



## APHYLLOPHOROID FUNGI (BASIDIOMYCOTA) IN BIOTOPES OF KYIVSKE PLATO, UKRAINE

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### SYNOPSIS

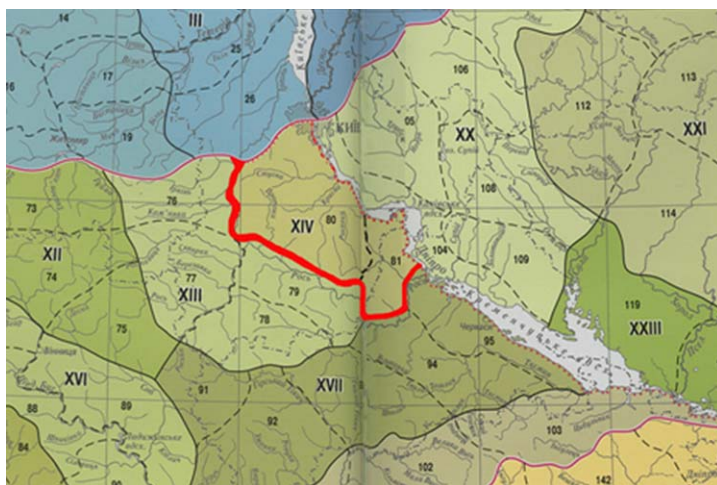
**Key words:**  
wood-destroying fungi,  
host-plant,  
substratum  
preferences,  
spreading of species,  
biotopes,  
Central Ukraine.

150 species, 86 genera, 33 families and 11 orders of aphylloroid fungi have been registered in forests and cultivated agricultural biotopes on Kyivske Plato. Investigated biotopes have been presented to “temporary flooded willow forests with *Salix alba* L.”, “birch fresh and dry forests (Betulo-Quercetum roboris)”, “aspen forests (*Populus tremula*)”, “alder eutrophic swamp forests (*Alnetea glutinosae*)”, “sub-continental hornbeam-oak forests (Carpinion betuli)”, “biotopes dominated by deciduous trees (Chelidonio-Robinion: *Robinia pseudoacacia* L., *Acer negundo* L.)”, “parks” and “fruit and ornamental gardens”. Distribution and ecological characteristic of each species of aphylloroid fungi in various biotopes on investigated area are given too.

### INTRODUCTION

Kyivske Plato is morphostructural independent unit in the north of Right-Bank Forest-Steppe of Ukraine. It is highland region (unto 250 meters above sea level), limited by the river Dnipro in the east, by the river Ros' in the south and south-west and by Ukrainian crystalline shield in the west. For geobotanical zoning of Ukraine (Didukh & Shelyag-Sosonko, 2003) Kyivske Plato is part of the Eurasian steppe region, forest-steppe subregion, East European forest-steppe province oak forests, steppe meadows and meadow steps, Ukrainian forest-steppe subprovince (Fig. 1).

Various forests are in the North and Eastern parts of investigated area (Fastivsky and Kanivsky geobotanical regions). They cover about 10% of the Kyivske Plato. Largest area is covered with sub-continental hornbeam-oak forests (*Carpinion betuli*). These typical zonal forests play a great role for regulation of climate and formation of soils. *Quercus robur* L., *Carpinus betulus* L., *Tilia cordata* Mill. and *Acer platanoides* L. are formed stands. Sometimes, *Cerasus avium* (L.) Moench, *Ulmus glabra* Huds., *Malus praecox* Borkh., *Pyrus communis* L., *Salix caprea* L. and *Populus tremula* L. are characterized (Didukh et al., 2011).



**Figure 1.**  
**Map of the investigated**  
**area: XIV – Kyivske Plato;**  
**geobotanical regions: 80 –**  
**Fastivsky, 81 – Kanivsky.**

The rest of the territory of Kyivske Plato occupied by agricultural landscapes, separated by artificial plantations and shelterbelts, planting *Acer saccharinum* Wangenh., *Robinia pseudoacacia* L., *Quercus rubra* L., *Populus nigra* L. etc. along roads and in locality.

The area of Kyivske Plato is characterized by diverse forest associations with rich fungal diversity. Aphylophoroid fungi are polyphyletic group of organisms, which distributed over several families and orders among the division Basidiomycota. They execute decay of cellulose, hemicellulose and lignin of wood. These fungi are the major wooddecaying organisms. They play an important role in the nutrient cycle of forest ecosystems. At the same time, aphylophoroid fungi cause the development of two types of fungal wood rot: brown (destructive) and white (corrosive) rot. This process leads to the emergence and development of forest disease (Schmidt, 2006; Küffer et al., 2008).

The purpose of research were to investigate the distribution of aphylophoroid fungi in different biotopes of deciduous trees on Kyivske Plato; with theirs preferences in nutrition (type of wood, host tree species).

