Acta Mycologica

Article ID: 55211
DOI: 10.5586/am.55211

Publication History
Received: 2020-05-08
Accepted: 2020-09-15
Published: 2021-02-25

Handling Editor
Małgorzata Ruszkiewicz-Michalska; Institute for Agricultural and Forest Environment, Polish Academy of Sciences, Poland; University of Łódź, Poland; https://orcid.org/0000-0001-8901-0552

Authors' Contributions
JP initiated the study and together with MG wrote the first draft of the manuscript; IS, MG, and MK coordinated specimens collection, sampling and preservation. MG, MC, ID, HF, CH, JK, DM, IKG, DW, MO, DS, BSI, MW, and JP identified recorded fungi; JP, IS, MM, DS, DW, and MK were responsible for data management; IS and ZB generated ITS barcode sequences; DS organized and coordinated the iNaturalist project; all authors contributed to the preparation of the manuscript

Funding
This study was funded by 18th Congress of European Mycologists and Polish Mycological Society.

Competing Interests
No competing interests have been declared.

CHECKLIST

18th Congress of European Mycologists Bioblitz 2019 – Naturalists Contribute to the Knowledge of Mycobiota and Lichenobiota of Białowieża Primeval Forest

Michał Gorczak[1*], Igor Siedlecki[2], Zuzanna Błocka[1], Maria Cullen[3], Inita Daniele[4], Howard Fox[5], Christoffer Harder[6], Juha Kinnunen[7], Michał Kochanowski[2], Irmgard Krisai-Greilhuber[8], Maria Majchrowska[1], Diana Meiere[4], Martina Oberhofer[9], Dmitry Schigel[10], Beatrice Senn-Irlet[11], Dorota Wiktorowicz[1], Marta Wrzosek[2], Julia Pawłowska[1]

[1]Institute of Evolutionary Biology, Faculty of Biology, University of Warsaw, Żwirki i Wigury 101, Warsaw, 02-089, Poland

[2]Botanical Garden, Faculty of Biology, University of Warsaw, Al. Ujazdowskie 4, Warsaw, 00-478, Poland

[3]Barrow Herbarium, Ballyanne, New Ross, Y34 RW14, Co. Wexford, Ireland

[4]Latvian Museum of Natural History, K. Barona 4, Riga, 1050, Latvia

[5]Irish National Herbarium, National Botanic Gardens, Glasnevin, Dublin 9, D09 VY63, Ireland

[6]Microbial Ecology Group, Department of Biology, Lund University, Ecology Building, Lund, 223 62, Sweden

[7]Botanical Museum, University of Helsinki, P.O. Box 7, Helsinki, 00014, Finland

[8]Department of Botany and Biodiversity, University of Vienna, Rennweg 14, Vienna, 1030, Austria

[9]Department of Pharmacognosy, University of Vienna, Althanstrasse 14, Vienna, 1090, Austria

[10]Secretariat, Global Biodiversity Information Facility, Universitetsparken 15, Copenhagen Ø, 2100, Denmark

[11]Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Zürcherstrasse 111, Birmensdorf, 8903, Switzerland

*To whom correspondence should be addressed. Email: gorczak.michal@wp.pl

Abstract

A total of 561 records of 233 species of fungi are reported from the Polish part of Białowieża Forest as a result of a short-term inventory that was conducted during the 18th Congress of European Mycologists (September 18–29, 2019). Four species new to Poland (*Bryocentria brongniartii*, *Tremella coppinsii*, *T. hypocenomycis*, and *Zevadia peroccidentalis*), and eight species new to Białowieża Primeval Forest (*Hypomyces chrysostomus*, *Hypomyces rosellus*, *Lachnellula resinaria*, *Peniophora lycii*, *Phellinus viticola*, *Phlebia subochracea*, *Pronectria anisospora*, and *Typhula quisquiliaris*) were recorded.

Keywords

fungal diversity; lichen diversity; new species; endangered species; short-term inventory; rapid inventory; Białowieża Forest

1. Introduction

Białowieża Primeval Forest, covering approximately 1,500 km^2, is one of the best preserved old-growth mixed forests in Europe. It is located on the Poland–Belarus border in the North Podlasie Plain (Solon et al., 2018). The preservation of Białowieża Forest was possible because from the fifteenth to the eighteenth century, it was used as a royal hunting reserve. Despite various extent of human

use through the ages, large parts of the forest remained relatively free of human impact until the twentieth century (Jaroszewicz et al., 2019; Samojlik et al., 2013; Szwagrzyk, 2016). Modern nature conservation started in 1921 when a "Reserve" forestry was created in Białowieża, encompassing 45.9 km^2 of old-growth forest. In 1932, it was transformed into The National Park in Białowieża and in 1947, after World War II, it was restored as Białowieża National Park (Okołów et al., 2009). Białowieża Primeval Forest has been a UNESCO World Heritage Site since 1979 (initially only Polish and Belarusian national parks, the whole Białowieża Forest since 2014). The Polish part of Białowieża Primeval Forest is additionally an EU Natura 2000 site, which includes an overlapping Special Protection Area and Special Area of Conservation. The main purpose of most of these designated sites is to protect the natural processes in the remaining part of the primeval forest from direct human interference (Bobiec, 2002).

In the Polish part of Białowieża Primeval Forest, a lime-oak-hornbeam forest *Tilio-Carpinetum* is the dominant type of potential natural vegetation. However, only approximately half of the area is currently covered by mixed deciduous forests. The remaining areas were changed to Norway spruce or Scots pine plantations as a result of twentieth century forest management. Nonetheless, many well-preserved, old growth deciduous stands, alder carrs *Carici elongatae-Alnetum*, pine bogs *Vaccinio uliginosi-Pinetum*, and other, less common forest types, are protected within the nature reserves (Jaroszewicz et al., 2019; Sokołowski, 2004). In numerous areas, a natural mosaic of habitats and vegetation types have been preserved. Moreover, forest microhabitats such as deadwood, animal carcasses, and tree cavities, are abundant because of relatively low human disturbance (Jaroszewicz et al., 2019).

There is a long-standing history of mycobiota research in Białowieża Primeval Forest. The first studies of mycobiota in this area date back to the nineteenth century (Błoński, 1889; Błoński et al., 1888). Extensive inventory and taxonomic works in Białowieża National Park were conducted by various researchers in the twentieth century. Domański published a series of 18 papers entitled "Wood inhabiting fungi in Białowieża virgin forest" in *Acta Societatis Botanicorum Poloniae* between 1965 to 1972 (as cited in Karasiński & Wołkowycki, 2015). The dematiaceous hyphomycetes were investigated by Alina Borowska and her students, but the lists of species are available only as manuscripts (Kostecka, 1989; Szulc, 1995). An extensive and methodical study of lichens, including a summary of previous knowledge, was published by Cieśliński and Tobolewski (1988). The largest inventory project on the fungal diversity of this region, called CRYPTO, was conducted between 1987 and 1991. The project focused on one forest section (number 256) of Białowieża National Park and recorded 1,380 species of micro-, macrofungi, and lichens in an area of 144 ha (Bujakiewicz et al., 1992; Faliński & Mułenko, 1992, 1995, 1997). Knowledge about the lichenobiota of Białowieża Forest was first compiled in a red list of threatened lichens in Białowieża Old-Growth Forest (Czyżewska & Cieśliński, 2003), and later in a checklist of lichens of Białowieża Primeval Forest, which included 450 species (Cieśliński, 2010). Recently, numerous new species of lichens and allied fungi have been noted (e.g., Matwiejuk, 2011; Łubek & Jaroszewicz, 2012; Łubek et al., 2018).

An increasing number of studies are now using next-generation sequencing of amplicons to assess fungal diversity (Lindahl et al., 2013; Nilsson, Anslan, et al., 2019). Short sequence insufficiency for species recognition and a shortage of reference sequences in the databases used to be limiting for the application of this method (Nilsson, Anslan, et al., 2019), but improvements in the coverage of the UNITE database (Nilsson, Larsson, et al., 2019) and advances in sequencing technology are very promising. A recent estimate of fungal diversity based on various methods concluded that 2.2. to 3.8 million fungal species could inhabit our planet (Hawksworth & Lücking, 2017). However, only 5,317 generic names of fungi are represented in the GenBank (November 12, 2020) NCBI database (Genbank; Hawksworth & Lücking, 2017). This highlights the importance of generating reference barcode sequences for rare or endemic fungal species, including old-growth forest species, which are scarcely represented in internal transcribed spacer (ITS) sequence records in GenBank.

The Global Biodiversity Information Facility (GBIF; https://www.gbif.org/) is currently the most widely used database for all kinds of biodiversity studies but exhibits similar limitations. The database currently contains 19,389,938 fungal observations representing 154,183 species. However, there are only 2,481 fungal records from the Polish part of Białowieża Forest. Of these, most (543 records) came from the iNaturalist citizen science application (https://www.inaturalist.org/).

Rapid biodiversity inventories, called bioblitz, are a means to teach people about natural sciences and species in the field, while also raising awareness about the need for nature conservation. Bioblitzes generate important biodiversity datasets, especially if many expert naturalists (amateur or professional) are involved (Parker et al., 2018). Such inventories, called expert bioblitzes by Parker et al. (2018), have a long tradition in the Polish mycological community. Short field trips and fieldwork organized by the Mycological Section of the Polish Botanical Society, the Polish Mycological Society, national parks, museums, and amateur naturalist groups (e.g., bio-forum.pl; https://www.bio-forum.pl/), are rich sources of specimens and biodiversity data (e.g., Kujawa et al., 2015, 2018). Such rapid fungal inventories can record several hundred species from various taxonomic groups. However, the number of species recorded is highly dependent on the weather conditions and the specialists involved (e.g., Gierczyk et al., 2013; Kujawa et al., 2018; Ruszkiewicz-Michalska et al., 2015). Mycological meetings, like international congresses, offer unique opportunities to involve a large group of expert mycologists in species diversity studies. The first of these inventories was performed during the IV Congress of European Mycologists (Warsaw) in 1966 and resulted in the first exhibition of fungi from Białowieża Forest. Beginning in 1993, the current tradition of the annual mushroom exhibition of Białowieża Primeval Forest has continued. Recently, Kujawa et al. (2018) reviewed and analyzed all historical records of nonlichenized fungi from this region, including the data gathered from these annual exhibitions. The records were based on macro- and micromorphological observations of the collected specimens. Combining these data, Kujawa et al. reported 1,144 macrofungal taxa, of which 85 taxa were new to Poland. Altogether, approximately 2,200 species of macrofungi are known from the Polish part of Białowieża Forest (Kujawa, 2020; Kujawa, Ślusarczyk, et al., 2020). At the 25th Jubilee exhibition in September 2019, 159 species of fungi were displayed and an additional 51 species were recorded. Among these were three species new to Poland (*Athelopsis subinconspicua*, *Hypomyces microspermus*, and *Ophiocordyceps variabilis*) and seven species new to Białowieża Forest (Kujawa, Ślusarczyk, et al., 2020).

Here, we report the diversity of fungi (including lichens and lichenicolous organisms) of Białowieża Primeval Forest as a result of a joint collection and identification effort from all participants of the 18th Congress of European Mycologists (CEM) in September 2019. The opportunity was seized to gather the diverse expertise of more than 200 international mycologists to collect and identify fungi using macro- and microscopic morphology, along with sequence data that has been made available in the GenBank and GBIF databases.

2. Material and Methods

Fungi were collected from managed areas of Białowieża Primeval Forest (Podlaskie Voivodeship, Poland) between September 19 and September 27, 2019 by participants of the 18th CEM and University of Warsaw students. Forest divisions 424 and 362 were sampled between September 19 and September 21, 2019 and divisions 403, 450A, 469C, and 491B between September 23 and September 27, 2019 (Figure 1). Sampled sites represented lime-oak-hornbeam forest habitat with the exception of divisions 469C and 491B, where secondary mixed forest prevailed (Forest Data Bank, 2020; Matuszkiewicz, 2002). Additionally, observations from excursions to Białowieża National Park were added. Observations made by iNaturalist are available on the 18th CEM project website: https://www.inaturalist.org/projects/xviiicem. iNaturalist records were manually checked for redundant observations and filtered out. All localities include a reference to the forest district and division if recorded from the managed part of Białowieża Forest (Figure 1).

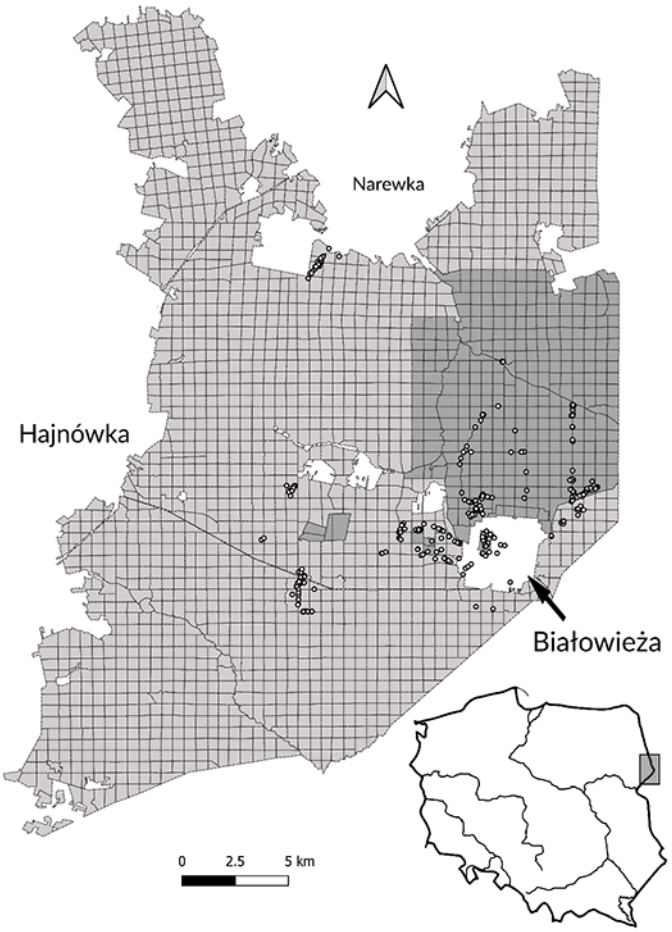

Figure 1 Contour map of the Polish part of Białowieża Primeval Forest showing forest subsections. Białowieża National Park is shown in dark gray. Dots represent records of fungi. Names indicate nearby settlements.

