *Phellinus chrysoloma*, on cut surface and sides.
- Trechispora confinis* (Bourd. & Galz.) Libert. Paklenica, rotten logs of *Fagus*, leg. V. L., det. K. Hjortstam, BEO (together with *Botryobasidium angustisporum*).
- Xylobolus frustulatus* (Pers.: Fr.) Boid. Senjska Draga, on *Quercus* (Škorić 1928 as *Stereum frustulatum*).

#### Hericiaceae

- Dentipellis fragilis* (Pers.: Fr.) Donk. Klepina Duliba, prostrate trunk of *Fagus*, ZA (Tortić & Jelić 1977)
- Hericium coralloides* (Scop.: Fr.) S. F. Gray Rusovo near Oštarije, 1200 m, on bark of *Fagus* (Moesz 1938 as *Hydnum coralloides*, Tortić & Jelić 1977)
- H. erinaceus* (Bull.: Fr.) Pers. Plješevica, on living trunk of *Fagus*, leg. et det. V. L., BEO (Tortić & Jelić 1977).

#### Lachnocladiaceae

- Scytinostroma aluta* Lanq. Otočac, on branches of several living shrubs of *Cornus mas*, rev. Z. Pouzar, ZA, PRM. — Starigrad—Paklenica, on dead branches of *Quercus pubescens* and *Paliurus aculeatus*, leg. F. K., ZA (Tortić 1983a)

#### Cantharellaceae

- Cantharellus cibarius* Fr.: Fr. Brušane, a few specimens.
- Craterellus cornucopioides* (L.) Pers. Brušane (Gjurašin 1898).

#### Clavariaceae s. l.

- Clavariadelphus pistillaris* (L.: Fr.) Donk. Plješevica, leg. et det. V. L., BEO.
- C. truncatus* (Qué!) Donk. Plješevica, leg. et det. V. L., BEO.
- Ramaria flava* (Schaeff.: Fr.) Qué! s. l. Velebit (Škorić 1928 as *Clavaria flava*). — In the forest of mountain Zakule near Zavalje (at the foot of Plješevica) (Moesz 1938 as *Clavaria flava*)
- Lentaria mucida* (Pers.: Fr.) Corner. Plješevica, on rotten trunks, leg. et det. V. L., BEO.

#### Lentinellaceae

- Lentinellus cochleatus* (Pers.: Fr.) P.Karst. Štirovača, stump of *Fagus*, two small clusters.

- L. flabelliformis* (Bolt.: Fr.) Ito. Brušane, branch of *Abies*, Klepina duliba, log of *Picea*.

## Ganodermataceae

- Ganoderma adpersum* (S. Schulz.) Donk. Otočac, at the base of living trunk of *Tilia cordata* ZA (Tortić 1985). — Filip-Jakov, stump of *Laurus nobilis*, leg. et det. F. K., PRM, ZA (Tortić 1971)
- G. lipsiense* (Batsch) Atk. Mali Halan, Zavižan, Štirovača, Klepina Duliba, on logs, trunks and stumps of *Fagus*, particularly abundant in Klepina Duliba with some very large carpophores. Brušane, stump of *Abies*, ZA. — Starigradski Put between Medak and Starigrad, on rotten trunks of *Fagus* (Moesz 1938 as *Fomes applanatus*).
- G. lucidum* (Curt.: Fr.) P. Karst. Between Oštarije and Šugarska Duliba in beech forests, at about 1000 m (Moesz 1938 as *Fomes lucidus*). *G. carnosum*?
- G. resinaceum* Boud. in Pat. Otočac, on the trunk of a living *Aesculus hippocastanum*, ZA (Tortić 1985).