## **SUBJECT AND METHOD OF RESEARCH**

Fungal fruit bodies and herbarium specimens were the subjects of the work. We used the classical methods of mycological research (Eriksson et al., 1973-1988; Jülich & Stalpers, 1980; Bondartseva & Parmasto, 1986; Gilbertson & Ryvarden, 1986, 1987; Ryvarden & Gilbertson, 1993, 1994; Bondartseva, 1998; Bernicchia, 2005; Bernicchia & Gorjón, 2010; Zmitrovich, 2008; Clémentçon, 2009; Yurchenko, 2010). The work are based on a comprehensive analysis of the published sources of data (Yavorsky, 1915; Hizhytska, 1926, 1929 a, b; Solomakhina & Prudenko, 1998; Dzhagan et al., 2008; Sukhomlin et al., 2010), mycological collections (National

Herbarium of Ukraine (KW), Kyiv National Taras Shevchenko University (KWHU) and materials of our investigations (spring and autumn, 2009-2012). In view of the recommendations of the International Botanical Congress (McNeill et al., 2011) current names of species and their classification are determined by the nomenclature base Mycobank. The collections were deposited at National Herbarium of Ukraine, KW (M.G. Kholodny Institute of Botany of the National Academy of Sciences of Ukraine).

The distribution of aphyllorphoid fungi by different types of plant communities has been carried out using the classification of biotopes (Didukh et al., 2011). This classification of biotopes corresponds to the European Nature Information System (EUNIS; Davies & Moss, 1999).

Author names and trees species were given according to nomenclatural checklist "Vascular plants of Ukraine" (Mosyakin & Fedoronchuk, 1999) and The International Plant Names Index ([ipni.org/index.html](http://ipni.org/index.html)).

#### FORMAT OF THE LIST

Each species of aphyllorphoid fungi accompanied by a next data:

- type of wood substrates (dead branches, lying trunks, stumps, deadwood, diseased trees, roots, etc.);
- host tree species (Tab. 1);
- biotopes (G Biotopes dominated by phanerophytes: G1.112 "temporary flooded willow forests with *Salix alba*", G1.123 "birch fresh and dry forests (Betulo-Quercetum roboris)", G1.124 "aspen forests (*Populus tremula*)", G1.132 "alder eutrophic swamp forests (*Alnetea glutinosae*)", G1.215 "sub-continental hornbeam-oak forests (*Carpinion betuli*)". I Cultivated agricultural biotopes: I4.111 "biotopes dominated by deciduous trees (Chelidonio-Robinion: *Robinia pseudoacacia* L., *Acer negundo* L.)", I4.21 "parks", I4.22 "fruit and ornamental gardens");
- place of collection (Kyiv region: Kyiv (K), park of landscape art of national importance "Feofania" (F), National Nature Park "Holosiivsky" (NNPH); Boyarka (B), Yurivka (Y), Vasylkiv (V), Vita-Poshtova (VP); Cherkasy region: Regional landscape park "Trakhtemyriv" (RLPT), Kanivsky Nature Reserve (KNR);
- our data and numbers of herbarium specimens (KW) or (in the absence of our data) mycological collections, literature: (1) – Solomakhina & Prudenko, 1998; (2) – Dzhagan et al., 2008; (3) – Sukhomlin et al., 2010.

**Table 1. Species of deciduous trees of Kyivske Plato.**

<b>N</b>	<b>Abbreviation</b>	<b>Species name</b>
1	<i>Acam</i>	<i>Acer campestre</i> L.
2	<i>Aglu</i>	<i>Alnus glutinosa</i> (L.) Gaertn.
3	<i>Ahip</i>	<i>Aesculus hippocastanum</i> L.
4	<i>Aneg</i>	<i>Acer negundo</i> L.
5	<i>Apla</i>	<i>A. platanoides</i>
6	<i>Asac</i>	<i>A. saccharinum</i>
7	<i>Bpen</i>	<i>Betula pendula</i> Roth
8	<i>Cavi</i>	<i>Cerasus avium</i>
9	<i>Cbet</i>	<i>Carpinus betulus</i>
10	<i>Coav</i>	<i>Corylus avellana</i> (L.) H.Karst.
11	<i>Crat</i>	<i>Crataegus</i> sp.
12	<i>Earg</i>	<i>Elaeagnus argentea</i> Pursh
13	<i>Ever</i>	<i>Euonymus verrucosa</i> Scop.
14	<i>Fexc</i>	<i>Fraxinus excelsior</i> L.
15	<i>Fsyl</i>	<i>Fagus sylvatica</i> L.
16	<i>Jreg</i>	<i>Juglans regia</i> L.
17	<i>Mdom</i>	<i>Malus domestica</i> Borkh.
18	<i>Mnig</i>	<i>Morus nigra</i> L.
19	<i>Palb</i>	<i>Populus alba</i> L.
20	<i>Pnig</i>	<i>P. nigra</i>
21	<i>Prcer</i>	<i>Prunus cerasus</i> L.
22	<i>Prdom</i>	<i>P. domestica</i> L.
23	<i>Prpe</i>	<i>P. persica</i> (L.) Batsch
24	<i>Ptre</i>	<i>Populus tremula</i>
25	<i>Pvir</i>	<i>Padus virginiana</i> Mill.
26	<i>Pycom</i>	<i>Pyrus communis</i>
27	<i>Qrob</i>	<i>Quercus robur</i>
28	<i>Qrub</i>	<i>Q. rubra</i>
29	<i>Rcan</i>	<i>Rosa canina</i> L.
30	<i>Rpse</i>	<i>Robinia pseudoacacia</i>
31	<i>Salb</i>	<i>Salix alba</i> L.
32	<i>Scap</i>	<i>S. caprea</i>
33	<i>Snig</i>	<i>Sambucus nigra</i> L.
34	<i>Svul</i>	<i>Syringa vulgaris</i> L.
35	<i>Tcor</i>	<i>Tilia cordata</i>
36	<i>Ugla</i>	<i>Ulmus glabra</i>
In all: 36 host tree species.		