The nomenclature was aligned using the GBIF species lookup tool (https://www.gbif.org/tools/species-lookup), and later corrected to follow Mycobank (https://mycobank.org/; Robert et al., 2013). If the current name from Mycobank is different from GBIF or one in used checklists, the latter are given as synonyms in brackets. For selected specimens, morphological identification was confirmed by sequencing of ITS rDNA. The sequences obtained in this study were deposited in the International Nucleotide Sequence Database Collaboration under the following GenBank accession numbers: MT229985–MT229993, MT240483, and MT240484. Voucher specimens were deposited in the Herbarium of the Faculty of Biology, University of Warsaw (WA) and the Herbarium of Swiss Federal Institute of Technology in Zurich (ZT Myc). The data on species occurrences were also deposited in GBIF (Siedlecki & Pawłowska, 2020). All species records we report here are also available in the supplementary Table S1.

Finally, the protective status of all species were annotated according to the regulation of the Polish Minister of the Environment (Minister of Environment, 2014), the "Red list of the macrofungi in Poland" (Wojewoda & Ławrynowicz, 2006), the IUCN Red List (The IUCN Red List of Threatened Species, 2020), the *Checklist of Polish Larger Basidiomycetes* (Wojewoda, 2003), *A Preliminary Checklist of Micromycetes in Poland* (Mułenko et al., 2008), the *Checklist of Microfungi and Larger Ascomycetes of Białowieża Forest* (Kozłowska et al., 2019), "The lichens of Poland. A fourth checklist" (Fałtynowicz & Kossowska, 2016), the "Red list of extinct and threatened lichens in Poland" (Cieśliński et al., 2003), and a literature database of macrofungi in Poland (Kujawa, 2020).

3. Results

The eight (three plus five) day inventory yielded 101 collections and 68 observations representing 142 species. During the 11 days of the dedicated bioblitz project on iNaturalist, 750 observations representing 223 species were recorded, out of which 418 observations were of research grade. After removing redundant observations and doubtful identifications, 392 records representing 161 species were obtained from iNaturalist (only these data will be further included in the current paper). In total, 561 observations representing 233 species were recorded. ITS rDNA sequences were obtained for 11 specimens: *Crucibulum crucibuliforme*, *Mycena inclinata*, *Nectria cinnabarina*, *Pholiota* sp., *Postia stiptica*, *Steccherinum fimbriatum*, *Stereum subtomentosum*, *Trichaptum abietinum*, *Tremella aurantia*, *Tyromyces chioneus*, and *Xylaria* sp.

In this study, we found nine strictly protected (SP) species in Poland (*Amylocystis lapponica*, *Chrysothrix candelaris*, *Hapalopilus croceus*, *Melanohalea olivacea*, *Peltigera praetextata*, *Ramalina farinacea*, *Rhodotus palmatus*, *Skeletocutis odora*, and *Thelotrema lepadinum*), and five partially protected (PP) species [*Fistulina hepatica*, *Hericium coralloides*, *Hypogymnia tubulosa*, *Rhodofomes roseus* (syn. *Fomitopsis rosea*), and *Tuckermanopsis chlorophylla*]. Additionally, we noted 49 fungal species listed on the "Red list of the macrofungi in Poland" in the following threat categories: one extinct (Ex) (*Phlebia subochracea*), 17 endangered (E), 19 rare (R), and 13 vulnerable (V). We also found one critically endangered (CR) species, *Melanohalea olivacea*, listed in the "Red list of threatened lichens in Białowieża Old-Growth Forest." Furthermore, five species are listed in the IUCN Red List in the following threat categories: data deficient (DD), *Resinoporia piceata*; least-concern (LC), *Amylocystis lapponica* and *Gomphidius glutinosus*; vulnerable (VU), *Hapalopilus croceus* and *Rhodotus palmatus*. Finally, our study resulted in the discovery of four species new for Poland, *Bryocentria brongniartii*, *Tremella coppinsii*, *Tremella hypocenomycis*, and *Zevadia peroccidentalis*, and eight species that were not previously reported in Białowieża Primeval Forest, *Hypomyces chrysostomus*, *Hypomyces rosellus*, *Lachnellula resinaria*, *Peniophora lycii*, *Phellinus viticola*, *Phlebia subochracea*, *Pronectria anisospora*, and *Typhula quisquiliaris*.

All of the species noted for the first time from the Białowieża region or even from Poland form small fruit bodies; therefore, they were probably overlooked during previous investigations. Many fungal species are hard to identify or inconspicuous, and are thus left unrecorded by nonspecialists. This often results in an expert-distribution record of some taxa rather than species distribution.

The following abbreviations are used in the list of species. Location: BNP – Białowieża National Park; f. dist. – forest district; div. – divison; Str. Res. – former Strict Reserve of BNP. Record character: iN – iNaturalist record (see supplementary Table S1); GB – GenBank accession number; WA – University of Warsaw Herbarium number; ZT Myc – Herbarium of Swiss Federal Institute of Technology in Zurich; * – taxon new for Białowieża Primeval Forest; ** – taxon new for Poland. Protective status: Ex, CR, E, V, R – category of threat according to the "Red list of the macrofungi in Poland" or "Red list of threatened lichens in the Białowieża Old-Growth Forest"; DD, VU, LC – category of threat according to the IUCN Red List of Threatened Species; PP – partially protected species; SP – strictly protected species. Names of collectors and/or identifiers: 18thCEM – 18th Congress of European Mycologists participants; BSI – Beatrice Senn-Irlet; CH – Christoffer Harder; DM – Diana Meiere; DS – Dmitry Schigel; FM UW, University of Warsaw Field Mycology course participants; HF – Howard Fox; ID - Inita Daniele; IKG – Irmgard Krisai-Greilhuber; JP – Julia Pawłowska; MC – Maria Cullen; MG – Michał Gorczak; MO – Martina Oberhofer; MW – Marta Wrzosek.

3.1. Ascomycota

Aleuria aurantia (Pers.) Fuckel, BNP, Str. Res., 52.7218N, 23.9069E, 2019-09-21, iN:33129946; f. dist. Białowieża, div. 403, 52.7217N, 23.9071E, 2019-09-24, iN:33326108.

Ascocoryne sarcoides (Jacq.) J. W. Groves & D. E. Wilson, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7211N, 23.8365E, 2019-09-27, iN:33475021.

Bisporella citrina (Batsch) Korf & S. E. Carp., f. dist. Hajnówka, div. 362, 52.7269N, 23.7134E, 2019-09-20, iN:33070323.

** ***Bryocentria brongniartii*** (P. Crouan & H. Crouan) Döbbeler, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, ZT Myc 60832; Figure 2D–F. **Notes:** *Bryocentria brongniartii* is a representative of the Bionectriaceae family which is characterized by the formation of small, orange perithecia. It parasites on liverworts, such as *Frullania* (Döbbeler, 2004, 2010) and is known from the northern hemisphere. There are 26 occurrences from Austria, Germany, Great Britain, Ireland, Italy, Norway, Spain and the USA reported in GBIF (2020).

Bulgaria inquinans (Pers.) Fr., f. dist. Hajnówka, div. 362, 52.7272N, 23.7133E, 2019-09-20, iN:33072721; f. dist. Białowieża, div. 425, 52.7098N, 23.8019E, 2019-09-23, iN:33252131; BNP, Str. Res., 52.7212N, 23.8376E, 2019-09-27, iN:33486524; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. MG, WA0000072762.

Diatrypella favacea (Fr.) Ces. & De Not., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072774.

Erysiphe alphitoides (Griffon & Maubl.) U. Braun & S. Takam., on *Quercus robur* L., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7305N, 23.9076E, 2019-09-19, iN:33005444.

Hercospora tiliae (Pers.) Tul. & C. Tul., on twig of *Tilia cordata* Mill., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF, vid. HF & MC.

Hypocrea sulphurea (Schwein.) Sacc. [syn. *Trichoderma sulphureum* (Schwein.) Jaklitsch & Voglmayr], f. dist. Białowieża, div. 424, 52.7113N, 23.7886E, 2019-09-26, iN:33429009; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072713.

* ***Hypomyces chrysostomus*** Berk. & Broome [syn. *Sporophagomyces chrysostomus* (Berk. & Broome) K. Põldmaa & Samuels], f. dist. Browsk, div. 78, 52.8243N, 23.7341E, 2019-09-20, iN:33056979. **Notes:** *Hypomyces chrysostomus* is a fungicolous ascomycete growing on *Ganoderma* spp, *Fomes conchatus*, and *Rigidoporus microporus* (Rogerson & Samuels, 1993), and it is known from South Asia, North and South America. In Europe, *H. chrysostomus* has been recorded from Belgium, Denmark, Estonia, and Germany (GBIF, 2020). In Poland, it has been recorded recently from Knyszyn Forest (as *Acremonium lindtneri*) (Kujawa et al., 2019), previously it was noted at least twice on mycological website bio-forum.pl (Domian, 2006; Drzewiecki, 2016) and additionally once, incorrectly as anamorph of *Ganoderma lucidum* from Biebrza National Park (Kujawa et al., 2012).

Hypomyces microspermus Rogerson & Samuels, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. MG, WA0000072722.

* ***Hypomyces rosellus*** (Alb. & Schwein.) Tul. & C. Tul., BNP, Str. Res., 52.7149N, 23.8364E, 2019-09-25, iN:33367410.

Hypoxylon fragiforme (Pers.) J. Kickx f., f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33069961; BNP, Str. Res., 52.7238N, 23.9122E, 2019-09-23, iN:33260164.

Hypoxylon fuscum (Pers.) Fr., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF & MC, vid. HF & MC.

Hysterium pulicare (Lightf.) Pers., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19-2019-09-20, det. HF & MC, vid. HF & MC.

Kretzschmaria deusta (Hoffm.) P. M. D. Martin, BNP, Str. Res., 52.7267N, 23.9231E, 2019-09-23, iN:33261346; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072741.

* ***Lachnellula resinaria*** (Cooke & W. Phillips) Rehm, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI. **Notes:** Although *L. resinaria* is not protected, red-listed, or new to Poland, it is known from only one

historical record in this country. The species was previously reported in 1908 by Schroeter from the Silesia region on the bark of *Abies* spp. (Schroeter, 1908). This observation in Białowieża Primeval Forest is therefore a significant finding.

Nectria cinnabarina (Tode) Fr., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19-2019-09-20, det. HF & MC, vid. HF & MC; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229991, WA0000072778.

Xylaria sp. Hill ex Schrank, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229988, WA0000072747.

Xylaria hypoxylon (L.) Grev., BNP, Str. Res., 52.7205N, 23.8399E, 2019-09-25, iN:33368169; f. dist. Hajnówka, div. 491, 52.6822N, 23.7127E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072799.

Xylaria longipes Nitschke, BNP, Str. Res., 52.7263N, 23.9171E, 2019-09-23, iN:33260869.

Xylaria polymorpha (Pers.) Grev., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7248N, 23.9077E, 2019-09-19, iN:33004690; BNP, Palace Park, 52.7032N, 23.8463E, 2019-09-20, iN:33093888; f. dist. Białowieża, div. 462, 52.7040N, 23.8273E, 2019-09-23, iN:33248810; European Bison Show Reserve, BNP, 52.7046N, 23.8095E, 2019-09-23, iN:33252392; f. dist. Białowieża, div. 451, 52.7011N, 23.8161E, 2019-09-27, iN:33533702.

3.2. Lichens

Acrocordia gemmata (Ach.) A. Massal., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Alyxoria varia (Pers.) Ertz & Tehler, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Bacidia herbarum (Stizenb.) Arnold, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Chaenotheca ferruginea (Turner ex Sm.) Mig., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF & MC, vid. HF & MC.

Chrysothrix candelaris (L.) J. R. Laundon, BNP, Str. Res., 52.7511N, 23.8672E, 19-2019-09-20, det. HF & MC, vid. HF & MC; SP.

Cladonia coniocraea (Flörke) Spreng., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Evernia prunastri (L.) Ach., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Palace Park, 52.7066N, 23.8455E, 2019-09-18, iN:32955554; BNP, Palace Park, 52.7063N, 23.8450E, 2019-09-19, iN:33002240; BNP, Palace Park, 52.7024N, 23.8463E, 2019-09-21, iN:33748248; BNP, Str. Res., 52.7599N, 23.9073E, 2019-09-22, iN:33194788; BNP, Str. Res., 52.7430N, 23.8331E, 2019-09-24, iN:33316321.

Graphis scripta (L.) Ach., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7271N, 23.9235E, 2019-09-23, iN:33261367.

Hypocenomyce scalaris (Ach. ex Lilj.) M. Choisy, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Hypogymnia physodes (L.) Nyl., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7799N, 23.8585E, 2019-09-24, iN:33317764.

Hypogymnia tubulosa (Schaer.) Hav., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; PP.

Lecanora carpinea (L.) Vain., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Lecidella elaeochroma (Ach.) M. Choisy, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Lepra albescens (Huds.) Hafellner, Palace Park [syn. *Pertusaria albescens* (Huds.) M. Choisy & Werner], BNP, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Palace Park, 52.7039N, 23.8484E, 2019-09-18, iN:32954150.

Lepra amara (Ach.) Hafellner [syn. *Pertusaria amara* (Ach.) Nyl.], BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7618N, 23.9079E, 2019-09-22, iN:33194092; BNP, Str. Res., 52.7271N, 23.9198E, 2019-09-23, iN:33261228.