## Hymenochaetaceae

- Hymenochaete rubiginosa* (Dicks.: Fr.) Lév. Murvice near Zadar, stump of *Quercus pubescens*, leg. et det. F. K., PRM.
- Inonotus hispidus* (Bull.: Fr.) P. Karst. Gardens in Senjska Draga at Senj, on *Morus alba* (Moesz 1938 as *Polyporus hispidus*).
- I. tamaricis* (Pat.) R. Maire. Starigrad-Paklenica and vicinity, on living *Tamarix gallica*, frequent, leg. et det. F. K., PRM (Tortić & Kotlaba 1976).
- Phellinus chrysoloma* (Fr.) Donk. Štirovača, on cut surface of a log of *Picea*, ZA.
- Ph. ferruginosus* (Schrad. in Gmelin: Fr.) Pat. Mala Paklenica, wood of *Fagus*, leg. F. K., PRM, ZA.
- Ph. igniarius* (L.: Fr.) Quéél. s. l. Starigrad—Seline, dead branch of *Amygdalus communis*, leg. et det. F. K., PRM. — Velebit (Škorić 1928 as *Fomes igniarius*). — Karlobag, in the garden of Capuchin monks on *Amygdalus communis* (Moesz 1938 as *Polyporus igniarius*).
- Ph. pini* (Brot.: Fr.) Ames. Starigrad—Paklenica, on living trunks of *Pinus halepensis*, leg. et det. F. K., PRM. — Senjska Draga (Škorić 1928 as *Trametes pini*).
- Ph. punctatus* (P. Karst.) Pilát. Starigrad—Paklenica, living trunks and a stump of *Olea europaea*, stump of *Tamarix gallica*, branch of *Pistacia terebinthus*, leg. et det. F. K., rev. T. Niemelä, PRM, ZA; Filip-Jakov, stump of *Laurus nobilis*, leg. et det. F. K., PRM.
- Ph. rimosus* (Berk.) Pilát. Starigrad—Paklenica, between Paklenica and Seline, Mala Paklenica, on living trunks of *Pistacia terebinthus* leg. F. K., det. F. K. and Z. Pouzar, PRM (three collections), ZA (Kotlaba & Pouzar 1978). Zadar, on *Robinia* in a park 6 VI 72, leg. H. Gorholt, det. H. Jahn, a fragment in ZA.
- Ph. robustus* (P. Karst.) Bourd. & Galz. Starigrad—Paklenica, stump of *Quercus petraea*; f. *resupinatus* on a dead branch of *Fraxinus ornus*, both leg. et det. F. K., PRM.
- Ph. torulosus* (Pers.) Bourd. & Galz. Between Starigrad and Seline, on stump of *Quercus pubescens*; Murvice near Zadar, on stump of *Quercus pubescens*, both leg. et det. F. K., PRM (Kotlaba 1975).

## Polyporaceae

- Antrodia albidia* (Fr.: Fr.) Donk. Starigrad—Paklenica, stump of *Olea europaea*, leg. et det. F. K., PRM, ZA.
- A. serialis* (Fr.) Donk. Klepina Duliba, trunks of *Picea*, ZA.
- Antrodiella hoehneltii* (Bres. in Höhn.) Niemelä. Klepina Duliba, logs of *Fagus*, ZA.