## RESULTS WITH DISCUSSION

Based on data from literature and examined herbarium specimens, aphylloroid fungi of Kyivske Plato is represented by 150 species, 86 genera, 33 families and 11 orders of the class Agaricomycetes, the division Basidiomycota (Tab. 2).

Table 2. Taxonomic structure of aphylloroid fungi of Kyivske Plato.

<b>BASIDIOMYCOTA (1;1;2;11;33;86;150)*</b>		
<b>AGARICOMYCOTINA (1;2;11;33;86;150)</b>		
<b>AGARICOMYCETES (2;8;25;70;124)</b>		
<b>Cantharellales</b> (3;5;8)	Cantharellaceae (3;3)	<i>Cantharellus</i> (1), <i>Craterellus</i> (1), <i>Pseudocraterellus</i> (1)
	Clavulinaceae (1;3)	<i>Clavulina</i> (3)
	Hydnaceae (1;2)	<i>Hydnum</i> (2)
<b>Corticiales</b> (1;2;3)	Corticaceae (2;3)	<i>Corticium</i> (1), <i>Vuilleminia</i> (2)
<b>Gloeophyllales</b> (1;2;3)	Gloeophyllaceae (2;3)	<i>Gloeophyllum</i> (2), <i>Veluticeps</i> (1)
<b>Hymenochaetales</b> (4;11;26)	Hymenochaetaceae (6;17)	<i>Coltricia</i> (1), <i>Hymenochaete</i> (1), <i>Inocutis</i> (2), <i>Inonotus</i> (4), <i>Phellinus</i> (8), <i>Pseudohaete</i> (1)
	Rickenellaceae (1;1)	<i>Sidera</i> (1)
	Schizoporaceae (3;5)	<i>Basidioradulum</i> (1), <i>Oxyporus</i> (2), <i>Schizopora</i> (2)
	Tubulicrinaceae (1;3)	<i>Hyphodontia</i> (3)
<b>Polyporales</b> (7;40;66)	Fomitopsidaceae (7;7)	<i>Anomoporia</i> (1), <i>Daedalea</i> (1), <i>Fomitopsis</i> (1), <i>Grifola</i> (1), <i>Laetiporus</i> (1), <i>Piptoporus</i> (1), <i>Postia</i> (1)
	Ganodermataceae (1;2)	<i>Ganoderma</i> (2)
	Hapalopilaceae (1;1)	<i>Trametopsis</i> (1)
	Meripilaceae (1;1)	<i>Meripilus</i> (1)
	Meruliaceae (8;16)	<i>Bjerkandera</i> (2), <i>Ceriporia</i> (2), <i>Ceriporiopsis</i> (2), <i>Gloeoporus</i> (1), <i>Hyphoderma</i> (2), <i>Mycoacia</i> (1), <i>Phlebia</i> (4), <i>Sarcodontia</i> (2)
	Phanerochaetaceae (7;8)	<i>Antrodiella</i> (1), <i>Byssomerulius</i> (1), <i>Irpex</i> (1), <i>Junghuhnia</i> (1), <i>Phanerochaete</i> (1), <i>Phanerodontia</i> (1), <i>Steccherinum</i> (2)
	Polyporaceae (15;31)	<i>Aurantiporus</i> (1), <i>Cerreana</i> (1), <i>Coriolopsis</i> (1), <i>Daedaleopsis</i> (2), <i>Datronia</i> (1), <i>Fomes</i> (1), <i>Hapalopilus</i> (1), <i>Lentinus</i> (1); <i>Lenzites</i> (1), <i>Lopharia</i> (1), <i>Polyporus</i> (11), <i>Pycnoporus</i> (1), <i>Skeletokutis</i> (1), <i>Trametes</i> (6), <i>Trichaptum</i> (1)
<b>Russulales</b> (6;6;13)	Amylostereaceae (1;1)	<i>Artomyces</i> (1)
	Auriscalpiaceae (1;1)	<i>Lentinellus</i> (1)

	Gloeocistidiellaceae (1;1)	<i>Gloeocystidiellum</i> (1)
	Hericiaceae (1;2)	<i>Hericium</i> (2)
	Peniophoraceae (1;3)	<i>Peniophora</i> (3)
	Stereaceae (1;5)	<i>Stereum</i> (5)
<b>Thelephorales</b> (2;3;4)	Bankeraceae (1;1)	<i>Sarcodon</i> (1)
<b>Trechisporales</b> (1;1;1)	Hydnodontaceae (1;1)	<i>Trechispora</i> (1)
<b>AGARICOMYCETIDAE (2;7;12;14)</b>		
<b>Agaricales</b> (6;11;12)	Clavariaceae (2;2)	<i>Clavulinopsis</i> (1), <i>Mucronella</i> (1)
	Cyphellaceae (2;2)	<i>Chondrostereum</i> (1), <i>Cylindrobasidium</i> (1)
	Fistulinaceae (1;1)	<i>Fistulina</i> (1)
	Pterulaceae (2;2)	<i>Pterula</i> (1), <i>Radulomyces</i> (1)
	Schizophyllaceae (2;2)	<i>Auriculariopsis</i> (1); <i>Schizophyllum</i> (1)
	Typhulaceae (2;3)	<i>Macrotyphula</i> (2), <i>Typhula</i> (1)
<b>Boletales</b> (1;1;2)	Coniophoraceae (1;2)	<i>Coniophora</i> (2)
<b>PHALLOMYCETIDAE (1;1;4;12)</b>		
<b>Gomphales</b> (1;4;12)	Gomphaceae (4;12)	<i>Clavariadelphus</i> (1), <i>Lentaria</i> (2), <i>Ramaria</i> (8), <i>Ramariopsis</i> (1)