Lepraria incana (L.) Ach., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Melanohalea olivacea (L.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch [syn. *Melanelia olivacea* (L.) Essl.], BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; SP, CR.

Parmelia sulcata Taylor, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; Białowieża village, 52.7028N, 23.8599E, 2019-09-19, iN:32994743; BNP, Str. Res., 52.7802N, 23.8583E, 2019-09-24, iN:33317620.

Peltigera praetextata (Flörke ex Sommerf.) Zopf, BNP, Str. Res., 52.7264N, 23.9056E, 2019-09-21, iN:33117754; BNP, Str. Res., 52.7616N, 23.9081E, 2019-09-22, iN:33194123; BNP, Str. Res., 52.7614N, 23.9074E, 2019-09-22, iN:33194311; BNP, Str. Res., 52.7422N, 23.8314E, 2019-09-24, iN:33315897; SP.

Phaeographis dendritica (Ach.) Müll. Arg., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Phlyctis argena (Ach.) Flot., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF, vid. HF & MC.

Physcia semipinnata (J. F. Gmel.) Moberg, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Physcia tenella (Scop.) DC., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Platismatia glauca (L.) W. L. Culb. & C. F. Culb., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-20, det. HF & MC, vid. HF & MC.

Pseudevernia furfuracea (L.) Zopf, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Pyrenula nitida (Weigel) Ach., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Ramalina farinacea (L.) Ach., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7298N, 23.9209E, 2019-09-23, iN:33261619; SP.

Ramalina fraxinea (L.) Ach., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-20, det. HF & MC, vid. HF & MC.

Skvortzovia furfuracea (Bres.) G. Gruhn & Hallenberg [syn. *Resinicium furfuraceum* (Bres.) Parmasto], BNP, Str. Res., 52.7526N, 23.8396E, 2019-09-24, iN:33316841.

Thelotrema lepadinum (Ach.) Ach., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-20, det. HF & MC, vid. HF & MC; SP.

Tuckermanopsis chlorophylla (Willd.) Hale, Białowieża village, 52.7029N, 23.8601E, 2019-09-19, iN:32994735; PP.

Usnea subfloridana Stirt., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Xanthoria parietina (L.) Beltr., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; Białowieża village, 52.6932N, 23.8327E, 2019-09-18, iN:32943403; Białowieża village, 52.6997N, 23.8449E, 2019-09-24, iN:33318128; Białowieża village, 52.7031N, 23.8571E, 2019-09-26, iN:33417221.

3.3. Lichenicolous Fungi

Athelia arachnoidea (Berk.) Jülich, on *Lepraria incana* (L.) Ach. sward on *Tilia cordata* Mill., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF, vid. HF & MC.

Clypeococcum hypocenomycis D. Hawksw., on *Hypocenomyce scalaris* (Ach. ex Lilj.) M. Choisy, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF, vid. HF & MC.

Lichenoconium erodens M. S. Christ. & D. Hawksw., on *Hypogymnia physodes* (L.) Nyl., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Lichenostigma maureri Hafellner, on *Pseudevernia furfuracea* (L.) Zopf on *Larix decidua* Mill. branches, BNP, Palace Park, 52.706N, 23.8467E, 2019-09-19, det. HF, vid. HF & MC.

* ***Pronectria anisospora*** (Lowen) Lowen, on *Hypogymnia physodes* (L.) Nyl. on *Pinus* sp. bark, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19, det. HF, vid. HF & MC. **Notes:** *Pronectria anisospora*, which grows on *Hypogymnia physodes* (Khodosovtsev et al., 2012; Lowen, 1990), is a Northern-Hemisphere species with more than 100 known localities mainly in Estonia, Germany, Great Britain, Ireland, Norway, and the USA (GBIF, 2020). In Poland, it was noted only once from Drawieński National Park (NW Poland, Western Pomerania) as *Trichonectria anisopora* (Schiefelbein et al., 2012).

** ***Tremella coppinsii*** Diederich & G. Marson, on *Platismatia glauca* (L.) W. L. Culb. & C. F. Culb., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF, vid. HF & MC. **Notes:** *Tremella coppinsii*, although originally described from Sarawak, Malaysia (Diederich & Marson, 1988) is also known from Belgium, Estonia, Ireland, Norway, Spain, Sweden, the UK and the USA (Ertz & Diederich, 2008; Fox, 2001; Millanes et al., 2014; Sérusiaux et al., 2006). This species is associated exclusively with *Platismatia glauca*.

** ***Tremella hypocenomycis*** Diederich, on *Hypocenomyce scalaris* (Ach. ex Lilj.) M. Choisy, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF, vid. HF & MC. **Notes:** An extremely rare *T. hypocenomycis* is restricted to *Hypocenomyce scalaris* and is previously only known from two specimens from Finland (Pippola & Kotiranta, 2008).

Vouauxiella lichenicola (Linds.) Petr. & Syd., on *Lecanora carpinea* (L.) Vain., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

** ***Zevadia peroccidentalis*** J. C. David & D. Hawksw., on *Usnea* sp., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC. **Notes:** *Zevadia peroccidentalis*, a lichenicolous fungus associated with *Usnea* spp. was, until now, only known from Ireland (David & Hawksworth, 1995; Fox, 2001).

3.4. Basidiomycota

Abortiporus biennis (Bull.) Singer, BNP, Str. Res., 52.7233N, 23.8482E, 2019-09-23, iN:33264250; E.

Amanita citrina Pers., f. dist. Białowieża, div. 451, 52.7011N, 23.8161E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072785.

Amanita muscaria (L.) Lam., f. dist. Browsk, div. 98, 52.8190N, 23.7285E, 2019-09-20, iN:33074619; f. dist. Białowieża, div. 469, 52.6870N, 23.7187E, 2019-09-25, iN:33361761; f. dist. Białowieża, div. 448, 52.6995N, 23.7746E, 2019-09-26, iN:33419072; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072738.

Amylocystis lapponica (Romell) Bondartsev & Singer, BNP, Str. Res., 52.7573N, 23.9063E, 2019-09-22, iN:33195620; BNP, Str. Res., 52.7230N, 23.8513E, 2019-09-23, iN:33264267; BNP, Str. Res., 52.7420N, 23.8315E, 2019-09-24, iN:33316063; SP, E, LC. **Notes:** *Amylocystis lapponica*, a polypore which grows on the logs of Norway spruce in old-growth humid forests is strictly protected in Poland

(Minister of Environment, 2014). It is red-listed in Poland, with high threat category – E (Wojewoda & Ławrynowicz, 2006). Although the species has only been observed in three localities in the country (Kujawa, Gierczyk, & Ślusarczyk, 2020; Wojewoda, 2003), there have been more than four thousand known observations around the world (GBIF, 2020). Therefore, its threat category on the IUCN Red List is LC (least-concern) (The IUCN Red List of Threatened Species, 2020).

Amylostereum areolatum (Chaillet ex Fr.) Boidin, BNP, Str. Res., 52.7575N, 23.9069E, 2019-09-22, iN:33195364.

Antrodiella serpula (P. Karst.) Spirin & Niemelä, BNP, Str. Res., 52.7260N, 23.8754E, 2019-09-23, iN:33264292; R.

Artomyces pyxidatus (Pers.) Jülich, BNP, Str. Res., 52.7232N, 23.9070E, 2019-09-21, iN:33129349; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072714; V.

Auricularia mesenterica (Dicks.) Pers., BNP, Str. Res., 52.7193N, 23.8429E, 2019-09-20, iN:33057646; f. dist. Białowieża, div. 424, 52.7060N, 23.7867E, 2019-09-20, iN:33060568; f. dist. Białowieża, div. 425, 52.7092N, 23.8000E, 2019-09-23, iN:33250849; f. dist. Białowieża, div. 424, 52.7084N, 23.7866E, 2019-09-26, iN:33428918; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. MG, WA0000072721; R.

Baeospora myosura (Fr.) Singer, f. dist. Hajnówka, div. 491, 52.6820N, 23.7171E, 2019-09-25, iN:33369170; f. dist. Hajnówka, div. 491, 52.6780N, 23.7167E, 2019-09-25, iN:33382012.

Basidioradulum radula (Fr.) Nobles, f. dist. Browsk, div. 98, 52.8150N, 23.7238E, 2019-09-20, iN:33056851; f. dist. Hajnówka, div. 362, 52.7269N, 23.7133E, 2019-09-20, iN:33095703; f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33095705.

Bjerkandera adusta (Willd.) P. Karst., f. dist. Hajnówka, div. 362, 52.7280N, 23.7149E, 2019-09-20, iN:33073881; BNP, Str. Res., 52.7174N, 23.8429E, 2019-09-20, iN:33053155; BNP, Str. Res., 52.7261N, 23.9202E, 2019-09-23, iN:33261236; BNP, Str. Res., 52.7244N, 23.8448E, 2019-09-23, iN:33263877; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072720.

Bjerkandera fumosa (Pers.) P. Karst., f. dist. Browsk, div. 78, 52.8236N, 23.7330E, 2019-09-20, iN:33115263.

Boreostereum radiatum (Peck) Parmasto, BNP, Str. Res., 52.7466N, 23.9072E, 2019-09-22, iN:33193241; BNP, Str. Res., 52.7420N, 23.8644E, 2019-09-23, iN:33264344; E.

Byssomerulius corium (Pers.) Parmasto, f. dist. Browsk, div. 78, 52.8219N, 23.7325E, 2019-09-20, iN:33115029; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI & DM, WA0000072718.

Calcipostia guttulata (Sacc.) B. K. Cui, L. L. Shen & Y. C. Dai [syn. *Postia guttulata* (Peck) Jülich], f. dist. Białowieża, div. 428, 52.7130N, 23.9001E, 2019-09-24, iN:33306063.

Calocera cornea (Batsch) Fr., f. dist. Białowieża, div. 451, 52.6970N, 23.8191E, 2019-09-24, iN:33303269; f. dist. Białowieża, div. 403, 52.7180N, 23.9140E, 2019-09-24, iN:33322328; f. dist. Białowieża, div. 424, 52.7095N, 23.7875E, 2019-09-26, iN:33428980; BNP, Str. Res., 52.7212N, 23.8375E, 2019-09-27, iN:33486560.

Calocera furcata (Fr.) Fries, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; R.

Calocera viscosa (Pers.) Fr., f. dist. Hajnówka, div. 362, 52.7261N, 23.7113E, 2019-09-20, iN:33069415; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH, WA0000072824.

Calvatia gigantea (Batsch) Lloyd, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Palace Park, 52.7042N, 23.8473E, 2019-09-18, iN:32952086; BNP, Palace Park, 52.7056N, 23.8493E, 2019-09-19, iN:33052618.

Cerioporus squamosus (Huds.) Quél., BNP, Palace Park, 52.7043N, 23.8475E, 2019-09-18, iN:32951736.

Chondrostereum purpureum (Pers.) Pouzar, f. dist. Białowieża, div. 469, 52.6916N, 23.7171E, 2019-09-25, iN:33361338; BNP, Str. Res., 52.7210N, 23.8363E, 2019-09-27, iN:33488154.

Chroogomphus rutilus (Schaeff.) O. K. Mill., f. dist. Hajnówka, div. 468, 52.6859N, 23.7158E, 2019-09-25, iN:33361191; f. dist. Hajnówka, div. 468, 52.6859N, 23.7161E, 2019-09-25, iN:33361933.

Coprinopsis atramentaria (Bull.) Redhead, Vilgalys & Moncalvo, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072739.

Coprinus comatus (O. F. Müll.) Pers., f. dist. Białowieża, div. 428C, 52.7067N, 23.8924E, 2019-09-24, iN:33302411.

Coriolopsis gallica (Fr.) Ryvarden, BNP, Str. Res., 52.7193N, 23.8431E, 2019-09-20, iN:33057532; BNP, Str. Res., 52.7611N, 23.9074E, 2019-09-22, iN:33194375; f. dist. Białowieża, div. 425, 52.7096N, 23.8020E, 2019-09-23, iN:33251541; BNP, Str. Res., 52.7163N, 23.8348E, 2019-09-25, iN:33367718; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072716; R.

Coriolopsis trogii (Berk.) Domański (syn. *Trametes trogii* Berk.), Białowieża village, 52.6939N, 23.8346E, 2019-09-20, iN:33096450; BNP, Str. Res., 52.7157N, 23.8375E, 2019-09-25, iN:33367165.

Crepidotus cesatii (Rabenh.) Sacc., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072783.

Crepidotus mollis (Schaeff.) Staude, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072733.

Crepidotus variabilis (Pers.) P. Kumm., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, ZT Myc 60833.

Crucibulum crucibuliforme (Scop.) V. S. White, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229990, WA0000072777.

Cyathus striatus (Huds.) Willd., BNP, Str. Res., 52.7179N, 23.8400E, 2019-09-20, iN:33054691; f. dist. Białowieża, div. 425, 52.7094N, 23.7983E, 2019-09-23, iN:33250922; European Bison Show Reserve, BNP, 52.7046N, 23.8095E, 2019-09-23, iN:33252364; Białowieża village, 52.7060N, 23.8528E, 2019-09-24, iN:33336903.

Cytidia salicina (Fr.) Burt, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072750; E.

Dacrymyces chrysospermus Berk. & M. A. Curtis, f. dist. Białowieża, div. 428, 52.7124N, 23.8993E, 2019-09-23, iN:33248696; BNP, Str. Res., 52.7252N, 23.9157E, 2019-09-23, iN:33260642; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, ZT Myc 60831; V.

Dacrymyces stillatus Nees, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-20, det. HF & MC, vid. HF & MC; f. dist. Browsk, div. 78, 52.8223N, 23.7323E, 2019-09-20, iN:33056741; BNP, Str. Res., 52.7220N, 23.8322E, 2019-09-27, iN:33488196; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072765.

Daedalea quercina (L.) Pers., BNP, Str. Res., 52.7260N, 23.9175E, 2019-09-23, iN:33260795; BNP, Str. Res., 52.7227N, 23.8737E, 2019-09-23, iN:33264273.