- Bjerkandera adusta* (Willd.: Fr.) P. Karst. Klepina Duliba, Štirovača, on logs, trunks and stump of *Fagus*. — Takalica valley between Oštarije and Brušane, beech forests between Oštarije and Šugarska Duliba, Široka Draga near Medak (Moesz 1938 as *Polyporus adustus*)
- Ceriporia viridans* (Berk. & Br.) Donk. Oštarije, log of *Fagus*, ZA.
- Ceriporiopsis gilvescens* (Bres.) Domaň. Paklenica, rotten trunks of *Fagus*, leg. V. L., BEO.
- Cerrena unicolor* (Bull.: Fr.) Murr. Stupačinovo at Oštarije, on standing dead trunk of *Fagus*. — Velika Paklenica, at the base of dead trunk of *Paliurus aculeatus* and Starigrad—Paklenica, dead trunk of *Acer monspessulanum*, both leg. et det. F. K., PRM. — Senjska Draga at Senj, rotten trunks of *Fagus* (Moesz 1938 as *Daedalea unicolor*).
- Climacocystis borealis* (Fr.) Kotl. & Pouz. Štirovača, stumps of *Picea*, ZA.
- Coriolorpsis gallica* (Fr.) Ryv. Seline near Starigrad—Paklenica, dead branch on a living tree of *Quercus petraea*, leg. et det. F. K., PRM (TortiĆ 1978 as *Trametes extenuata*).
- Datronia mollis* (Sommerf.: Fr.) Donk. Štirovača, logs of *Fagus*, on cut surface and sides, ZA. — Stolac above Senj, on trunks of *Fagus* (Moesz 1938 as *Trametes mollis*).
- Dichomitus campestris* (Quél.) Domaň. & Orlicz. Between Starigrad and Seline, on dead branches on living trees of *Quercus pubescens*, leg. et det. F. K., PRM. (TortiĆ & Kotlaba) 1976).
- D. squalens* (P. Karst.) Reid. Paklenica, on trunks of *Pinus nigra*, leg. V. L., BEO. Poorly developed but recognisable specimen (TortiĆ 1975)
- Fomes fomentarius* (L.: Fr.) Fr. Oštarije, Brušane, Klepina Duliba, Štirovača, Zavižan, Mali Halan, on standing and prostrate dead trunks and logs of *Fagus*. — Velika Paklenica, dead trunk of *Fagus* leg. et det. F. K. — Visočica and Počitelj, in beech forests, also in Gola Plješevica (Moesz 1938).
- Fomitopsis pinicola* (Sw.: Fr.) P. Karst. Zavižan, Krasno, Štirovača, Klepina Duliba, Brušane, Plješevica, on trunks, logs and stumps of *Picea*, *Abies*, *Fagus*. — Velebit (Škorić 1928 as *Fomes pinicola*).
- Gloeophyllum odoratum* (Wulf.: Fr.) Imaz, Štirovača, stumps of *Picea*.
- G. sepiarium* (Wulf.: Fr.) P. Karst. Štirovača, log of *Picea* (?), Krasno, stump of *Abies* or *Picea*.
- Gloeoporus pannocinctus* (Romell) John Erikss. Paklenica, rotten trunk of *Fagus*, leg. V. L., BEO.
- Heterobasidion annosus* (Fr.) Bref. Brušane, Klepina Duliba, Štirovača, stumps of *Abies* and *Picea*, also on a prostrate trunk of probably *Abies*.
- Ischnoderma benzoinum* (Wahlenb.) P. Karst. Klepina Duliba, on a very rotten conifer trunk, probably *Picea*, 3 very young specimens.
- I. resinolum* (Fr. P. Karst. Plješevica, stump of probably *Fagus*, PRM.
- Laetiporus sulphureus* (Bull.: Fr.) Murr. Sadikovac near Oštarije, on *Fagus* (Moesz 1938 as *Polyporus caudicinus*).
- Perenniporia medulla-panis* (Jacq.: Fr.) Donk. Between Starigrad and Seline, stump of *Pistacia terebinthus*, leg. et det. F. K., PRM, ZA (TortiĆ 1978).
- Polyporus arcularius* (Batsch.): Fr. Kiza near Oštarije, on prostrate branch of *Fagus*.
- P. badius* (S. F. Gray) Schw. Sveto Brdo, on rotten trunks (Moesz 1938 as *P. picipes*).
- P. brumalis* Pers.: Fr. Plješevica, on *Carpinus*? leg. et det. V. L., BEO.
- P. melanopus* (Pers.: Fr.) Štirovača, root of living *Picea*, one specimen, ZA.
- P. mori* (Pollini): Fr. Paklenica, rotten trunk of *Fagus*, leg. V. L., BEO.