\*– from right to left: number of species, genera, families, orders, subclasses, classes and subdivisions in each taxonomic category

Below is the distribution of wood-destroying fungi for major biotopes on Kyivske Plato.

#### LIST OF SPECIES

- Anomoporia bombycina* (Fr.) Pouzar** – dead branches; deciduous trees; G1.215; KNR (1, 2)
- Antrodiella serpula* (P. Karst.) Spirin & Niemelä** – dead branches; Cbet; G1.215, KNR (1, 2)
- Artomyces pyxidatus* (Pers.) Julich** – soil, dead branches; Ptre; G1.215; KNR (1, 2)
- Aurantiporus fissilis* (Berk. et M.A. Curtis) H. Jahn ex Ryvarde**n – diseased trees; Aglu, Ahip, Bpen; G1.215, I4.21; F
- Auriculariopsis ampla* (Lév.) Maire** – dead branches; Cbet; G1.215; KNR (3)
- Basidioradulum radula* (Fr.) Nobles** – dead branches; Tcor; G1.215, I4.22; RLPT (KW 39871)
- Bjerkandera adusta* (Willd.) P. Karst.** – dead branches; Aneg, Cbet, Ptre, Qrob, Salb; G1.112, 1.124, 1.215, I4.21; F, NNPH, VP, Y, KNR, RLPT
- B. fumosa* (Pers.) P. Karst.** – dead branches; Aneg, Salb; G1.112, I4.21; F, RLPT

- Byssomerulius corium* (Pers.) Parmasto** – deadwood; *Tcor*; I4.22; RLPT (KW 39863)
- Cantharellus cibarius* Fr.** – soil; G1.123, 1.215; KNR (1, 2)
- Ceriporia purpurea* (Fr.) Donk.** – lying trunks; *Aneg*; G1.112; RLPT (KW 39874)
- C. viridans* (Berk. & Broome) Donk** – dead branches; *Cbet*; G1.215; KNR (2)
- Ceriporiopsis gilvescens* (Bres.) Donk** – soil; *Cbet*; G1.215; KNR (1, 2)
- C. resinascens* (Romell) Domański** – *Cbet*; G1.215; KNR (1)
- Cerrena unicolor* (Bull.) Murrill** – dead branches, stumps; *Cbet*; G1.215, I4.22; KNR, NNPH
- Chondrostereum purpureum* (Pers.) Pouzar** – stumps, deadwood; *Aglu*, *Bpen*; G1.123, 1.215, I4.21; K, KNR, VP (KW 39892, 39888)
- Clavariadelphus pistillaris* (L.) Donk** – soil; G1.215; KNR (1, 2)
- Clavulina amethystina* (Bull.) Donk** – soil; G1.215; KNR (1, 2)
- C. cinerea* (Bull.) J. Schröt.** – soil; G1.215; KNR (1, 2)
- C. coralloides* (L.) J. Schröt.** – soil; G1.215; KNR (2)
- Clavulinopsis subtilis* (Pers.) Corner** – soil; G1.215; KNR(1, 2)
- Coltricia perennis* (L.) Murrill** – soil; G1.123, 1.215; KNR, RLPT
- Coniophora arida* (Fr.) P. Karst.** – *Cbet*; KNR (1)
- C. puteana* (Schumach.) P. Karst.** – dead branches; *Apla*, *Cavi*, *Cbet*, *Bpen*; G1.123, 1.215; KNR, NNPH
- Corioloopsis trogii* (Berk.) Domansky** – dead branches, lying trunks; *Palb*, *Pnig*, *Ptre*, *Cbet*, *Salb*; G1.112, 1.215, I4.111; B, F, KNR, NNPH, RLPT, VP, Y
- Corticium serum* (Pers.) Fr.** – G1.215; (KW)
- Craterellus cornucopioides* (L.) Pers.** – soil; G1.215; KNR (1, 2)
- Cylindrobasidium evolvens* (Fr.) Jülich** – dead branches; *Cbet*; G1.215; KNR (1, 2)
- Daedalea quercina* (L.) Pers.** – stumps, lying trunks; *Qrob*; G1.215, I4.22; F, KNR, NNPH, VP (KW 39906)
- Daedaleopsis confragosa* (Bolton) J. Schröt.** – deadwood; *Cavi*, *Cbet*, *Coav*, *Bpen*, *Prce*, *Pycom*, *Salb*, *Scap*; G1.112, 1.123, 1.132, 1.215, I 4.22; F, KNR, NNPH, RLPT, VP, Y (KW 39897-39899)
- D. tricolor* (Bull.) Bondartsev & Singer** – dead branches, lying trunks; *Bpen*, *Cavi*, *Coav*, *Prce*, *Prdom*, *Pycom*; G1.112, 1.123, 1.215, I4.22; F, KNR, NNPH, RLPT, VP, Y (KW 39819-39822, 39869-39870, 39939-39941)
- Datronia mollis* (Sommerf.) Donk** – growing trees; *Cbet*; G1.215, I4.22; NNPH
- Fistulina hepatica* (Schaeff.) With.** – stumps, growing, diseased trees; *Qrob*; G1.215, I4.21; F, KNR, NNPH, RLPT, VP, Y (KW 39831-39836)
- Fomes fomentarius* (L.) Fr.** – stumps, deadwood, diseased trees; *Aneg*, *Apla*, *Bpen*, *Cavi*, *Cbet*, *Mdom*, *Prce*, *Ptre*; G1.112, 1.123, 1.215, I4.21, 4.22; B, F, K, KNR, NNPH, RLPT, VP, Y (KW 39837-39838)