Daedaleopsis confragosa (Bolton) J. Schröt., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072749; f. dist. Białowieża, div. 469, 52.6916N, 23.7188E, 2019-09-26, iN:33416174.

Datronia mollis (Sommerf.) Donk, f. dist. Browsk, div. 78, 52.8236N, 23.7331E, 2019-09-20, iN:33115301; BNP, Str. Res., 52.7275N, 23.9242E, 2019-09-23, iN:33261542; BNP, Str. Res., 52.7160N, 23.8378E, 2019-09-25, iN:33367149.

Fistulina hepatica (Schaeff.) With., BNP, Str. Res., 52.7254N, 23.9078E, 2019-09-19, iN:33005170; BNP, Str. Res., 52.7573N, 23.9065E, 2019-09-22, iN:33195676; f. dist. Białowieża, div. 462, 52.7096N, 23.8156E, 2019-09-23, iN:33250006; BNP, Str. Res.,

52.7231N, 23.8486E, 2019-09-23, iN:33264258; BNP, Str. Res., 52.7159N, 23.8372E, 2019-09-25, iN:33367195; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072752; PP, R.

Fomes fomentarius (L.) Fr., BNP, Str. Res., 52.7245N, 23.9081E, 2019-09-19, iN:33004755; BNP, Palace Park, 52.7076N, 23.8451E, 2019-09-19, iN:33051685; BNP, Palace Park, 52.7074N, 23.8500E, 2019-09-19, iN:33051691; BNP, Palace Park, 52.7051N, 23.8451E, 2019-09-19, iN:33051699; BNP, Str. Res., 52.7175N, 23.8432E, 2019-09-20, iN:33053131; f. dist. Browsk, div. 98, 52.8172N, 23.7262E, 2019-09-20, iN:33056836; BNP, Palace Park, 52.7032N, 23.8465E, 2019-09-20, iN:33069268; f. dist. Hajnówka, div. 362, 52.7237N, 23.7115E, 2019-09-20, iN:33094385; f. dist. Browsk, div. 78, 52.8236N, 23.7331E, 2019-09-20, iN:33115545; f. dist. Browsk, div. 78, 52.8220N, 23.7303E, 2019-09-20, iN:33143787; BNP, Palace Park, 52.7025N, 23.8471E, 2019-09-21, iN:33117731; f. dist. Białowieża, div. 428, 52.7123N, 23.8991E, 2019-09-23, iN:33248821; f. dist. Białowieża, div. 462, 52.7095N, 23.8155E, 2019-09-23, iN:33251374; BNP, Str. Res., 52.7239N, 23.8446E, 2019-09-23, iN:33263844; f. dist. Białowieża, div. 451, 52.7000N, 23.8128E, 2019-09-24, iN:33302593; f. dist. Białowieża, div. 469, 52.6886N, 23.7184E, 2019-09-25, iN:33360582; BNP, Str. Res., 52.7162N, 23.8377E, 2019-09-25, iN:33366977; BNP, Str. Res., 52.7161N, 23.8448E, 2019-09-27, iN:33479141; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072776.

Fomitiporia robusta (P. Karst.) Fiasson & Niemelä, f. dist. Browsk, div. 78, 52.8230N, 23.7331E, 2019-09-20, iN:33115083; f. dist. Białowieża, div. 469, 52.6865N, 23.7174E, 2019-09-25, iN:33361090.

Fomitopsis betulina (Bull.) B. K. Cui, M. L. Han & Y. C. Dai, f. dist. Browsk, div. 98, 52.8175N, 23.7260E, 2019-09-20, iN:33056891; f. dist. Białowieża, div. 425, 52.7094N, 23.8014E, 2019-09-23, iN:33252379; BNP, Str. Res., 52.7158N, 23.8375E, 2019-09-25, iN:33367076; f. dist. Białowieża, div. 469, 52.6916N, 23.7171E, 2019-09-25, iN:33369018; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072754.

Fomitopsis pinicola (Sw.) P. Karst., BNP, Palace Park, 52.706N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Palace Park, 52.7088N, 23.8474E, 2019-09-19, iN:33051687; BNP, Palace Park, 52.7032N, 23.8466E, 2019-09-20, iN:33057230; BNP, Str. Res., 52.7228N, 23.8441E, 2019-09-19, iN:33028856; BNP, Str. Res., 52.7177N, 23.8429E, 2019-09-20, iN:33053475; BNP, Str. Res., 52.7473N, 23.9071E, 2019-09-22, iN:33193338; BNP, Str. Res., 52.7274N, 23.9244E, 2019-09-23, iN:33261512; BNP, Str. Res., 52.7239N, 23.8446E, 2019-09-23, iN:33263860; BNP, Str. Res., 52.7614N, 23.8555E, 2019-09-24, iN:33317257; BNP, Str. Res., 52.7801N, 23.8591E, 2019-09-24, iN:33317961; f. dist. Browsk, div. 78, 52.8232N, 23.7329E, 2019-09-20, iN:33056680; f. dist. Hajnówka, div. 362, 52.7252N, 23.7104E, 2019-09-20, iN:33069350; f. dist. Hajnówka, div. 362, 52.7280N, 23.7143E, 2019-09-20, iN:33076264; f. dist. Białowieża, div. 425, 52.7119N, 23.8040E, 2019-09-23, iN:33250282; f. dist. Białowieża, div. 450, 52.6987N, 23.8020E, 2019-09-23, iN:33252419; f. dist. Białowieża, div. 451, 52.6959N, 23.8220E, 2019-09-24, iN:33303011; f. dist. Białowieża, div. 403, 52.7181N, 23.9118E, 2019-09-24, iN:33303186; f. dist. Białowieża, div. 451, 52.6971N, 23.8189E, 2019-09-24, iN:33303230; Białowieża village, 52.6985N, 23.8468E, 2019-09-24, iN:33377072; f. dist. Białowieża, div. 469, 52.6883N, 23.7183E, 2019-09-25, iN:33360650; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072746.

Galerina marginata (Batsch) Kühner, f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072743; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH, WA0000072825.

Ganoderma applanatum (Pers.) Pat., BNP, Palace Park, 52.7063N, 23.8456E, 2019-09-18, iN:32954988; f. dist. Hajnówka, div. 362, 52.7253N, 23.7105E, 2019-09-20, iN:33069376; f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33094381; BNP, Str. Res., 52.7620N, 23.9069E, 2019-09-22, iN:33194535; BNP, Str. Res., 52.7266N, 23.9062E, 2019-09-21, iN:33129194; BNP, Str. Res., 52.7239N, 23.8445E, 2019-09-23, iN:33263836; BNP, Str. Res., 52.7207N, 23.8401E,

2019-09-25, iN:33368137; f. dist. Białowieża, div. 425, 52.7098N, 23.8005E, 2019-09-23, iN:33251771; f. dist. Białowieża, div. 451, 52.6959N, 23.8224E, 2019-09-24, iN:33302609; f. dist. Białowieża, div. 403, 52.7184N, 23.9122E, 2019-09-24, iN:33311429; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072775.

Geastrum fimbriatum Fr., f. dist. Białowieża, div. 469, 52.6897N, 23.7186E, 2019-09-25, iN:33369310; f. dist. Białowieża, div. 469, 52.6872N, 23.7210E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072791; Figure 2A; R.

Gloeophyllum abietinum (Bull.) P. Karst., BNP, Str. Res., 52.7250N, 23.9157E, 2019-09-23, iN:33260685; f. dist. Białowieża, div. 403, 52.7156N, 23.9108E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072787.

Gloeophyllum odoratum (Wulfen) Imazeki, f. dist. Browsk, div. 98, 52.8201N, 23.7315E, 2019-09-20, iN:33056762; f. dist. Browsk, div. 78, 52.8236N, 23.7330E, 2019-09-20, iN:33115376; BNP, Str. Res., 52.7177N, 23.8437E, 2019-09-20, iN:33056867; BNP, Str. Res., 52.7422N, 23.8717E, 2019-09-23, iN:33264321; BNP, Str. Res., 52.7421N, 23.8715E, 2019-09-23, iN:33264327; BNP, Str. Res., 52.7578N, 23.8447E, 2019-09-24, iN:33317091; f.dist. Białowieża, div. 403, 52.7227N, 23.9157E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072802; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072758.

Gloeophyllum sepiarium (Wulfen) P. Karst., f. dist. Białowieża, div. 492, 52.6751N, 23.7264E, 2019-09-25, iN:33364030.

Gloeoporus pannocinctus (Romell) J. Erikss., BNP, Str. Res., 52.7230N, 23.9102E, 2019-09-23, iN:33259889; E.

Gloeoporus taxicola (Pers.) Gilb. & Ryvarden, BNP, Str. Res., 52.7422N, 23.8736E, 2019-09-23, iN:33264309; BNP, Str. Res., 52.7554N, 23.8434E, 2019-09-24, iN:33316945; R.

Gomphidius glutinosus (Schaeff.) Fr., f. dist. Hajnówka, div. 468, 52.6856N, 23.7158E, 2019-09-25, iN:33374730; R, LC.

Gymnopus androsaceus (L.) J. L. Mata & R. H. Petersen [syn. *Marasmius androsaceus* (L.) Fr.], f. dist. Hajnówka, div. 468, 52.6856N, 23.7155E, 2019-09-25, iN:33374719; f. dist. Hajnówka, div. 468, 52.6871N, 23.7165E, 2019-09-26, iN:33416840; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072717.

Gymnopus confluens (Pers.) Antonín, Halling & Noordel., f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072757; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IG, WA0000072726; f. dist. Białowieża, div. 462, 52.7059N, 23.8161E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072784.

Gymnopus dryophilus (Bull.) Murrill, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7182N, 23.8402E, 2019-09-20, iN:33055789; BNP, Str. Res., 52.7235N, 23.9114E, 2019-09-21, iN:33129566; f. dist. Hajnówka, div. 362, 52.7276N, 23.7137E, 2019-09-20, iN:33072903; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH & IKG, WA0000072826; f. dist. Białowieża, div. 469, 52.6872N, 23.7210E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072789.

Gymnopus peronatus (Bolton) Gray, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI.

Hapalopilus croceus (Pers.) Bondartzew & Singer, BNP, Str. Res., 52.7619N, 23.9075E, 2019-09-22, iN:33193945; BNP, Str. Res., 52.7233N, 23.8480E, 2019-09-23, iN:33264240; f. dist. Białowieża, div. 450, 52.7012N, 23.7996E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072790; SP, E, VU. **Notes:** *Hapalopilus croceus* is the orange bracket fungus from the order Polyporales. It grows almost exclusively on old oaks (*Quercus* spp.) (Dahlberg, 2019). According to GBIF, more than 800 occurrences were reported, mainly from the Northern Hemisphere (GBIF, 2020). In Poland, this species is strictly protected (Minister

of Environment, 2014) and is red-listed in Poland, with high threat category – E (Wojewoda & Ławrynowicz, 2006). The species is known from less than 10 localities in the country (Kujawa, 2020; Kujawa, Gierczyk, & Ślusarczyk, 2020).

Hapalopilus nidulans (Fr.) P. Karst [syn. *Hapalopilus rutilans* (Pers.) Murrill], BNP, Str. Res., 52.7180N, 23.8404E, 2019-09-20, iN:33054439; f. dist. Białowieża, div. 448, 52.6996N, 23.7752E, 2019-09-26, iN:33418400.

Hericium coralloides (Scop.) Pers., f. dist. Białowieża, div. 424, 52.7112N, 23.7885E, 2019-09-26, iN:33428998; V, PP.

Hygrophoropsis aurantiaca (Wulfen) Maire, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG; f. dist. Hajnówka, WA0000072742, div. 491, 52.6822N, 23.7127E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072796.

Hymenochaete rubiginosa (Dicks.) Lév., f. dist. Hajnówka, div. 362, 52.7269N, 23.7134E, 2019-09-20, iN:33070390; BNP, Str. Res., 52.7298N, 23.9207E, 2019-09-23, iN:33261597; BNP, Str. Res., 52.7228N, 23.8735E, 2019-09-23, iN:33264282; BNP, Str. Res., 52.7255N, 23.9077E, 2019-09-19, iN:33005351; f. dist. Białowieża, div. 403, 52.7182N, 23.9101E, 2019-09-24, iN:33311447; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. MG & DM, WA0000072711; f. dist. Białowieża, div. 462, 52.7066N, 23.8212E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072788.

Hymenochaete tabacina (Sowerby) Lév, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072771; R.

Hypholoma fasciculare (Huds.) P. Kumm., BNP, Str. Res., 52.7266N, 23.9171E, 2019-09-23, iN:33260997; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072737.

Hypholoma lateritium (Schaeff.) P. Kumm., BNP, Str. Res., 52.7247N, 23.9075E, 2019-09-19, iN:33004935; f. dist. Białowieża, div. 425, 52.7090N, 23.7999E, 2019-09-23, iN:33252300; f. dist. Białowieża, div. 450, 52.6990N, 23.8032E, 2019-09-24, iN:33304627; f. dist. Hajnówka, div. 418, 52.7052N, 23.6913E, 2019-09-25, iN:33369105; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH & IKG, WA0000072715.

Infundibulicybe gibba (Pers.) Harmaja, f. dist. Hajnówka, div. 362, 52.7275N, 23.7141E, 2019-09-20, iN:33094372; f. dist. Białowieża, div. 469, 52.6893N, 23.7190E, 2019-09-26, iN:33416042; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072745.

Inonotus radiatus (Sowerby) P. Karst., BNP, Str. Res., 52.7611N, 23.9072E, 2019-09-22, iN:33194421; BNP, Str. Res., 52.7421N, 23.8367E, 2019-09-23, iN:33264364.

Irpex lacteus (Fr.) Fr., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072769; f. dist. Białowieża, div. 469, 52.6929N, 23.7194E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072800; R.