- P. squamosus* (Huds.): Fr. Zavižan, Klepina Duliba, Oštarije and vicinity, on standing living and dead trunks, prostrate trunks and on stumps of *Fagus*, sometimes abundant; one specimen noted on the trunk of a living *Abies* tree (in Klepina Duliba) — Velebit, on *Acer obtusatum* and *A. pseudoplatanus* (Škorić 1928). — Ramino Korito between Oštarije and Šugarska Duliba, in beech forests (Moesz 1938).
- P. tuberaster* Jacq.: Fr. Brušane, on a stump of *Fagus*, det. F. Kotlaba and Z. Pouzar. — Plješevica, leg. et det. V. L., BEO.
- P. varius* (Pers.): Fr. Zavižan, Štirovača, Klepina Duliba, Brušane, Oštarije, Plješevica, on logs, stumps and a branch of *Fagus*, also on injured part of living beech trees, ZA. — Bunovac under Vaganski Vrh above Raduč, leg. V. L. BEO. — Velebit (Škorić 1928 as *P. varius* and *P. elegans* var. *nummularius*). — Prosina above Golubići, forests of Kozjak near Alan and in Bunjevačka Draga above Raduč, on dead branches of *Fagus* (Moesz 1938 as *Polyporus varius* and *P. elegans*).
- Porpomyces mucidus* (Pers.: Fr.) Jülich. Štirovača, very rotten log of *Abies*, ZA (Tortić 1980a, as *Fibuloporia donkii*).
- Postia caesia* (Schr.: Fr.) P. Karst. Klepina Duliba two specimens on a log of *Picea*.
- Pycnoporus cinnabarinus* (Jacq.: Fr.) P. Karst. Klepina Duliba, Štirovača, branches and logs of *Fagus*, in Štirovača also on a small trunk of *Abies*, ZA. — Plješevica, on ?, and above Raduč, on a branch of perhaps *Prunus avium*, leg. et det. V. L., BEO. — Počiteljska Draga above Počitelj, on beech trunks (Moesz 1938 as *Trametes cinnabarina*).
- Rigidoporus sanguinolentus* (Alb. & Schw.: Fr.) Donk. Klepina Duliba, very rotten wood of *Abies*, ZA.
- Schizopora paradoxa* (Schr.: Fr.) Donk s. l. Zavižan, branch of *Fagus*, ZA.
- Trametes cervina* (Schw.) Bres. Paklenica, on rotten logs (probably *Fagus*) leg. V. L., BEO. (2 collections).
- T. gibbosa* (Pers.: Fr.) Fr. Sladovača at Oštarije, abundant, Brušane, Smiljan, stumps and logs of *Fagus*, ZA.
- T. hirsuta* (Wulf.: Fr.) Pilát. Mali Halan, Brušane, Oštarije and vicinity, Klepina Duliba, Štirovača, on logs, trunks, stumps of *Fagus* sometimes abundant. — Starigrad—Seline, on branches of *Quercus petraea* and *Q. pubescens*, Velika Paklenica, on trunk of *Fagus*, leg. et det. F. K. — Velebit (Škorić 1928 as *Polystictus hirsutus*). — Takalica Valley between Oštarije and Brušane, on old beeches, in beech forests near the chapel of Sv. Ivan above Medak, Široka Draga near Medak, near Sv. Rok, Sveto Brdo (Moesz 1938 as *Polystictus hirsutus*).
- T. pubescens* (Schum.: Fr.) Pilát. Sv. Križ near Senj, on old trunks of *Fagus* (Moesz 1938 as *Polystictus velutinus* — probably this species).
- T. versicolor* (L.: Fr.) Pilát. Zavižan, Krasno, Klepina Duliba, Oštarije and vicinity, Brušane, on stumps, trunks and logs of *Fagus*, sometimes abundant. — Between Seline and Starigrad, on dead branches of *Quercus petraea* and *Q. pubescens*, and in Velika Paklenica on *Fagus* trunk, leg. et det. F. K., PRM. — Takalica valley between Oštarije and Šugarska Duliba, Visočica, Malovan, bank of the river Gacka near Švica (Moesz 1938 as *Polystictus versicolor*).
- Trichaptum abietinum* (Pers. in Gmelin: Fr.) Ryv. Zavižan, Štirovača, Brušane, on prostrate trunks and branches of *Abies* and *Picea*, ZA. — Between Oštarije and Šugarska Duliba (Moesz 1938 as *Polystictus abietinus*).
- Tyromyces chioneus* (Fr.: Fr.) P. Karst. Plješevica, on rotten wood (probably *Fagus*) leg. V. L., BEO.

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### Pleurotaceae

- Lentinus adhaerens* (Alb. & Schw.: Fr.) Fr. Klepina Duliba, log of probably *Abies*, a few specimens.  
*Panus conchatus* (Bull.: Fr.) Fr. Brušane, stump of *Fagus*, 2 specimens.  
*P. lecomtei* (Fr.) Corner. Takalica valley between Oštarije and Šugarska Duliba, on old trunks of *Fagus* (Moesz 1938 as *Panus rudis*).  
*Pleurotus ostreatus* (Jacq.: Fr.) Kumm. s. l. Between Oštarije and Šugarska Duliba, beech forests (Moesz 1938).

### Strobilomycetaceae

- Strobilomyces strobilaceus* (Scop.: Fr.) Berk. Above Raduč, leg. et det. V. L. as *S. floccopus*, BEO.

### Boletaceae

- Boletus edulis* Bull.: Fr. s. l. Visočica above Počitelj (Moesz 1938 as *B. bulbosus*).  
*B. luridus* Schaeff.: Fr. Zavižan, Oštarije, Brušane, in the second and third localities once very abundant.  
*B. rhodoxanthus* (Krombh.) Kallenb. Plješevica, leg. et det. V. L., BEO, n. v.  
*Xerocomus chrysenteron* (Bull.) Quéł. Brušane, a few specimens.