- Fomitopsis pinicola (Sw.) P. Karst.** – lying trunks, diseased trees; *Apla, Bpen, Cavi, Cbet, Qrob, Tcor*; G1.215; F, K, KNR, NNPH, RLPT, VP, Y (KW 39839)
- Ganoderma lipsiense (Batsch) G.F. Atk.** – stumps, lying trunks; *Bpen, Cbet, Palb, Qrob*; G1.112, 1.123, 1.215, I4.21; F, K, KNR, NNPH, RLPT, VP, Y (KW 39824-39830)
- Ganoderma lucidum (Fr.) P. Karst.** – stumps, lying trunks; *Cbet*; G1.215; F, KNR
- Gloeocystidiellum luridum (Bres.) Boidin** – Cave; G1.215; (KW)
- Gloeophyllum odoratum (Wulfen) Imazeki** – stumps; *Ptre*; I4.111; VP
- G. sepiarium (Wulfen) P. Karst.** – lying trunks; diseased tree; G1.215; NNPH
- Gloeoporus dichrous (Fr.) Bres.** – dead branches; *Qrob*; G1.215; RLPT, VP
- Grifola frondosa (Dicks.) Gray** – roots; *Qrob*; G1.215, I4.21; F, K (KW 39905)
- Hapalopilus rutilans (Pers.) Murrill** – dead branches; *Bpen, Cbet*; G1.123, 1.215; F, KNR, NNPH, RLPT
- Hericium cirrchatum (Pers.) Nikol.** – lying trunks; *Bpen*; G1.215; KNR (3)
- H. coralloides (Scop.) Pers.** – lying trunks; *Cbet*; G1.215; KNR (1, 2)
- Hydnum repandum L.** – soil; G1.215; KNR (1, 2)
- H. weinmanni Fr.** – stump; *Qrob*; G1.215; KNR (KWHU)
- Hymenochaete rubiginosa (Dicks.) Lév.** – stumps, lying trees; *Qrob*; G1.215; B, F, KNR, NNPH, RLPT, VP, Y (KW 39845-39856)
- Hyphoderma setigerum (Fr.) Donk** – dead branches; *Cbet, Rpse*; G1.215, I4.111; KNR, VP (KW 39861)
- H. praetermissum (P. Karst.) J. Erikss. et A. Strid** – dead branches; *Cbet*; G1.215; KNR (1, 2)
- Hyphodontia quercina (Pers.) J. Erikss.** – dead branches; *Qrob*; G1.215; F
- H. sambuci (Pers.) J. Erikss.** – dead branches; *Snig*; G1.112; RLPT
- H. subalutacea (P. Karst.) J. Erikss.** – dead branches; *Cbet*; G1.215; KNR (1, 2)
- Inocutis dryophila (Berk.) Fiasson et Niemelä** – growing trees; *Qrob*; G1.215; F, NNPH
- I. rheades (Berk.) Fiasson et Niemelä** – diseased tree; *Ptre*; I4.21; K
- Inonotus dryadeus (Pers.) Murrill** – growing trees; *Qrob*; G1.215; K (KW)
- I. hispidus (Bull.) P. Karst.** – growing trees; *Mnig*; G1.215, I4.22; NNPH, RLPT
- I. obliquus (Ach. ex Pers.) Pilát** – under the bark; *Bpen*; G1.112; RLPT
- I. radiatus (Sowerby) P. Karst.** – growing trees; *Aglu*; G1.132; NNPH
- Irpex lacteus (Fr.) Fr.** – dead branches, diseased tree; *Bpen, Cbet, Prcer, Prdom*; G1.123, 1.215, I4.22; F, KNR, NNPH, RLPT, VP, Y (KW 39879)
- Junghuhnia nitida (Pers.) Ryvarde** – dead branches; *Cbet*; G1.215; F (KW 39862)
- Laetiporus sulphureus (Bull.) Murrill** – stumps, growing trees; *Acer spp., Cbet, Bpen, Fexc, Pycom, Qrob, Rpse, Salb*; G1.215, I4.111, 4.21; F, K, KNR, NNPH, RLPT, VP, Y (KW 39844)
- Lentaria albovinacea (Pilát) Pilát** – lying trunks; *Aglu*, G1.132; KNR (1, 2)