Junghuhnia nitida (Pers.) Ryvarden [syn. *Irpex nitidus* (Pers.) Saaren. & Kotir.], f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072770; R.

Kuehneromyces mutabilis (Schaeff.) Singer & A. H. Sm., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI & CH & IKG, WA0000072710.

Lactarius turpis (Weinm.) Fr., BNP, Palace Park, 52.7051N, 23.8452E, 2019-09-19, iN:33051700.

Lactarius vellereus (Fr.) Fr., f. dist. Białowieża, div. 403, 52.7177N, 23.9130E, 2019-09-24, iN:33303281.

Laetiporus sulphureus (Bull.) Murrill, BNP, Palace Park, 52.7063N, 23.8449E, 2019-09-19, iN:33051676; Białowieża village, 52.6906N, 23.8311E, 2019-09-20, iN:33095090; f. dist. Browsk, div. 78, 52.8242N, 23.7340E, 2019-09-20, iN:33116034; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7256N, 23.9073E, 2019-09-21, iN:33129296; BNP, Str. Res., 52.7579N, 23.8454E, 2019-09-24, iN:33316993.

Leccinum variicolor Watling, f. dist. Białowieża, div. 462, 52.7099N, 23.8142E, 2019-09-23, iN:33252362.

Lenzites betulina (L.) Fr. [syn. *Trametes betulina* (L.) Pilát], f. dist. Białowieża, div. 469, 52.6885N, 23.7184E, 2019-09-25, iN:33361738.

Lepiota aspera (Pers.) Quél., f. dist. Białowieża, div. 424, 52.7122N, 23.7898E, 2019-09-26, iN:33434114.

Lepiota cristata (Bolton) P. Kumm., f. dist. Białowieża, div. 492, 52.6749N, 23.7205E, 2019-09-25, iN:33374868.

Lepista flaccida (Sowerby) Pat. [syn. *Paralepista flaccida* (Sowerby) Vizzini], f. dist. Białowieża, div. 492, 52.6751N, 23.7202E, 2019-09-25, iN:33374840.

Leptoporus mollis (Pers.) Quél., BNP, Str. Res., 52.7234N, 23.8480E, 2019-09-23, iN:33264233; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072719; E.

Lycoperdon perlatum Pers., f. dist. Białowieża, div. 492, 52.6749N, 23.7202E, 2019-09-25, iN:33374849.

Lycoperdon pyriforme Schaeff., BNP, Str. Res., 52.7247N, 23.9079E, 2019-09-19, iN:33004721; Białowieża village, 52.6974N, 23.8284E, 2019-09-23, iN:33251056; f. dist. Białowieża, div. 451, 52.6962N, 23.8204E, 2019-09-24, iN:33302744; f. dist. Białowieża, div. 469, 52.6887N, 23.7181E, 2019-09-25, iN:33360574; f. dist. Białowieża, div. 499, 52.6770N, 23.8401E, 2019-09-25, iN:33361301; f. dist. Białowieża, div. 492, 52.6753N, 23.7221E, 2019-09-25, iN:33364009; f. dist. Hajnówka, div. 468, 52.6858N, 23.7161E, 2019-09-25, iN:33374585; BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072731; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. MG, WA0000072761.

Macrolepiota procera (Scop.) Singer, f. dist. Białowieża, div. 492, 52.6750N, 23.7234E, 2019-09-25, iN:33374900; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. MO, WA0000072829.

Marasmius rotula (Scop.) Fr., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072712.

Mycena epipterygia (Scop.) Gray, BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; European Bison Show Reserve, BNP, 52.7003N, 23.8067E, 2019-09-23, iN:33251519; f. dist. Białowieża, div. 450, 52.7014N, 23.7999E, 2019-09-24, iN:33304874.

Mycena galericulata (Scop.) Gray, f. dist. Białowieża, div. 462, 52.7039N, 23.8276E, 2019-09-23, iN:33248582.

Mycena haematopus (Pers.) P. Kumm., f. dist. Białowieża, div. 462, 52.7039N, 23.8277E, 2019-09-23, iN:33248571.

Mycena inclinata (Fr.) Quél., f. dist. Białowieża, div. 492, 52.6750N, 23.7205E, 2019-09-25, iN:33369231; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH, GB: MT240483; f. dist. Hajnówka, div. 362, 52.728N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072736.

Mycena polygramma (Bull.) Gray, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH, WA0000072828.

Mycena pura (Pers.) P. Kumm., f. dist. Białowieża, div. 403, 52.7178N, 23.9140E, 2019-09-24, iN:33322337.

Mycoacia uda (Fr.) Donk, BNP, Str. Res., 52.7619N, 23.9073E, 2019-09-22, iN:33193920; V.

Oligoporus floriformis (Quél.) Gilb. & Ryvarden, f. dist. Białowieża, div. 403, 52.7156N, 23.9108E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072803; V.

Onnia tomentosa (Fr.) P. Karst., Białowieża village, 52.6996N, 23.8548E, 2019-09-18, iN:32951167; BNP, Str. Res., 52.7250N, 23.8302E, 2019-09-23, iN:33264415; f.

dist. Białowieża, div. 469, 52.6844N, 23.7280E, 2019-09-25, iN:33374987; f. dist. Białowieża, div. 403, 52.7156N, 23.9108E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072792; V.

Osteina undosa (Peck) Miettinen & Spirin [syn. *Oligoporus undosus* (Peck) Gilb. & Ryvarden], BNP, Str. Res., 52.7527N, 23.9072E, 2019-09-22, iN:33193695; E.

Oxyporus populinus (Schumach.) Donk, BNP, Str. Res., 52.7179N, 23.8414E, 2019-09-20, iN:33053913.

Panellus stipticus (Bull.) P. Karst., f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33070016; f. dist. Białowieża, div. 462, 52.7040N, 23.8276E, 2019-09-23, iN:33249131; f. dist. Hajnówka, div. 491, 52.6830N, 23.7171E, 2019-09-25, iN:33361834; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072744.

Paxillus involutus (Batsch) Fr., Białowieża village, 52.6993N, 23.8444E, 2019-09-21, iN:33118029.

Peniophora incarnata (Pers.) P. Karst., BNP, Str. Res., 52.7574N, 23.9072E, 2019-09-22, iN:33195248.

* ***Peniophora lycii*** (Pers.) Höhn. & Litsch., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Peniophora quercina (Pers.) Cooke, f. dist. Hajnówka, div. 491, 52.6842N, 23.7171E, 2019-09-25, iN:33361774; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072753.

Phaeolus schweinitzii (Fr.) Pat., f. dist. Białowieża, div. 462, 52.7068N, 23.8216E, 2019-09-23, iN:33249667; f. dist. Hajnówka, div. 491, 52.6802N, 23.7170E, 2019-09-25, iN:33369216.

Phallus impudicus L., f. dist. Białowieża, div. 424, 52.7115N, 23.7889E, 2019-09-26, iN:33433767; BNP, Str. Res., 52.7178N, 23.8428E, 2019-09-20, iN:33053479; BNP, Str. Res., 52.7215N, 23.8395E, 2019-09-27, iN:33488116; BNP, Str. Res., 52.7228N, 23.8435E, 2019-09-27, iN:33488252.

Phellinus alni (Bondartsev) Parmasto, f. dist. Białowieża, div. 424, 52.7058N, 23.7872E, 2019-09-26, iN:33428876.

Phellinus laevigatus (Fr.) Bourdot & Galzin, f. dist. Białowieża, div. 462, 52.7059N, 23.8161E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072795; V.

Phellinus populicola Niemelä, f. dist. Białowieża, div. 424, 52.7098N, 23.7907E, 2019-09-20, iN:33061104; BNP, Str. Res., 52.7420N, 23.8645E, 2019-09-23, iN:33264354; BNP, Str. Res., 52.7799N, 23.8588E, 2019-09-24, iN:33317683; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. BSI, WA0000072723; E.

Phellinus punctatus (P. Karst.) Pilát, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072732.

Phellinus robustus (P. Karst.) Bourdot & Galzin, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072780.

Phellinus tremulae (Bondartsev) Bondartsev & P.N. Borisov, f. dist. Browsk, div. 98, 52.8216N, 23.7322E, 2019-09-20, iN:33056811; BNP, Str. Res., 52.7159N, 23.8380E, 2019-09-25, iN:33366897; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072772; E.

Phellinus tuberculosus (Baumg.) Niemelä [syn. *Phellinus pomaceus* (Pers.) Maire], Białowieża village, 52.7063N, 23.8522E, 2019-09-25, iN:33360455.

* ***Phellinus viticola*** (Schwein.) Donk [syn. *Fuscoporia viticola* (Schwein.) Murrill], f. dist. Browsk, div. 98, 52.8199N, 23.7286E, 2019-09-20, iN:33056931; E.

Phellopilus nigrolimitatus (Romell) Niemelä, T. Wagner & M. Fisch., BNP, Str. Res., 52.7237N, 23.9079E, 2019-09-19, iN:32997155; E.

Phlebia centrifuga P. Karst., BNP, Str. Res., 52.7182N, 23.8403E, 2019-09-20, iN:33054684; E.

Phlebia rufa (Pers.) M.P. Christ., BNP, Str. Res., 52.7180N, 23.8400E, 2019-09-20, iN:33054716; R.

* ***Phlebia subochracea*** (Alb. & Schwein.) J. Erikss. & Ryvarden, BNP, Str. Res., 52.7618N, 23.9074E, 2019-09-22, iN:33193854; Ex. **Notes:** Confirmed microscopically by Otto Miettinen.

Phlebia tremellosa (Schrad.) Nakasone & Burds. (syn. *Merulius tremellosus* Schrad.), f. dist. Białowieża, div. 462, 52.7036N, 23.8289E, 2019-09-23, iN:33248336; BNP, Str. Res., 52.7445N, 23.8337E, 2019-09-24, iN:33316729.

Phleogena faginea (Fr.) Link, BNP, Str. Res., 52.7180N, 23.8405E, 2019-09-20, iN:33055758; E.

Pholiota sp. (Fr.) P. Kumm., f. dist. Białowieża, div. 462, 52.7059N, 23.8161E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, GB: MT240484, WA0000072794.

Pholiota adiposa (Batsch) P. Kumm., BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; R.

Picipes badius (Pers.) Zmitr. & Kovalenko, BNP, Palace Park, 52.7060N, 23.8467E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; f. dist. Białowieża, div. 425, 52.7092N, 23.8005E, 2019-09-20, iN:33074454; f. dist. Białowieża, div. 425, 52.7095N, 23.8005E, 2019-09-23, iN:33252140; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7241N, 23.9085E, 2019-09-19, iN:33004845; BNP, Str. Res., 52.7421N, 23.8717E, 2019-09-23, iN:33264315; BNP, Str. Res., 52.7194N, 23.8430E, 2019-09-27, iN:33478865; f. dist. Białowieża, div. 451, 52.6972N, 23.8118E, 2019-09-24, iN:33303905; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072751.

Pleurotus dryinus (Pers.) P. Kumm., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072760.

Pleurotus ostreatus (Jacq.) P. Kumm., BNP, Str. Res., 52.7174N, 23.8407E, 2019-09-20, iN:33054239; f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33073306; f. dist. Białowieża, div. 462, 52.7038N, 23.8289E, 2019-09-23, iN:33248239; European Bison Show Reserve, BNP, 52.7046N, 23.8095E, 2019-09-23, iN:33249113; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072725.

Pleurotus pulmonarius (Fr.) Quél., BNP, Str. Res., 52.7300N, 23.9072E, 2019-09-19, iN:33005404; f. dist. Browsk, div. 98, 52.8169N, 23.7249E, 2019-09-20, iN:33056870; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072724; V.

Pluteus cervinus (Schaeff.) P. Kumm., BNP, Str. Res., 52.7183N, 23.8398E, 2019-09-20, iN:33054855; f. dist. Hajnówka, div. 362, 52.7280N, 23.7142E, 2019-09-20, iN:33073106; f. dist. Białowieża, div. 462, 52.7065N, 23.8214E, 2019-09-23, iN:33252317; BNP, Palace Park, 52.7000N, 23.8494E, 2019-09-24, iN:33303217; BNP, Str. Res., 52.7195N, 23.8428E, 2019-09-27, iN:33479052; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH & BSI, WA0000072823.

Pluteus fenzlii (Schulzer) Corriol & P.-A. Moreau, BNP, Str. Res., 2019-09-19, leg. BSI, det. BSI; Figure 2C.

Pluteus umbrosus (Pers.) P. Kumm., f. dist. Białowieża, div. 462, 52.7040N, 23.8277E, 2019-09-23, iN:33248477.

Polyporus tuberaster (Jacq.) Fr., BNP, Str. Res., 52.7176N, 23.8429E, 2019-09-20, iN:33053346; R.

Porodaedalea pini (Brot.) Murrill, BNP, Str. Res., 52.7267N, 23.9185E, 2019-09-23, iN:33260918; R.

Postia caesia (Schrad.) P. Karst., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072755; f. dist. Białowieża, div. 403, 52.7156N, 23.9108E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072786.

Postia stiptica (Pers.) Jülich, BNP, Palace Park, 52.7032N, 23.8463E, 2019-09-20, iN:33093797; BNP, Str. Res., 52.7247N, 23.9149E, 2019-09-23, iN:33260383; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, GB: MT229993, WA0000072748.

Postia tephroleuca (Fr.) Jülich, f. dist. Browsk, div. 78, 52.8226N, 23.7322E, 2019-09-20, iN:33056728; f. dist. Browsk, div. 98, 52.8199N, 23.7286E, 2019-09-20, iN:33056920; BNP, Str. Res., 52.7337N, 23.8749E, 2019-09-23, iN:33264299.

Pycnoporellus fulgens (Fr.) Donk, BNP, Str. Res., 52.7180N, 23.8402E, 2019-09-20, iN:33054381; f. dist. Browsk, div. 78, 52.8219N, 23.7325E, 2019-09-20, iN:33115008; V.