### Hygrophoraceae

- Hygrophorus cossus* (Sow.: Fr.) Fr. (= *H. chryspis* Mitr.) Plješevica, several specimens in two places, ZA.

### Tricholomataceae

- Armillaria mellea* (Vahl.: Fr.) Kumm. s. l. Brušane, Klepina Duliba, rhizomorphs on prostrate trunks of *Fagus*. — Crni Potok near Oštarije, in forests, rhizomorphs on rotten fir trunks under bark (Moesz 1938 as *Rhizomorpha subcorticalis*, without any doubt this species).  
*Chaetocalathus craterellus* (Dur. et Lév.) Sing. Velika Paklenica, rotten branch of *Ficus carica*, and branches of *Rubus* sp., leg. F. K., det. R. Singer, PRM.  
*Clitocybe gibba* (Pers.: Fr.) Kumm. Zavižan, Štirovača, Klepina Duliba, Brušane, small groups, in Klepina Duliba once abundant.  
*Collybia confluens* (Pers.: Fr.) Kumm. Brušane, 2—3 groups.  
*C. peronata* (Bolt.: Fr.) Kumm. Brušane, 2—3 groups, ZA.  
*Laccaria laccata* (Scop.: Fr.) Berk. & Br. Klepina Duliba quite numerous, Štirovača, one specimen.  
*Marasmius alliaceus* (Jacq.: Fr.) Fr. Oštarije, one specimen on wood of probably *Fagus*, Klepina Duliba, abundant on dead wood of *Fagus*.  
*M. androsaceus* (L.) Fr. Senjska Draga at Senj (Moesz 1938).  
*M. lupuletorum* (Weinm.) Bres. Brušane, three specimens.  
*M. rotula* (Scop.: Fr.) Fr. Brušane, a small group on a branch of *Fagus*, Klepina Duliba, wood of *Fagus*.  
*Mycena alcalina* (Fr.: Fr.) Kumm. Brušane, one specimen on a branch of *Abies*, Klepina Duliba, a group on wood of *Abies* (or *Picea*?)  
*M. galericulata* (Scop.: Fr.) Quéł. Plješevica, several specimens on unidentified wood, ZA.  
*M. haematopus* (Pers.: Fr.) Kumm. Plješevica, a cluster on a log of *Fagus*, ZA.  
*Megacollybia platyphylla* (Pers.: Fr.) Kotl. & Pouz. Paklenica, leg. et det. V. L., BEO, n. v.  
*Rickenella fibula* (Bull.: Fr.) Raith. Brušane, 3 specimens on a stump of *Abies* among mosses, ZA.  
*Xerula pudens* (Pers.) Sing. s. l. Krasno, 2 or 3 specimens.  
*X. radicata* (Rehl.: Fr.) Dörfelt. Oštarije, one specimen on *Fagus* wood, Zavižan, one specimen.

## Entolomataceae

*Clitopilus prunulus* (Scop.: Fr.) Kumm. Oštarije, Brušane, Štirovača, in Brušane abundant, in the other two localities a few specimens.

## Pluteaceae

*Pluteus atromarginatus* (Sing.) Kühn. Brušane, stump and root of *Abies*, two specimens, ZA.

## Amanitaceae

*Amanita pantherina* (DC: Fr.) Krombh. Brušane, one specimen.

*A. porphyria* Alb. & Schw.: Fr. Brušane, one specimen, ZA.

*A. rubescens* (Pers.: Fr.) Brušane, Klepina Duliba, Štirovača, everywhere a few specimens.

*A. strobiliformis* (Paulet in Vitt.) Bertillon. Oštarije, one young specimen, ZA.

*A. cf. umbrinolutea* Secr. Štirovača, several specimens.

*A. vaginata* (Bull.: Fr.) Lam. s. l. Štirovača, several specimens, incl. *A. fulva*.

## Agaricaceae

*Leucocoprinus bresadolae* (Schulz.) Moser = *L. badhamii* auct. plur. Seline, at the base of rotten trunk of *Acer monspessulanus*? leg. F. K., det. V. Demoulin, PRM.

## Coprinaceae

*Coprinus disseminatus* (Pers.: Fr.) S. F. Gray. Ličko Lešće, near the Gacka Hotel, on stumps of probably *Populus* sp.

*C. micaceus* (Bull.: Fr.) Fr. Zavižan, 3—4 groups at stumps of *Fagus* and *Picea*, Štirovača, one group.