- L. soluta* (P. Karst.) Pilat** – stumps, growing trees; *Cbet*; G1.215; KNR (1, 2)
- Lentinellus ursinus* (Fr.) Kühner** – lying trunks; *Qrob*; G1.215; F
- Lentinus tigrinus* (Bull.) Fr.** – stumps, growing trees; *Salb*; G1.112; VP
- Lenzites betulina* (L.) Fr.** – dead branches, lying trunks; *Bpen, Cbet, Qrob*; G1.123, 1.215, KNR, NNPH
- Lopharia spadicea* (Pers.) Boidin** – growing old trees; *Mnig*; I4.22; RLPT (KW 39858)
- Macrotyphula contorta* (Holmsk.) Rauschert** – dead branches in soil; G1.215; KNR (2)
- M. juncea* (Alb. et Schwein.) Berthier** – dead branches; deciduous trees; G1.215; F, KNR
- Meripilus giganteus* (Pers.) P.Karst.** – stumps; *Ahip, Qrob*; G1.215, I4.21; F, K
- Mucronella calva* (Alb. et Schwein.) Fr.** – dead branches, stumps; *Cbet*; G1.215; KNR (1, 2)
- Mycoacia aurea* (Fr.) J. Erikss. et Ryvarden** – dead branches; *Cbet*; G1.215; KNR (2)
- Oxyporus obducens* (Pers.) Donk** – growing trees; *Aneg*; G1.112, 1.215; F
- O. populinus* (Schumach.) Donk** – growing trees; *Acam, Aneg*; G1.215; F, KNR, NNPH, RLPT (KW 40128-40129)
- Peniophora cinerea* (Pers.) Cooke** – dead branches; *Apla, Coave, Qrob*; I4.22; F, KNR
- P. laeta* (Fr.) Donk** – dead branches; *Cbet*; G1.215; F, KNR (KW 39866-39867)
- P. quercina* (Pers.) Cooke** – dead branches; *Qrob*; G1.215, I4.21; B, F, KNR, NNPH, RLPT, VP, Y
- Phanerochaete sordida* (P. Karst.) J. Erikss. et Ryvarden** – lying trunks; *Bpen, Qrob*; G1.215, I4.22; F (KW 39868)
- Phanerodontia magnoliae* (Berk. et M.A. Curtis) Burds.** – dead branches; *Cbet*; G1.215, KNR (1, 2)
- Phellinus contiguus* (Pers.) Pat.** – diseased trees; *Pycom, Uglá*; G1.215, I4.111, 4.22; KNR, RLPT (KW 39872, 40118)
- P. ferruginosus* (Schad.) Pat.** – lying trunks; *Crat, Bpen, Pycom, Rpse, Salb*; G1.112, 1.215, I4.111; F, KNR, NNPH, RLPT, VP (KW 39875-39877, 40115-40117)
- P. igniarius* (L.) Quéf.** – lying trunks, deadwood, diseased trees; *Bpen, Cbet, Qrob, Salb*; G1.112, 1.123, 1.215, I4.111; B, F, KNR, NNPH, RLPT, VP, Y
- P. punctatus* (P. Karst.) Pilát** – diseased trees; *Cbet, Coav, Crat, Salb, Uglá*; G1.112, 1.215; F, NNPH, VP
- P. ribis* (Schumach.) Quéf.** – growing, diseased trees; *Ever*; G1.215; F, KNR, VP (KW 40110-40111)
- P. robustus* (P. Karst.) Bourdot et Galzin** – growing, diseased trees; *Qrob*; G1.215, I4.21; F, KNR, NNPH, VP