Resinoporia piceata (Runnel, Spirin & Vlasák) Audet (syn. *Antrodia piceata* K. Runnel, Spirin & Vlasák), BNP, Str. Res., 52.7240N, 23.8445E, 2019-09-23, iN:33263834; BNP, Str. Res., 52.7575N, 23.8450E, 2019-09-24, iN:33316961; DD. **Notes:** IUCN red-listed taxon, *Resinoporia piceata*, is a wood-decaying polypore. It forms resupinate basidiomata on fallen trunks of coniferous trees, mainly in old-growth forests. There are only ca. 60 known localities of this fungus worldwide (Kunca, 2019). In Poland, *R. piceata* was reported only from Białowieża Primeval Forest (Karasiński & Wołkowycki, 2015).

Rhodofomes roseus (Alb. & Schwein.) Vlasák, f. dist. Browsk, div. 98, 52.8201N, 23.7291E, 2019-09-20, iN:33056955; BNP, Palace Park, 52.7033N, 23.8462E, 2019-09-20, iN:33093394; f. dist. Browsk, div. 78, 52.8234N, 23.7324E, 2019-09-20, iN:33115189; f. dist. Białowieża, div. 450, 52.6992N, 23.8034E, 2019-09-23, iN:33252442; BNP, Str. Res., 52.7582N, 23.9074E, 2019-09-22, iN:33194910;BNP, Str. Res., 52.7183N, 23.8403E, 2019-09-20, iN:33054664; BNP, Str. Res., 52.7251N, 23.9157E, 2019-09-23, iN:33260654; BNP, Str. Res., 52.7240N, 23.8448E, 2019-09-23, iN:33263850; BNP, Str. Res., 52.7578N, 23.8448E, 2019-09-24, iN:33317034; PP, E.

Rhodotus palmatus (Bull.) Maire, BNP, Str. Res., 52.7599N, 23.9072E, 2019-09-22, iN:33194742; SP, E, VU. **Notes:** *Rhodotus palmatus* has been assigned the category threat of near threatened (NT) in the global IUCN assessment. However, at the European level, the species is classified as vulnerable (VU) (Iršėnaitė et al., 2019). Moreover, it is on the Red List of macrofungi in Poland with the category of threat E (Wojewoda & Ławrynowicz, 2006). *Rhodotus palmatus* is known to form fruitbodies on dead trunks of deciduous trees (particularly on *Ulmus* spp., *Fraxinus* spp., and *Fagus* spp.) in moist habitats (Iršėnaitė et al., 2019). In Poland, *R. palmatus* is known from two localities only (Kujawa, Gierczyk, & Ślusarczyk, 2020).

Rickenella fibula (Bull.) Raithelh., f. dist. Hajnówka, div. 468, 52.6858N, 23.7160E, 2019-09-25, iN:33374704; f. dist. Białowieża, div. 469, 52.6900N, 23.7214E, 2019-09-26, iN:33430931.

Rickenella swartzii (Fr.) Kuyper, f. dist. Hajnówka, div. 418, 52.7052N, 23.6913E, 2019-09-25, iN:33369067.

Sarcoporia polyspora P. Karst. [syn. *Parmastomyces transmutans* (Overh.) Ryvarden & Gilb.], BNP, Str. Res., 52.7578N, 23.8445E, 2019-09-24, iN:33317136; V.

Schizophyllum commune Fr., BNP, Str. Res., 52.7307N, 23.9065E, 2019-09-19, iN:33005710; BNP, Str. Res., 52.7257N, 23.9171E, 2019-09-23, iN:33260778; Białowieża village, 52.6950N, 23.8368E, 2019-09-20, iN:33076162; Białowieża village, 52.6874N, 23.8639E, 2019-09-25, iN:33361585; f. dist. Białowieża, div. 403, 52.7194N, 23.9126E, 2019-09-24, iN:33303175; f. dist. Białowieża, div. 469, 52.6875N, 23.7175E, 2019-09-25, iN:33360849; f. dist. Hajnówka, div. 468, 52.6864N, 23.7165E, 2019-09-25, iN:33361125; f. dist. Hajnówka, div. 468, 52.6861N, 23.7162E, 2019-09-25, iN:33361763; f. dist. Białowieża, div. 469, 52.6876N, 23.7175E, 2019-09-26, iN:33417956; f. dist. Białowieża, div. 500, 52.6761N, 23.8520E, 2019-09-25, iN:33363437; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072756.

Scleroderma areolatum Ehrenb., f. dist. Hajnówka, div. 491, 52.6822N, 23.7127E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072797.

Scleroderma bovista Fr., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072727; E.

Scleroderma citrinum Pers., BNP, Str. Res., 52.7176N, 23.8432E, 2019-09-20, iN:33053135; f. dist. Hajnówka, div. 491, 52.6783N, 23.7170E, 2019-09-25, iN:33374778; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. ID, WA0000072767.

Scleroderma verrucosum (Bull.) Pers., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. MO, WA0000072830.

Skeletocutis amorpha (Fr.) Kotl. & Pouzar, BNP, Palace Park, 52.7032N, 23.8463E, 2019-09-20, iN:33093718; f. dist. Browsk, div. 78, 52.8223N, 23.7326E, 2019-09-20, iN:33115125.

Skeletocutis nivea (Jungh.) Jean Keller, f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072766.

Skeletocutis odora (Peck ex Sacc.) Ginns, f. dist. Browsk, div. 98, 52.8180N, 23.7267E, 2019-09-20, iN:33056895; BNP, Str. Res., 52.7236N, 23.8448E, 2019-09-23–2019-09-27, det. DS, vid. DS; SP, V.

Sparassis crispa (Wulfen) Fr., f. dist. Hajnówka, div. 362, 52.7270N, 23.7135E, 2019-09-20, iN:33070854; BNP, Str. Res., 52.7246N, 23.9145E, 2019-09-23, iN:33260322; f. dist. Białowieża, div. 428, 52.7120N, 23.9008E, 2019-09-23, iN:33302925; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. MO, WA0000072827; R.

Steccherinum fimbriatum (Pers.) J. Erikss., f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. MG, GB: MT229989, WA0000072768; R.

Steccherinum ochraceum (Pers.) Gray, f. dist. Browsk, div. 78, 52.8222N, 23.7323E, 2019-09-20, iN:33115052.

Steccherinum tenuispinum Spirin, Zmitr. & Malysheva, BNP, Str. Res., 52.7575N, 23.9065E, 2019-09-22, iN:33195495.

Stereum gausapatum (Fr.) Fr., BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC.

Stereum hirsutum (Willd.) Pers., f. dist. Browsk, div. 98, 52.8206N, 23.7318E, 2019-09-20, iN:33056756; f. dist. Browsk, div. 98, 52.8213N, 23.7315E, 2019-09-20, iN:33074934; f. dist. Hajnówka, div. 362, 52.7269N, 23.7133E, 2019-09-20, iN:33072506; f. dist. Hajnówka, div. 362, 52.7277N, 23.7140E, 2019-09-20, iN:33094371; f. dist. Browsk, div. 78, 52.8242N, 23.7451E, 2019-09-20, iN:33115454; f. dist. Białowieża, div. 462, 52.7042N, 23.8271E, 2019-09-23, iN:33252306; BNP, Str. Res., 52.7256N, 23.9167E, 2019-09-23, iN:33260733; BNP, Str. Res., 52.7296N, 23.9209E, 2019-09-23, iN:33261554; f. dist. Białowieża, div. 451, 52.6965N, 23.8211E, 2019-09-24, iN:33302843; f. dist. Białowieża, div. 403, 52.7182N, 23.9109E, 2019-09-24, iN:33303098; f. dist. Białowieża, div. 469, 52.6892N, 23.7190E, 2019-09-25, iN:33360465; f. dist. Białowieża, div. 469, 52.6883N, 23.7183E, 2019-09-25, iN:33360634; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072735.

Stereum rugosum Pers., BNP, Str. Res., 52.7575N, 23.9071E, 2019-09-22, iN:33195326.

Stereum subtomentosum Pouzar, f. dist. Białowieża, div. 425, 52.7108N, 23.8108E, 2019-09-20, iN:33063792; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229986, WA0000072734.

Suillus luteus (L.) Roussel, f. dist. Hajnówka, div. 468, 52.6859N, 23.7160E, 2019-09-25, iN:33361771.

Tapinella atrotomentosa (Batsch), f. dist. Hajnówka, div. 491, 52.6779N, 23.7166E, 2019-09-25, iN:33363988.

Tapinella panuoides (Batsch) E.-J.Gilbert, BNP, Str. Res., 52.7234N, 23.9138E, 2019-09-21, iN:33129601.

Thelephora caryophyllea (Schaeff.) Pers., f. dist. Hajnówka, div. 468, 52.6857N, 23.7160E, 2019-09-25, iN:33361462; f. dist. Białowieża, div. 448, 52.7001N, 23.7775E, 2019-09-26, iN:33416786; f. dist. Białowieża, div. 403, 52.7156N, 23.9108E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072793; V.

Trametes gibbosa (Pers.) Fr., f. dist. Browsk, div. 98, 52.8209N, 23.7307E, 2019-09-20, iN:33056971; f. dist. Hajnówka, div. 362, 52.7263N, 23.7125E, 2019-09-20, iN:33070104; f. dist. Hajnówka, div. 362, 52.7280N, 23.7088E, 2019-09-20, leg. 18thCEM, det. DM, WA0000072763; BNP, Str. Res., 52.7343N, 23.9071E, 2019-09-19, iN:33005520; BNP, Str. Res., 52.7612N, 23.9073E, 2019-09-22, iN:33194498; BNP, Str. Res., 52.7271N, 23.9195E, 2019-09-23, iN:33261074; BNP, Str. Res., 52.7395N, 23.8297E, 2019-09-23, iN:33264383; BNP, Str. Res., 52.7153N, 23.8362E, 2019-09-25, iN:33367330; f. dist. Białowieża, div. 462, 52.7045N, 23.8254E, 2019-09-23, iN:33249287; f. dist. Białowieża, div. 469, 52.6897N, 23.7211E, 2019-09-26, iN:33431485.

Trametes hirsuta (Wulfen) Lloyd, BNP, Str. Res., 52.7159N, 23.8393E, 2019-09-25, iN:33366874; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072728.

Trametes ochracea (Pers.) Gilb. & Ryvarden, f. dist. Hajnówka, div. 362, 52.7269N, 23.7135E, 2019-09-20, iN:33070501.

Trametes versicolor (L.) Lloyd, BNP, Palace Park, 52.7060N, 23.8454E, 2019-09-18, iN:32956028; BNP, Palace Park, 52.7064N, 23.8447E, 2019-09-19, iN:33051674; BNP, Palace Park, 52.7001N, 23.8493E, 2019-09-24, iN:33302804; f. dist. Hajnówka, div. 362, 52.7269N, 23.7135E, 2019-09-20, iN:33094377; BNP, Str. Res., 52.7511N, 23.8672E, 2019-09-19–2019-09-20, det. HF & MC, vid. HF & MC; BNP, Str. Res., 52.7620N, 23.9076E, 2019-09-22, iN:33194050; BNP, Str. Res., 52.7270N, 23.9195E, 2019-09-23, iN:33261104; BNP, Str. Res., 52.7298N, 23.9207E, 2019-09-23, iN:33261631; BNP, Str. Res., 52.7244N, 23.8450E, 2019-09-23, iN:33263882; BNP, Str. Res., 52.7206N, 23.8399E, 2019-09-25, iN:33368213; BNP, Str. Res., 52.7217N, 23.8398E, 2019-09-27, iN:33478007; f. dist. Białowieża, div. 451, 52.6974N, 23.8181E, 2019-09-23–2019-09-27, leg. FM UW, det. MW & JP, WA0000072798; f. dist. Białowieża, div. 469, 52.6885N, 23.7188E, 2019-09-25, iN:33360530; f. dist. Hajnówka, div. 491, 52.6830N, 23.7170E, 2019-09-25, iN:33361910; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. CH & DM, WA0000072709.

Trechispora candidissima (Schwein.) Bondartsev & Singer, BNP, Str. Res., 52.7527N, 23.9069E, 2019-09-22, iN:33193524.

Tremella aurantia Schwein., BNP, Str. Res., 52.7209N, 23.8363E, 2019-09-27, iN:33475121; BNP, Str. Res., 52.7226N, 23.8444E, 2019-09-27, iN:33477901; BNP, Str. Res., 52.7212N, 23.8351E, 2019-09-27, iN:33488167; f. dist. Białowieża, div. 451, 52.7011N, 23.8161E, 2019-09-27, iN:33533684; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229987, WA0000072740; Figure 2B.

Tremella mesenterica Retz., f. dist. Białowieża, div. 462, 52.7089N, 23.8176E, 2019-09-23, iN:33249964.

Trichaptum abietinum (Dicks.) Ryvarden, f. dist. Browsk, div. 98, 52.8199N, 23.7291E, 2019-09-20, iN:33056937; BNP, Palace Park, 52.7032N, 23.8465E, 2019-09-20, iN:33093837; f. dist. Białowieża, div. 402, 52.7213N, 23.9063E, 2019-09-21, iN:33129835; f. dist. Białowieża, div. 469, 52.6895N, 23.7185E, 2019-09-26, iN:33416025; f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229992, WA0000072779.

Trichaptum biforme (Fr.) Ryvarden, f. dist. Browsk, div. 98, 52.8172N, 23.7261E, 2019-09-20, iN:33056818; BNP, Str. Res., 52.7235N, 23.9090E, 2019-09-21, iN:33129380; BNP, Str. Res., 52.7158N, 23.8376E, 2019-09-25, iN:33367115; f. dist. Białowieża, div. 451, 52.6971N, 23.8193E, 2019-09-23, iN:33255277; f. dist. Białowieża, div. 403, 52.7178N, 23.9147E, 2019-09-24, iN:33322352; f. dist. Białowieża, div. 469, 52.6883N, 23.7183E, 2019-09-25, iN:33360623; f. dist. Hajnówka, div. 418, 52.7059N, 23.6931E, 2019-09-26, iN:33417964; R.