*Psathyrella candolleana* (Fr.: Fr.) R. Maire. Oštarije, one group.

## Strophariaceae

*Hypholoma fasciculare* (Huds.: Fr.) Kumm. Brušane, stump of *Abies*, 2 or 3 specimens.

*Kuehneromyces mutabilis* (Schaeff.: Fr.) Sing. & Smith. Klepina Duliba, logs of *Fagus*.

*Pholiota astragalina* (Fr.) Sing. Klepina Duliba, stump of *Picea*, one specimen.

## Cortinariaceae

*Gymnopilus penetrans* (Fr.: Fr.) Murr. Plješevica, stump of probably *Abies*, ZA.

*Hebeloma cf. crustuliniforme* (Bull.) Quél. Plješevica, several specimens.

## Russulaceae

*Lactarius deterrimus* Gröger. Štirovača, 3 specimens.

*L. piperatus* (L.: Fr.) Pers. s. l. Brušane, a few specimens — Velebit (Škorić 1928 as *Lactaria piperata*).

*L. salmonicolor* Heim & Lecl. Štirovača, 2 specimens; Plješevica, several specimens.

*L. scrobiculatus* (Scop.: Fr.) Fr. Štirovača, one specimen.

*L. subdulcis* (Bull.: Fr.) S. F. Gray Klepina Duliba, one specimen.

*L. vellereus* (Fr.) Fr. Oštarije, Brušane, a few specimens.

*L. volemus* (Fr.) Fr. Brušane, a few specimens.

*Russula cyanozantha* (Schaeff.) Fr. Klepina Duliba, Štirovača, a few specimens.

*R. foetens* Pers. (Fr.). Brušane, Oštarije, several specimens.

*R. laurocerasi* Melzer. Mali Halan, 1 specimen.

*R. xerampelina* (Schaeff.) Fr. s. l. Štirovača, several specimens

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### Phallaceae

*Mutinus caninus* (Huds.: Pers.) Fr. Between Oštarije and Šugarska Duliba, beech forests (Moesz 1938).

### Clathraceae

*Clathrus ruber* Pers. Senjska Draga (Moesz 1938 as *C. cancellatus*).

### Lycoperdaceae

*Bovista nigrescens* Pers.: Pers. Bunjevačka Draga above Raduč (Moesz 1938)

*Bovista polymorpha* (Vitt.) Kreisel. In alpine meadows at Javornik above Medak 1400 m, Bunjevačka Draga above Raduč, Rodojča near Medak 560 m (Moesz 1938 as *Lycoperdon furfuraceum*).

*Calvatia utriformis* (Bull.: Pers.) Jaap. Oštarije, in a meadow, 3 old specimens. — Plješevica, in grassland, one together with *Psalliota macrospora* leg. et det. V. L., BEO. — Stony, grassy slopes of Ogradenik above Prizna, 1600 m, Počiteljska Draga (Moesz 1938 as *C. caelata*).

*C. excipuliformis* (Scop.: Pers.) Perdeck. Plješevica, in grassland, leg. et det. V. L., BEO.

*Lycoperdon echinatum* Pers.: Pers. Plješevica, beech forest, leg. et det. V. L., BEO.

*L. perlatum* Pers.: Pers. Slopes of Kozjak above Alan, 1400 m, on rotten wood. (Moesz 1938 as *L. gemmatum*).

*L. pyriforme* Schaeff.: Pers. Oštarije, Klepina Duliba. Zavižan, on stumps of *Fagus*. — Lisac above Prizna, Prislop above Devčići (Moesz 1938)

*Vascellum pratense* (Pers.: Pers.) Kreisel. Meadows between Čitluk and Divoselo (Moesz 1938 as *Lycoperdon hyemale*).

### Gastraceae

*Geastrum triplex* Jungh. Plješevica, leg. et det. V. L., BEO. — Slopes of Prislop above Devčići (Moesz 1938 as *Geaster triplex*).

### Sclerodermataceae

*Scleroderma bovista* Fr. Jažine valley near Brušane, 650 m (Moesz 1938).

### Tulostomataceae

*Tulostoma squamosum* (Gmelin): Pers. Slopes of Mt. Prislop above Devčići (Moesz 1938 as *Tylostoma s.*)

### Astraeaceae

*Astraeus hygrometricus* (Pers.) Morg. Senjska Draga at »Kestenje« (Moesz 1938 as *A. stellatus*).