- P. tremulae* (Bondartsev) Bondartsev et P.N. Borisov** – growing, diseased trees; *Ptre*; G1.124; 1.215; KNR, RLPT, VP
- P. tuberculosus* (Baumg.) Niemelä** – old trees; *Prunus* spp., *Mdom*; I4.22; F, KNR, NNPH, RLPT, VP, Y (KW 39903-39904, 39936-39938)
- Phlebia deflectens* (P. Karst.) Ryvardeen** – dead branches; *Cbet*; G1.215; KNR (2)
- P. radiata* Fr.** – lying trunks; *Apla*, *Bpen*, *Cbet*; G1.123, 1.215; F, K, KNR, NNPH, RLPT, VP
- P. rufa* (Pers.) M.P. Christ.** – dead branches; deciduous trees; G1.215; KNR, NNPH
- P. tremellosus* Schrader.** – lying trunks; *Qrob*, *Salb*; G1.112, 1.123, 1.124, 1.215; F, KNR, NNPT, RLPT, VP (KW 39882-39885)
- Piptoporus betulinus* (Bull.) P. Karst.** – dead branches, lying trunks, deadwood, diseased trees; *Bpen*; G1.123, 1.215; F, K, KNR, NNPH, RLPT, VP, Y
- Polyporus alveolaris* (DC.) Bondartsev et Singer** – dead branches, lying trunks, growing trees; *Aneg*, *Apla*, *Cbet*, *Earg*, *Mnig*, *Prce*, *Rcan*, *Rpse*, *Snig*, *Svul*, *Tcor*, *Ugla*; G1.215; F, K, KNR, NNPH, RLPT, VP, Y (KW 39843)
- P. arcularius* (Batsch) Fr.** – dead branches, lying trunks; *Cbet*, *Qrob*; G1.215; KNR, NNPH, RLPT
- P. badius* Jungh.** – lying trunks; *Qrob*, *Salb*; G1.112, 1.215; KNR, RLPT (KW 40130)
- P. brumalis* (Pers.) Fr.** – dead branches; *Cbet*; G1.215; F, KNR
- P. ciliatus* Fr.** – stumps, dead branches; *Bpen*, *Salb*; G1.123, 1.215, F, K, RLPT
- P. lepideus* Fr.** – dead branches; *Bpen*; G1.123; V (KW)
- P. leptcephalus* (Pers.) Fr.** –stumps; deciduous trees; G1.215; KNR (1, 2)
- P. melanopus* (Pers.) Fr.** – dead branches; deciduous tree; G1.215; NNPH
- P. squamosus* (Huds.) Fr.** – stumps, lying trunks, growing trees; *Aneg*, *Apla*, *Ahip*, *Asac*, *Jreg*, *Pnig*, *Salb*; G1.112, 1.215, I4.21, 4.22; B, F, K, KNR, NNPH, RLPT, VP, Y (KW 39944)
- P. tuberaster* (Jacq. ex Pers.) Fr.** – dead branches; deciduous tree; G1.215; NNPH
- P. umbellatus* (Pers.) Fr.** – roots; *Cbet*; G1.215; KNR (1, 2)
- Postia alni* Niemelä et Vampola** – lying trunks; deciduous trees; G1.132, 1.215; F, VP
- Pseudochaete tabacina* (Sowerby) T. Wagner et M. Fisch.** – dead branches; *Coav*; G1.215; RLPT
- Pseudocraterellus sinuosus* (Fr.) D.A. Reid** – soil; G 1.215; KNR (1, 2)
- Pterula subulata* Fr.** – soil; G 1.215; KNR (1, 2)
- Pycnoporus cinnabarinus* (Jacq.) P. Karst.** – lying trunks; *Bpen*; G1.123, I4.111; NNPH
- Radulomyces molaris* (Chaillet ex Fr.) Christ.** – dead branches; *Cbet*, *Qrob*; G1.215, I4.22; KNR, VP
- Ramaria aurea* (Schaeff.) Quéf.** – soil; G1.215; KNR (1, 2)
- R. botrytis* (Pers.) Ricken** – soil; G1.215; KNR (1, 2)

- R. botrytoides (Peck) Corner** – soil; G1.215; KNR (1, 2)
- R. crispula (Fr.) Quél.** – dead branches, lying trunks; deciduous trees; G1.215; KNR (1, 2)
- R. flava (Schaeff.) Quél.** – soil; G1.215; KNR (1, 2)
- R. fragillima (Sacc. et P. Syd.) Corner** – soil; G1.215; KNR (2)
- R. gracilis (Pers.) Quél.** – soil; G1.215; KNR (1)
- R. stricta (Pers.) Quél.** – soil, dead branches; *Cbet*; G1.215, I4.111; KNR (1, 2)
- Ramariopsis crocea (Pers.) Corner** – soil; G1.215; KNR (1, 2)
- Sarcodontia crocea (Schwein.) Kotl.** – diseased trees; *Mdom*; I4.21, 4.22; F
- S. setosa (Pers.) Donk** – I 4.22; (KW)
- Schizophyllum commune Fr.** – dead branches, lying trunks; deciduous trees; G1.112, 1.123, 1.215, I4.111, 4.21, 4.22; F, K, KNR, NNPH, RLPT, VP, Y (KW 39813, 39823)
- Schizopora flavipora (Cooke) Ryvarden** – lying trunks; *Qrub*; I4.111; RLPT (KW 39859-39860)
- S. paradoxa (Schrad.) Donk** – lying trunks; *Bpen, Cbet, Qrob, Rpse*; G1.123, 1.215; F, KNR, NNPH, RLPT, VP (KW 39864, 39865)
- Sidera vulgaris (Fr.) Miettinen** – dead branches; *Cbet*; G1.215; KNR (1, 2)
- Skeletokutis nivea (Jungh.) Jean Keller** – dead branches; *Cbet*; G1.215; KNR, VP
- Steccherinum fimbriatum (Pers.) J. Erikss.** – dead branches; *Cbet*; G 1.215; KNR (1, 2)
- S. ochraceum (Pers. ex J.F. Gmelin) Gray** – dead branches; *Bpen, Cbet, Qrob*; G1.215, I4.111; F, NNPH, RLPT, VP, Y (KW 39857)
- Stereum gausapatum (Fr.) Fr.** – growing trees; *Qrob*; G1.215, I4.21; F, NNPH
- S. hirsutum (Willd.) Pers.** – dead branches, lying trunks, deadwood; *Bpen, Cbet, Pvir, Prpe*; G1.112, 1.123, 1.215, I4.111, 4.21, 4.22; F, K, KNR, NNPH, RLPT, VP, Y (KW 39840-39842, 39907-39908, 39911-39912)
- S. ostrea (Blume et Nees) Fr.** – deadwood; *Cbet*; G1.215; KNR (1, 2)
- S. rugosum Pers.** – dead branches, lying trunks; *Cbet*; G1.215; KNR, NNPH
- S. subtomentosum Pouzar** – dead branches, lying trunks; *Aneg, Apla, Bpen, Cbet*; G1.123, 1.215; F, NNPH, RLPT, VP, Y (KW 39900-39902, 39909-39910)
- Trametes gibbosa (Pers.) Fr.** – stumps, lying trunks; *Cbet, Qrob, Ptre*; G1.215, I4.21, 4.22; F, K, NNPH, RLPT, VP, Y (KW 39814-39817)
- T. hirsuta (Wulfen) Pilát** – stumps, lying trunks, deadwood; *Bpen, Cbet, Ptre*; G1.112, 1.123, 1.215, I4.21; F, KNR, NNPH, RLPT, VP, Y
- T. ochracea (Pers.) Gilb. et Ryvarden** – stumps, lying trunks; *Aneg, Cbet*; G1.215; F, KNR, NNPH, RLPT, VP
- T. pubescens (Schumach.) Pilát** – stumps, dead branches; *Cbet, Ptre, Qrob*; G1.215, I4.21, 4.22; F, KNR, NNPH, VP, Y
- T. suaveolens (L.) Fr.** – lying trunks, growing trees; *Palb*; G1.112, 1.215; K, KNR