Trichaptum fuscoviolaceum (Ehrenb.) Ryvarden, f. dist. Hajnówka, div. 362, 52.7258N, 23.7126E, 2019-09-20, iN:33069656.

Tricholomopsis rutilans (Schaeff.) Singer, f. dist. Białowieża, div. 451, 52.6973N, 23.8183E, 2019-09-23, iN:33359459.

* ***Typhula quisquiliaris*** (Fr.) Henn., f. dist. Hajnówka, div. 468, 52.6857N, 23.7159E, 2019-09-25, iN:33322387; R. **Notes:** *Typhula quisquiliaris* is a minuscule, white club fungus from the family Typhulaceae (Agaricales) that usually grows on *Pteridium aquilinum* petioles. In Poland, the species was observed for the first time in 1973 in Katowice (Silesia) by Wojewoda (2000) and is also known from Kashubian Landscape Park (Pomerania) (Karasiński, 2016). However, reliable data on its distribution in Poland are lacking. *Typhula quisquiliaris* is likely overlooked due to its small size and specific substrate requirement and could be much more prevalent than indicated by current estimates.

Tyromyces chioneus (Fr.) P. Karst., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, GB: MT229985, WA0000072730.

Xeromphalina campanella (Batsch) Maire, BNP, Str. Res., 52.7182N, 23.8437E, 2019-09-27, iN:33488293.

Xylobolus frustulatus (Pers.) P. Karst., BNP, Str. Res., 52.7250N, 23.9079E, 2019-09-19, iN:33004895; BNP, Str. Res., 52.7303N, 23.9052E, 2019-09-19, iN:33005723; BNP, Str. Res., 52.7619N, 23.9074E, 2019-09-22, iN:33193965; BNP, Str. Res., 52.7268N, 23.9171E, 2019-09-23, iN:33260956; f. dist. Browsk, div. 78, 52.8235N, 23.7324E, 2019-09-20, iN:33115212; V.

Xylodon paradoxus (Schrad.) Chevall., f. dist. Białowieża, div. 424, 52.7084N, 23.7879E, 2019-09-20, leg. 18thCEM, det. IKG, WA0000072782.

Xylodon raduloides Riebesehl & Langer, f. dist. Białowieża, div. 424, 52.7053N, 23.7880E, 2019-09-26, iN:33425261.

4. Summary

A rapid inventory carried out during 18th Congress of European Mycologists (September 18–29, 2019) yielded 101 collections and 68 observations representing 142 species. A dedicated accompanying bioblitz project on iNaturalist resulted in 392 unique, research grade records representing 161 species. In total, 561 observations representing 233 species were recorded. Four species new to Poland (*Bryocentria brongniartii*, *Tremella coppinsii*, *T. hypocenomycis*, and *Zevadia peroccidentalis*) and eight species new to Białowieża Primeval Forest (*Hypomyces chrysostomus*, *Hypomyces rosellus*, *Lachnellula resinaria*, *Peniophora lycii*, *Phellinus viticola*, *Phlebia subochracea*, *Pronectria anisospore*, and *Typhula quisquiliaris*) were recorded.

5. Supporting Material

The following supporting material is available for this article:

- Table S1. Detailed table of all records with metadata.

Acknowledgments

We are grateful to the director of Białowieża National Park, Dr. Michał Krzysiak as well as to Ewa Moroz-Keczyńska, Dr. Joanna Bober, Hanna Schmidt and other employees of Białowieża National Park for their help and for offering their facilities. We are grateful to all 18th CEM participants and students of the field mycology course who collected specimens and participants and identifiers of the iNaturalist project. We also acknowledge students of mycology classes who collected specimens and performed part of molecular identification: Miłosz Augustyniak, Monika Babis, Bartosz Bałdowski, Maciej Biela, Laura Bielawska, Justyna Borowiecka, Małgorzata Chwalińska, Zofia Cieślińska, Julia Cyran, Urszula Drwęcka, Agnieszka Gajewska, Michał Gierek, Sebastian Korab, Karolina Koszarska, Grzegorz Kowalczyk, Agnieszka Kuc, Marharyta Lyzohub, Agata Michalak, Patryk Mierzejewski, Wojciech Pawlak, Emilia Pielaszek, Zuzanna Pyffel, Albert Roethel, Joanna Rosińska, Marta Sałek, Aleksandra Sobkowiak, Ida Tymińska, Patryk Walędziak, Grzegorz Wałpuski, Eliza Żurawska. Finally, we would like to specially thank Dr. Anna Kujawa for many critical remarks to the manuscript and sharing unpublished data.

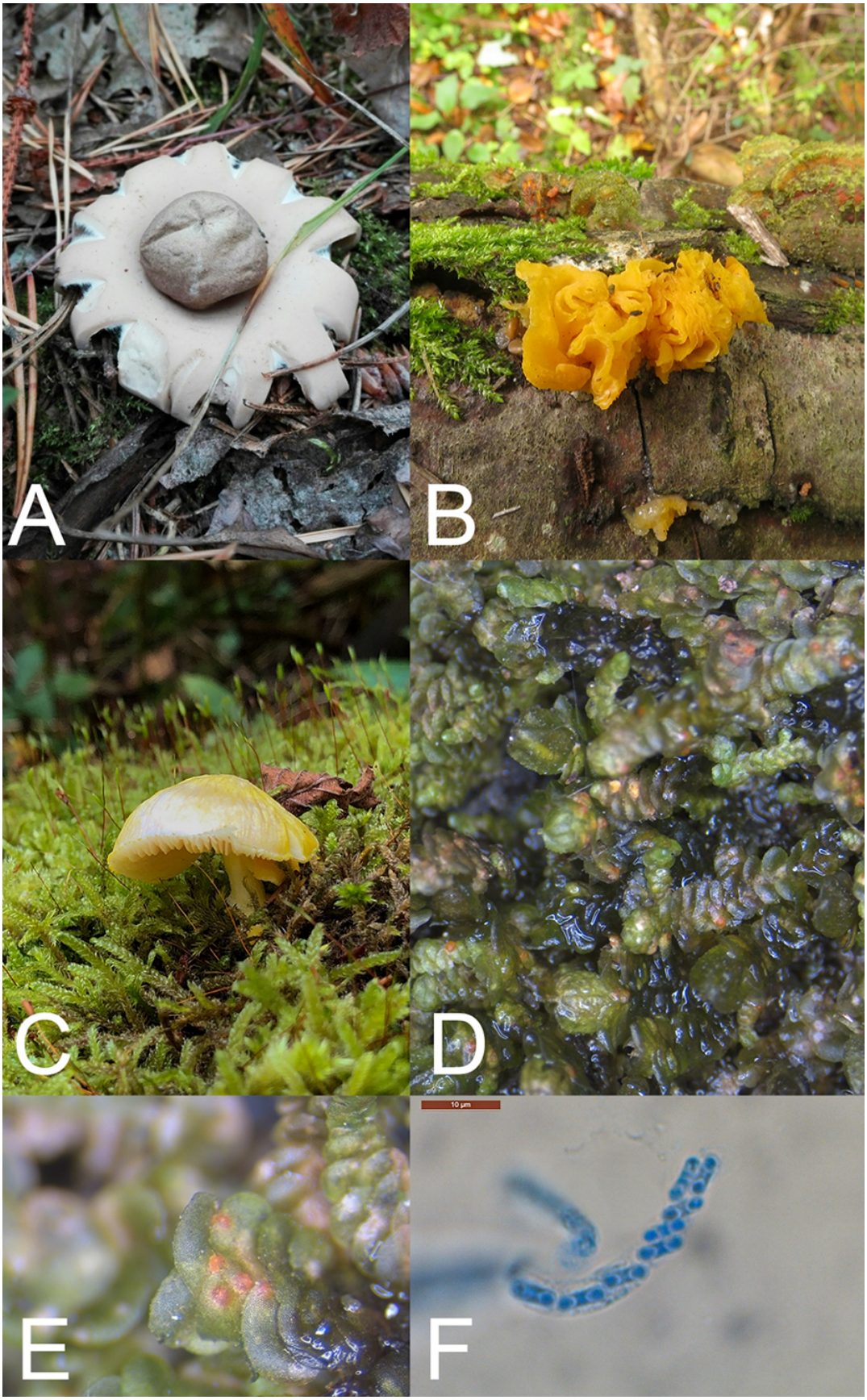

Figure 2 (**A**) *Geastrum fimbriatum* Fr. Photo: JP. (**B**) *Tremella aurantia* Schwein. Photo: BSI. (**C**) *Pluteus fenzlii* (Schulzer) Corriol & P.-A. Moreau. Photo: BSI. (**D–F**) *Bryocentria brongniartii* (P. Crouan & H. Crouan) Döbbeler. Photo: BSI.

References

Błoński, F. (1889). Spis roślin zarodnikowych zebranych lub zanotowanych w lecie w r. 1888 w puszczach: Białowieskiéj, Świsłockiéj i Ladzkiéj [List of cryptogamic plants collected or recorded in summer 1888 in forests: Białowieża, Świsłocz, Lady]. *Pamiętnik Fizyjograficzny*, *9*, 63–101.

Błoński, F., Drymmer, K., & Ejsmond, A. (1888). Sprawozdanie z wycieczki botanicznej, odbytéj po puszczy Białowieskiéj, Ladzkiéj i Świsłockiéj w 1887 roku [Report from botanical excursion in forests: Białowieża, Świsłocz, Lady, from 1887]. *Pamiętnik Fizyjograficzny*, *8*, 59–103.

Bobiec, A. (2002). Białowieża Primeval Forest. *International Journal of Wilderness*, *8*(3), 33–37.

Bujakiewicz, A., Chlebicki, A., Chmiel, M., Cieśliński, S., Czyżewska, K., Faliński, J., Glanc, K., Głowacki, Z., Klama, H., & Komorowska, H. (1992). Fungi. In J. B. Faliński & W. Mułenko (Eds.), *Cryptogamous plants in the forest communities of Białowieża National Park. Check-list of cryptogamous and seminal plant species recorded during the period 1987–1991 on the permanent plot V-100 (Project CRYPTO 1)* (pp. 1–48). Uniwersytet Warszawski.

Cieśliński, S. (2010). Wykaz gatunków porostów (grzybów zlichenizowanych) Puszczy Białowieskiej (NE Polska) [List of lichens (lichenized fungi) of Białowieża Forest (NE Poland)]. *Parki Narodowe i Rezerwaty Przyrody*, *29*(2), 3–39.

Cieśliński, S., Czyżewska, K., & Fabiszewski, J. (2003). Czerwona lista porostów wymarłych i zagrożonych w Polsce [Red list of extinct and threatened lichens in Poland]. *Monographiae Botanicae*, *91*, 13–49. https://doi.org/10.5586/mb.2003.001

Cieśliński, S., & Tobolewski, Z. (1988). Porosty (Lichenes) puszczy Białowieskiej i jej zachodniego przedpola [Lichens of Białowieża Forest and its western foreland]. *Phytocoenosis, Supplementum Cartographiae Geobotanicae*, *1*, 1–216.

Czyżewska, K., & Cieśliński, S. (2003). Czerwona lista porostów zagrożonych w Puszczy Białowieskiej [Red list of threatened lichens in the Białowieża Old-Growth Forest]. *Monographiae Botanicae*, *91*, 107–119. https://doi.org/10.5586/mb.2003.006

Dahlberg, A. (2019). *Hapalopilus croceus.* The IUCN Red List of Threatened Species. https://doi.org/fvvh

David, J. C., & Hawksworth, D. (1995). *Zevadia*: A new lichenicolous hyphomycete from western Ireland. *Bibliotheca Lichenologica*, *58*, 63–71.

Diederich, P., & Marson, G. (1988). *Tremella coppinsii*, a new lichenicolous basidiomycete from Sarawak. *Notes From The Royal Botanic Garden Edinburgh*, *45*(1), 175–176.

Domian, G. (2006). *Symbioza lakownicy z chropiatką?* [Symbiosis of *Ganoderma* and *Thelephora*?]. bio-forum.pl. https://www.bio-forum.pl/messages/33/61242.html

Döbbeler, P. (2004). *Bryocentria* (Hypocreales), a new genus of bryophilous Ascomycetes. *Mycological Progress*, *3*(3), 247–256. https://doi.org/10.1007/s11557-006-0095-7

Döbbeler, P. (2010). New species and records of *Bryocentria* – A hypocrealean genus of bryophilous ascomycetes. *Karstenia*, *50*(1), 11–23. https://doi.org/10.29203/ka.2010.437

Drzewiecki, P. (2016). *"Twory" na Ganoderma* ["Formations" on *Ganoderma*]. bio-forum.pl. https://www.bio-forum.pl/messages/33/874079.html

Ertz, D., & Diederich, P. (2008). Lichens and lichenicolous fungi new for Tenerife (Canary Islands). *Cryptogamie, Mycologie*, *29*(4), 389–396.

Faliński, J. B., & Mułenko, W. (1992). Introduction. In J. B. Faliński & W. Mułenko (Eds.), *Cryptogamous plants in the forest communities of Białowieża National Park. Check-list of cryptogamous and seminal plant species recorded during the period 1987–1991 on the permanent plot V-100 (Project CRYPTO 1)* (pp. 2–11). Uniwersytet Warszawski.

Faliński, J. B., & Mułenko, W. (1995). Summing-up. In J. B. Faliński & W. Mułenko (Eds.), *Cryptogamous plants in the forest communities of Białowieża National Park. General problems and taxonomic group analysis (Project CRYPTO 2)* (pp. 165–169). Uniwersytet Warszawski.

Faliński, J. B., & Mułenko, W. (Eds.). (1997). *Cryptogamous plants in the forest communities of Białowieża National Park. Ecological atlas. (Project CRYPTO 4)*. Uniwersytet Warszawski.