### Nidulariaceae

*Cyathus olla* Batsch.: Pers. Senjska Draga at Senj, at the base of Mt. Zir near Raduč (Moesz 1938 as *C. sericeus*).

*C. striatus* (Huds.) Fr.: Pers. Bunjevačka Draga above Raduč, on rotten wood (Moesz 1938).

A few species were cited by Moesz (1938) from some other localities, not belonging to the area investigated: *Gloeophyllum abietinum* (Bull.: Fr.) P. Karst. (as *Lenzites abietina*) on wood in the vicinity of Bihać, also *Ramaria flava* (Schaeff.: Fr.) Quél. (as *Clavaria flava*), *Panellus stipticus* (Bull.: Fr.) P. Karst. (as *Panus semipetiolatus*), *Lycoperdon marginatum* Vitt. (as *L. papillatum*) and *L. perlatum* Pers.: Pers. (as

*L. gemmatum*), all four from Jasikovac near Gospić. Fungi in this wood and elsewhere in the vicinity of Gospić were studied by Gjurašin (1898).

In Moesz' list four finds are identified only up to the genus (*Pleurotus* sp., *Tricholoma* sp., *Hypholoma* sp., *Russula* sp.) from various parts of Velebit. He mentions also *Poria vulgaris* Fr. from rotten beech logs at Plitvice; this might be one of several resupinate polypores, impossible to ascertain without a specimen. This information therefore does not signify much, and is added here for the sake of completeness only.

On the other hand, Lindtner made 45 collections at Paklenica, 32 at Raduč and Bunovac and 60 at Plješevica, but only 30 were determined and could be added to the list. Others were either not determined at all or only up to the genus (*Pleurotus*, *Boletus*, *Clitocybe*, *Mycena*, *Volvaria*, *Phlegmacium*, *Lactarius*, *Russula*, *Tulostoma* etc.). There are also several micromycetes on various hosts. In all there are extant more than 100 of his unidentified collections from this area, which must remain so for the moment, unfortunately.

### Discussion

It is natural that in such occasional investigations many species of fungi are missed, even characteristic of a given area, in the first place those with short-lived fleshy carpophores which may also fructify earlier or later in the season. Polypores and corticia can often be found when other fungi are absent, i. e. in dry weather, as the coriaceous carpophores of many, especially polypores last for weeks or months, sometimes years. Those two groups, predominantly lignicolous, were moreover particularly investigated and sought for by the author and F. Kotlaba and are therefore rather overrepresented. As it happens, most of the species noted from other groups were also those growing on wood (which offers some moisture even when the soil is dry), therefore few terricolous fungal species are included here; they are certainly much more numerous at other times, in the wet seasons.

Several species in the list, many those mentioned by Moesz (1938) are taken in broad sense (marked s. 1.): *Ramaria flava*, *Boletus edulis*, *Pleurotus ostreatus*, *Lactarius piperatus* etc., now each divided into two or more taxa. They could not be checked since no voucher specimens by him were available. For that reason the identity of some species can be only guessed. For instance, *Ganoderma lucidum* may be perhaps *G. carnosum*, recognised as separate species not long ago, and growing predominantly on conifer wood. His *Polystictus velutinus* is very probably *Trametes pubescens*, occurring often on beech wood in large quantities. A number of the author's finds could not be re-examined either owing to the lack of specimens.

However, because of the scarcity of the data and the present impossibility to continue the investigations in this area, it was felt that each item of information, even if somewhat uncertain, was precious and was therefore included here.

Accordingly, the list can give only a very imperfect idea of the mycoflora of the region investigated, but shows at least a clear difference in the composition of species on the land resp. sea side of Velebit (the last at lower altitudes or at sea-level).

At the land side, in forests of beech and of beech and fir, many species known from similar forests investigated in some other regions were noted. This is especially the case with species growing on wood, some of them mainly on *Fagus*, as *Dentipellis fragilis*, *Antrodiella hoehnelii*, *Ischnoderma resinosum*, *Marasmius alliaceus*, *Mycena haematopus* etc., others on *Abies* and/or *Picea*, as *Cystostereum murrarii*, *Phellinus chrysoloma*, *Antrodia serialis*, *Climacocystis borealis*, *Fomitopsis pinicola*, *Gloeophyllum odoratum*, *Trichaptum abietinum*, *Lentinus adhaerens*, *Gymnopilus penetrans* etc., which can therefore be considered as characteristic of such forests. As a rare species, *Amylocorticium subincarnatum* on *Picea* may be mentioned. Among terricolous fungi *Hygrophorus cossus* (= *H. chrysoaspis*), *Collybia confluens*, several *Lactarius* and *Russula* spp. forming mycorrhiza with *Fagus*, *Abies* or *Picea*, *Lycoperdon echinatum* and some others also occur mainly in forests containing beech and fir. Species noted here only for Plješevica are surely present in Velebit, too.