**T. versicolor (L.) Lloyd** – stumps, lying trunks, dead branches; *Bpen*, *Cbet*, *Crat*, *Fsyl*, *Ptre*, *Qrob*; G1.123, 1.215, I4.21, 4.22; F, KNR, NNPH, RLPT, VP, Y (KW 39975)

**Trametopsis cervina (Schwein.) Tomsovský** – *Ahip*; I4.22; K (KWHU)

**Trechispora mollusca (Pers.) Liberta** – *Cbet*; I4.22; K (KW)

**Trichaptum biforme (Fr.) Ryvarde** – dead branches, stumps, lying trunks, deadwood; *Bpen*, *Cbet*; G1.123, 1.215; F, KNR, NNPH, RLPT, VP, Y (KW 39878)

**Typhula phacorrhiza (Reichard) Fr.** – dead branches; G1.123, 1.215; KNR (1, 2)

**Veluticeps abietina (Pers.) Hjortstam et Telleria** – stumps, dead branches; *Cbet*; G1.215, KNR (1, 2)

**Vuilleminia comedens (Nees) Maire** – dead branches; *Cbet*, *Qrob*; G1.215, I4.21; F, K, KNR, NNPH, RLPT, VP, Y

**V. coryli Boidin, Lanq. et Gilles** – dead branches; *Coav*; G1.215; RLPT

Hornbeam-oak forest is the most species-rich of aphyloporoid fungi (Tab. 3). That is due to presence many host-tree species. Well hornbeam-oak forests are protected in Kanivsky Nature Reserve, National Nature Park “Holosiivsky” and Regional landscape park “Trakhtemyriv”.

**Table 3. Number of species of aphyloporoid fungi recorded in each biotopes\* of deciduous trees.**

N	Biotopes	Number of species	% of biota
G Biotopes dominated by phanerophytes:			
1	1.112 “temporary flooded willow forests with <i>Salix alba</i> ”	22	15
2	1.123 “birch fresh and dry forests ( <i>Betulo-Quercetum roboris</i> )”	26	17
3	1.124 “aspen forests ( <i>Populus tremula</i> )”	3	2
4	1.132 “alder eutrophic swamp forests ( <i>Alnetea glutinosae</i> )”	4	3
5	1.215 “sub-continental hornbeam-oak forests ( <i>Carpinion betuli</i> )”	125	83
I Cultivated agricultural biotopes:			
6	4.111 “biotopes dominated by deciduous trees ( <i>Chelidonio-Robinion: Robinia pseudoacacia</i> L., <i>Acer negundo</i> L.)”	13	9
7	4.21 “parks”	23	15
8	4.22 “fruit and ornamental gardens”	26	17
In all:			
8		150	100

\* The classification of biotopes Y. P. Didukh (2011).

## CONCLUSION

So, aphyllorphoid fungi of deciduous forests on Kyivske Plato is represented by 150 species, 86 genera, 33 families and 11 orders of the class Agaricomycetes, the division Basidiomycota. They are growing on 36 host-trees species. Investigated plant communities are divided into 8 types. These biotopes of deciduous trees due to “temporary flooded willow forests with *Salix alba* L.”, “birch fresh and dry forests (Betulo-Quercetum roboris)”, “aspen forests (*Populus tremula*)”, “alder eutrophic swamp forests (*Alnetea glutinosae*)”, “sub-continental hornbeam-oak forests (*Carpinion betuli*)”, “biotopes dominated by deciduous trees (Chelidonio-Robinion: *Robinia pseudoacacia* L., *Acer negundo* L.)”, “parks” and “fruit and ornamental gardens”. Sub-continental hornbeam-oak forest is the most species-rich of wood-destroying fungi. 83% of biota of aphyllorphoid fungi is presented here. The rest of biotopes are presented by 17% and fewer of fungi. Considering that these plant communities are insufficiently investigated in mycological sense, we presume that further work will show the presence of species of aphyllorphoid fungi which have not so far been recorded in the biotopes on Kyivske Plato.

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RECEIVED: 7 August 2013.