Fałtynowicz, W., & Kossowska, M. (2016). The lichens of Poland. A fourth checklist. *Acta Botanica Silesiaca, Monographiae*, *8*, 3–122.

Forest Data Bank. (2020). Retrieved March 10, 2020, from https://www.bdl.lasy.gov.pl/portal/mapy-en

Fox, H. F. (2001). *Census catalogue of the lichenicolous fungi of Ireland*. National Botanic Gardens.

GBIF – Global Biodiversity Information Facility. (2020). Retrieved March 10, 2020, from https://www.gbif.org/

Gierczyk, B., Szczepkowski, A., & Kujawa, A. (2013). XVIII Wystawa Grzybów Puszczy Białowieskiej [18th Exhibition of Fungi of the Białowieża Forest]. *Parki Narodowe i Rezerwaty Przyrody*, *32*(2), 88–112.

Hawksworth, D. L., & Lücking, R. (2017). Fungal diversity revisited: 2.2 to 3.8 million species. In J. Heitman, B. J. Howlett, P. W. Crous, E. H. Stukenbrock, T. Y. James, & N. A. R. Gow (Eds.), *The fungal kingdom* (pp. 79–95). ASM Press. https://doi.org/10.1128/9781555819583.ch4

Iršėnaitė, R., Kałucka, I., & Ibarguren, I. O. (2019). *Rhodotus palmatus.* The IUCN Red List of Threatened Species. https://www.iucnredlist.org/species/70402359/148546185

The IUCN Red List of Threatened Species. (2020). Retrieved April 2, 2020, from https://www.iucnredlist.org/en/

Jaroszewicz, B., Cholewińska, O., Gutowski, J. M., Samojlik, T., Zimny, M., & Latałowa, M. (2019). Białowieża Forest – A relic of the high naturalness of European forests. *Forests*, *10*(10), Article 849. https://doi.org/10.3390/f10100849

Karasiński, D. (2016). Grzyby afylloforoidalne Kaszubskiego Parku Krajobrazowego [Aphylloporoid fungi of the Kaszuby Landscape Park]. *Acta Botanica Cassubica Monographiae*, *7*, 1–198.

Karasiński, D., & Wołkowycki, M. (2015). An annotated and illustrated catalogue of polypores (Agaricomycetes) of the Białowieża Forest (NE Poland). *Polish Botanical Journal*, *60*(2), 217–292. https://doi.org/10.1515/pbj-2015-0034

Khodosovtsev, A., Vondrák, J., Naumovich, A., Kocourková, J., Vondráková, O., & Motiejūnaitė, J. (2012). Three new *Pronectria* species in terricolous and saxicolous microlichen communities (Bionectriaceae, Ascomycota). *Nova Hedwigia*, *95*(1–2), 211–220. https://doi.org/10.1127/0029-5035/2012/0026

Kostecka, B. (1989). *Epiksyliczne Dematiaceae w grądzie w Białowieskim Parku Narodowym* [Epixylic Dematiaceae in oak-linden-hornbeam forest of Białowieża National Park] [Unpublished master's thesis]. Faculty of Biology, University of Warsaw.

Kozłowska, M., Mułenko, W., Anusiewicz, M., & Wołkowycki, M. (2019). *Checklist of microfungi and larger ascomycetes of Białowieża Forest*. Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Kujawa, A. (2020). *Grzyby makroskopijne Polski w literaturze mykologicznej* [Macroscopic fungi of Poland in mycological literature]. https://www.grzyby.pl/grzyby-makroskopijne-Polski-w-literaturze-mikologicznej.htm

Kujawa, A., Gierczyk, B., Domian, G., Wrzosek, M., Stasińska, M., Szkodzik, J., Leski, T., Karliński, L., Pietras, M., & Dynowska, M. (2015). Preliminary studies of fungi in the Biebrza National Park. Part IV. Macromycetes – New data and the synthesis. *Acta Mycologica*, *50*(2), Article 1070. https://doi.org/10.5586/am.1070

Kujawa, A., Gierczyk, B., Gryc, M., & Wołkowycki, M. (2019). *Grzyby Puszczy Knyszyńskiej* [Fungi of Knyszyn Forest]. Stowarzyszenie Przyjaciół Puszczy Knyszyńskiej Wielki Las.

Kujawa, A., Gierczyk, B., & Ślusarczyk, T. (2020). *Rejestr gatunków grzybów chronionych i zagrożonych* [Register of protected and endangered fungi of Poland]. Atlas grzybów Polski [Atlas of fungi of Poland]. Retrieved April 17, 2020, from https://www.grzyby.pl/rejestr-grzybow-chronionych-i-zagrozonych.htm

Kujawa, A., Szczepkowski, A., Gierczyk, B., & Slusarczyk, T. (2018). Ile gatunków grzybów rośnie w Puszczy Białowieskiej? Wystawy grzybów źródłem nowych danych [How many fungal species grow in the Białowieża Forest? Exhibitions of fungi as a source of new data]. *Sylwan*, *162*(11), 933–940.

Kujawa, A., Ślusarczyk, T., Domian, G., Piskorski, S., Kaczmarek, K., Gęsiorska, A., & Gorczak, M. (2020). XXV Wystawa Grzybów Puszczy Białowieskiej. Materiały do poznania mykobioty Puszczy Białowieskiej [25th Exhibition of Fungi of the Białowieża Forest. Materials to the knowledge of mycobiota of the Białowieża Primeval Forest]. *Przegląd Przyrodniczy*, *31*(2), 69–89.

Kujawa, A., Wrzosek, M., Domian, G., Kędra, K., Szkodzik, J., Rudawska, M., Leski, T., Karliński, L., Pietras, M., Gierczyk, B., Dynowska, M., Ślusarczyk, D., Kałucka, I., & Ławrynowicz, M. (2012). Preliminary studies of fungi in the Biebrza National Park (NE Poland). II. Macromycetes. *Acta Mycologica*, *47*(2), 235–264. https://doi.org/10.5586/am.2012.027

Kunca, V. (2019). *Resinoporia piceata.* The IUCN Red List of Threatened Species. https://doi.org/fvvk

Lindahl, B. D., Nilsson, R. H., Tedersoo, L., Abarenkov, K., Carlsen, T., Kjøller, R., Kõljalg, U., Pennanen, T., Rosendahl, S., & Stenlid, J. (2013). Fungal community analysis by high-throughput sequencing of amplified markers – A user's guide. *New Phytologist*, *199*(1), 288–299. https://doi.org/10.1111/nph.12243

Lowen, R. (1990). New combinations in *Pronectria*. *Mycotaxon*, *39*, 461–463.

Łubek, A., & Jaroszewicz, B. (2012). New, rare and noteworthy species of lichens and lichenicolous fungi from Białowieża Forest. *Polish Journal of Natural Sciences*, *27*(3), 275–287.

Łubek, A., Kukwa, M., Jaroszewicz, B., & Czortek, P. (2018). Changes in the epiphytic lichen biota of Białowieża Primeval Forest are not explained by climate warming. *Science of the Total Environment*, *643*, 468–478. https://doi.org/10.1016/j.scitotenv.2018.06.222

Matuszkiewicz, J. (2002). *Zespoły leśne Polski* [Forest associations of Poland]. Wydawnictwo Naukowe PWN.

Matwiejuk, A. (2011). Anthropogenic changes of lichen biota of the Białowieża town (Podlasie, eastern Poland). *Roczniki Akademii Rolniczej w Poznaniu, Botanika-Steciana*, *15*, 129–138.

Millanes, A. M., Diederich, P., Westberg, M., Knutsson, T., & Wedin, M. (2014). *Tremella rhizocarpicola* sp. nov. and other interesting Tremellales and Filobasidiales in the Nordic countries. *MycoKeys*, *8*, 31–41. https://doi.org/10.3897/mycokeys.8.8176

Mułenko, W., Majewski, T., & Ruszkiewicz-Michalska, M. (2008). *A preliminary checklist of micromycetes in Poland*. W. Szafer Institute of Botany, Polish Academy of Sciences.

Nilsson, R. H., Anslan, S., Bahram, M., Wurzbacher, C., Baldrian, P., & Tedersoo, L. (2019). Mycobiome diversity: High-throughput sequencing and identification of fungi. *Nature Reviews Microbiology*, *17*(2), 95–109. https://doi.org/10.1038/s41579-018-0116-y

Nilsson, R. H., Larsson, K. H., Taylor, A. F. S., Bengtsson-Palme, J., Jeppesen, T. S., Schigel, D., Kennedy, P., Picard, K., Glöckner, F. O., & Tedersoo, L. (2019). The UNITE database for molecular identification of fungi: Handling dark taxa and parallel taxonomic classifications. *Nucleic Acids Research*, *47*(D1), 259–264. https://doi.org/10.1093/nar/gky1022

Okołów, C., Karaś, M., & Bołbot, A. (2009). *Białowieski Park Narodowy. Poznać. Zrozumieć. Zachować* [Białowieża National Park: Know it, understand it, protect it]. Białowieski Park Narodowy.

Parker, S. S., Pauly, G. B., Moore, J., Fraga, N. S., Knapp, J. J., Principe, Z., Brown, B. V., Randall, J. M., Cohen, B. S., & Wake, T. A. (2018). Adapting the bioblitz to meet conservation needs. *Conservation Biology*, *32*(5), 1007–1019. https://doi.org/10.1111/cobi.13103

Pippola, E., & Kotiranta, H. (2008). The genus *Tremella* (Basidiomycota, Tremellales) in Finland. *Annales Botanici Fennici*, *45*(6), 401–434. https://doi.org/10.5735/085.045.0601

Robert, V., Vu, D., Amor, A. B. H., Wiele, N., Brouwer, C., Jabas, B., Szoke, S., Dridi, A., Triki, M., & Daoud, S. B. (2013). MycoBank gearing up for new horizons. *IMA Fungus*, *4*(2), 371–379. https://doi.org/10.5598/imafungus.2013.04.02.16

Rogerson, C. T., & Samuels, G. J. (1993). Polyporicolous species of *Hypomyces*. *Mycologia*, *85*(2), 213–272. https://doi.org/10.1080/00275514.1992.12026272

Rozporządzenie Ministra Środowiska z dnia 9 października 2014 roku, w sprawie ochrony gatunkowej grzybów (Dz. U. z 2014 r., poz. 1408) [Regulation of the Minister of Environment dated November 9, 2014 on the legally protected fungi (Journal of Laws, 2014, item 1408)]. (2014). http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20140001408

Ruszkiewicz-Michalska, M., Bałazy, S., Chełkowski, J., Dynowska, M., Pawłowska, J., Sucharzewska, E., Szkodzik, J., Tkaczuk, C., Wilk, M., & Wrzosek, M. (2015). Preliminary studies of fungi in the Biebrza National Park (NE Poland). Part III. Micromycetes – New data. *Acta Mycologica*, *50*(2), Article 1067. https://doi.org/10.5586/am.1067

Samojlik, T., Rotherham, I. D., & Jędrzejewska, B. (2013). Quantifying historic human impacts on forest environments: A case study in Białowieża Forest, Poland. *Environmental History*, *18*(3), 576–602. https://doi.org/10.1093/envhis/emt039

Schiefelbein, U., Czarnota, P., Thüs, H., & Kukwa, M. (2012). The lichen biota of the Drawieński National Park (NW Poland, Western Pomerania). *Folia Cryptogamica Estonica*, *49*, 59–71.

Schroeter, J. (1908). *Die Pilze Schlesiens* [Silesian Fungi] (Vol. 2). J. U. Kern's Verlag.

Sérusiaux, E., Diederich, P., Ertz, D., Brand, M., & Boom, P. (2006). New or interesting lichens and lichenicolous fungi from Belgium, Luxembourg and northern France. X. *Bulletin de La Société Des Naturalistes Luxembourgeois*, *107*, 63–74.

Siedlecki, I., & Pawłowska, J. (2020). *Fungal Bioblitz in Białowieża Primeval Forest at 18th Congress of European Mycologists.* GBIF.org. Retrieved August 5, 2020, from https://doi.org/10.15468/4z86w4

Sokołowski, A. W. (2004). *Lasy Puszczy Białowieskiej* [Woods of Białowieża Forest]. Centrum Informacyjne Lasów Państwowych.

Solon, J., Borzyszkowski, J., Bidłasik, M., Richling, A., Badora, K., Balon, J., Brzezińska-Wójcik, T., Chabudziński, Ł., Dobrowolski, R., Grzegorczyk, I., Jodłowski, M., Kistowski, M., Kot, R., Krąż, P., Lechnio, J., Macias, A., Majchrowska, A., Malinowska, E., Migoń, P., … Ziaja, W. (2018). Physico-geographical mesoregions of Poland: Verification and adjustment of boundaries on the basis of contemporary spatial data. *Geographia Polonica*, *91*(2), 143–170. https://doi.org/10.7163/GPol.0115

Szulc, U. (1995). *Epiksyliczne Dematiaceae w grądzie w Białowieskim Parku Narodowym* [Epixylic Dematiaceae in oak-linden-hornbeam forest of Białowieża National Park] [Unpublished master's thesis]. Faculty of Biology, University of Warsaw.

Szwagrzyk, J. (2016). Białowieża Forest: What it used to be, what it is now and what we want it to be in the future. *Forest Research Papers*, *77*(4), 291–295. https://doi.org/10.1515/frp-2016-0030

Wojewoda, W. (2000). *Typhula quisquiliaris* (Cantharellales) – A species new to Poland. *Acta Mycologica*, *35*(1), 29–35. https://doi.org/10.5586/am.2000.003

Wojewoda, W. (2003). *Checklist of Polish larger Basidiomycetes* (Vol. 5). W. Szafer Institute of Botany, Polish Academy of Sciences.

Wojewoda, W., & Ławrynowicz, M. (2006). Red list of the macrofungi in Poland. In Z. Mirek, K. Zarzycki, W. Wojewoda, & Z. Szeląg (Eds.), *Red list of plants and fungi in Poland* (pp. 53–71). W. Szafer Institute of Botany, Polish Academy of Sciences.