Several *Gasteromycetes* grew typically in grasslands, such as *Calvatia utriformis*, *C. excipuliformis*, *Vascellum pratense* etc.

At the sea side all the species noted, except two, were lignicolous. (Terricolous ones develop in abundance at the sea coast only in late autumn, after the start of the rains.) Some were distinctly thermophilous even if for the most part occurring also inland, and many grew on Mediterranean and Submediterranean trees and shrubs, which are less known as hosts and mentioned in the literature rather rarely. A few of the rarer or interesting fungi and hosts are pointed out. *Aleurodiscus cerussatus*, *Peniophora lycii* and *Scytinostroma aluta* were found on *Paliurus aculeatus*. *Inonotus tamaricis*, bound to *Tamarix* spp., is apparently common not only in the localities mentioned here but all along the Adriatic coast. Several species were found on *Pistacia terebinthus*, among them not common *Perenniporia medulla-panis* and, particularly interesting, *Phellinus rimosus*, known in the Mediterranean but rather rare; its distribution and affinities were discussed by Kotlaba and Pouzar (1978). *Chaetocalathus craterellus*, found on *Ficus carica* and *Rubus* sp. is a small, inconspicuous fungus which is probably more spread at the coast; here it is recorded for the first time for this country. Terricolous *Clathrus ruber* is known from a number of localities along the Adriatic coast; it is a typical southern species, occurring, though very rarely, inland up to Central Europe. *Leucocoprinus bresadolae* was first described by S. Schulzer from the vicinity of Vinkovci.

A curious find was that of *Stereum insignitum* on *Ostrya carpiniifolia* at the coast. It is otherwise characteristic of *Fagus* and is widespread in mountain forests on this host, on which it was found also on the land side. On both land and sea side of Velebit some more or less ubiquitous species grew on various hosts; particularly frequent were *Stereum hirsutum*, *Trametes hirsuta*, *T. versicolor*.

The number of macromycetes determined up to now in the whole of the area investigated is, one must say, ridiculously small: 192 in all, in Plješevica only 25. This is about a tenth of higher plants known in those mountains. Mycology is, unfortunately, very much behind botany of higher plants in the knowledge of the organisms it studies.

The aim of this paper was to point out this fact and emphasize the necessity of mycological investigations, particularly in regions with more or less natural forests, and to give a small starting point to later mycologists in the (near or far?) future.

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## SAŽETAK

## VIŠE GLJIVE VELEBITA (HRVATSKA)

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Na osnovi oskudne literature i povremenih istraživanja autorice i nekih drugih mikologa sastavljen je popis dosad određenih viših gljiva na Velebitu. Dodan je i malen broj njih nađen na ličkoj Plješevici. Osobito je pozornost posvećena lignikolnim poroidnim i korticioidnim vrstama, no dosta ustanovljenih gljiva iz drugih grupa također redovito raste na drvetu. Terikolnih je nađeno malo, vjerojatno zbog nepovoljnih vremenskih prilika za njihov razvitak za vrijeme istraživanja (ljetna suša).

## MILICA TORTIĆ

Opažena je jasna razlika u mikoflori kopnene i primorske strane Velebita. Na kopnenoj strani, u šumama bukve te bukve i jele nađene su mnoge gljive koje dolaze u sličnim šumama i u drugim krajevima; lignikolne uglavnom rastu na bukvi, jeli ili smreki. Na primorskoj su strani sabirane gljive uglavnom na nižim nadmorskim visinama, mnoge uz more i priličan broj njih je termofilan, a dosta ih je raslo na mediteranskom i submediteranskom drveću i grmlju.

Ukupno su ovdje navedene 192 vrste što je upravo smiješno malen broj, osobito kad se usporedi s brojem višeg bilja zabilježenog na Velebitu — blizu 2000. To pokazuje koliko je mikologija zapravo zapostavljena. Neophodna bi stoga bila intenzivna i dugotrajna istraživanja gljiva naših šuma, posebice onih koje su u približno prirodnom stanju.

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