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Bruce ING

## NEW RECORDS OF MYXOMYCETES IN ESTONIA

During the forays associated with the Tenth Congress of European Mycologists held in Tallinn in August 1989 many collections of myxomycetes were made. The use of moist chamber culture of bark from living trees resulted in developments of several species not previously recorded from Estonia.

The sites visited were of considerable ecological and mycological interest and are briefly described:

**Häädemeeste**, south of Pärnu, is a forest village with open pine forest on coastal sands.

**Heimtali Estate** is south-west of Viljandi and includes the woodland around the old distillery. The nemoral forest here is rich *Ulmus-Tilia* with *Actaea*, *Paris*, *Hepatica*, *Pulmonaria*, *Asarum* and *Mercurialis*.

**Kilingi-Nõmme** is a small forestry town, south-west of Pärnu, with street trees.

**Lahemaa National Park**, east of Tallinn, is a mixture of pine and spruce forest types with *Betula* and *Populus*, with ground vegetation dominated by *Vaccinium* spp. and mosses, near the coast of the Gulf of Finland.

**Loodi Forest**, south of Viljandi, is a nemoral *Picea-Pinus* stand on neutral soils, with a rich ground vegetation containing *Paris*, *Hepatica*, *Anemone*, *Oxalis* and *Rubus saxatilis*. The shrub layer is rich, dominated by *Corylus*. There is an abundance of decaying wood, an important habitat for myxomycetes. Nearby is the **Püstmäe** *Larix* plantation with much *Quercus robur*, *Acer platanoides* and *Betula pendula*.

**Märjamaa**, between Tallinn and Pärnu, has alvar spruce-pine forests on limestone.

**Nigula State Reserve**, south-east of Pärnu, consists of primeval woodland of many species, with abundant dead wood and reduced ground flora, and a fine raised bog with its marginal pine forest.

**Rannametsa Forest**, south of Pärnu, is a dry pine forest on coastal dunes, with a well-developed moss and *Cladonia* layer.

**Surju Forest**, south-east of Pärnu, has several forest types, with fine mossy pine forest and areas of paludal woodland with *Alnus* and *Picea* stands on peaty soils.

**Tartu** refers to the wooded park on the hill above the city.

**Viljandi** has street trees and an interesting area of woodland around the ruins of the castle.

The nomenclature of myxomycetes follows Ing (1980). An asterisk before a name indicates a taxon, under any name (not in Järva and Parmasto (1980), or Parmasto (1987)). Two asterisks indicate a probable addition to the recorded myxomycetes of the U.S.S.R. Specimens of most taxa are deposited in the Herbarium of the Institute of Botany and Zoology, Tartu; others are in the author's herbarium.

The species in the list reflect the high proportion of coniferous trees in the forests visited — many of these taxa are characteristic of pine or spruce forest in Europe and North America. Several species, including

some of those found on the bark of living trees, are typical of an oceanic rather than continental climate and this is borne out by the preponderance of ferns and the richness of bryophytes in the forests.

## MYXOMYCOTA

### ACRASIOMYCETES

**\*\*Pocheina rosea** (Cienk.) Loeblich et Tappin (*Guttulina rosea* Cienk.)  
On bark of living *Pinus* in moist chamber culture; Lahemaa. A common species of acid-barked trees, tolerant of moderate atmospheric pollution, known from much of Europe and North America.

### CERATIOMYXOMYCETES

**Ceratiomyxa fruticulosa** (Müll.) Macbr.  
On dead wood of *Pinus*, *Picea* and *Betula*; Heimtali, Lahemaa, Loodi, Nigula, Surju. A very common species, cosmopolitan.

**\*\*C. porioides** (Alb. et Schw.) Schröt.  
On stump of *Ulmus*; Heimtali. A rare species, developing from yellowish-green plasmodium; not recognised as distinct by all workers. Known from scattered localities in Europe, North America, southern Africa and Japan.

### MYXOMYCETES

**Arcyria cinerea** (Bull.) Pers.  
On dead *Pinus* wood, and bark of living *Quercus*, *Tilia* and *Ulmus* in moist chamber culture; Heimtali, Lahemaa, Loodi, Nigula. Very common, cosmopolitan.

**A. denudata** (L.) Wettst.  
On dead wood; Heimtali, Loodi, Nigula. Very common, cosmopolitan.

**A. incarnata** (Pers.) Pers.  
On dead wood; Lahemaa. Very common, cosmopolitan.

**A. obvelata** (Öder) Onsberg (*A. nutans* (Bull.) Grev.)  
On dead *Pinus* wood; Lahemaa, Surju. Very common, cosmopolitan.

**A. pomiformis** (Leers) Rost.  
On dead *Pinus* wood, and bark of living *Quercus* in moist chamber culture; Lahemaa, Loodi, Viljandi. Very common, widespread.

**\*Collaria arcyronema** (Rost.) Nann.-Brem. (*Lamproderma arcyronema* Rost.)  
On dead *Pinus* wood; Lahemaa. Frequent, cosmopolitan.

**\*C. elegans** (Racib.) Dhillon and Nann.-Brem. [*Comatricha elegans* (Racib.) List.]  
On dead *Pinus* wood; Häädemeeste, Lahemaa. Frequent and widespread.

**\*\*Comatricha alta** Preuss [*C. nigra* var. *alta* (Preuss) G. Lister]  
On dead *Pinus* wood; Nigula. Rare, scattered in Europe, South Africa and New Zealand; not recognised by all workers.

**\*C. laxa** Rost.  
On dead *Pinus* wood; Nigula. Widespread but not common.

**C. nigra** (Pers.) Schröt.  
On dead *Acer*, *Betula*, *Picea* and *Pinus* wood; Lahemaa, Loodi, Nigula, Tartu. One of the commonest species, cosmopolitan.

**Cribraria agrillacea** (Pers.) Pers.  
On dead *Pinus* wood; Lahemaa, Nigula, Surju. Common and widespread in temperate regions.

- \***C. aurantiaca** Schrad.  
On dead *Picea* wood; Loodi. Common and widespread in temperate regions.
- \*\***C. intricata** Schrad.  
On dead *Pinus* wood; Lahemaa. Cosmopolitan, much commoner in the tropics.
- \***C. persoonii** Nann.-Brem. [*C. vulgaris* auct. p. p.]  
On dead *Pinus* wood; Lahemaa. Probably common and widespread but not always distinguished.
- \***C. piriformis** Schrad.  
On dead *Pinus* wood; Lahemaa, Märjamaa, Surju. Common in northern conifer forests, rare elsewhere.
- \***Dictydiaethalium plumbeum** (Schum.) Rost.  
On dead *Betula* wood; Loodi. Frequent, cosmopolitan.
- Diderma globosum** Pers.  
On living stems of *Succisa*; Loodi. Widespread and frequent in temperate regions but often confused with related species.
- \***Didymium bahiense** Gottsberger  
On bark of living *Fraxinus* in moist chamber culture; Nigula. Usually a litter species and not at all common in bark culture; this is the most common of the orange-stalked members of the *D. nigripes* aggregate.
- D. difforme** (Pers.) S. F. Gray  
On marsh litter; Heimtali. One of the commonest litter species, cosmopolitan.
- D. melanospermum** (Pers.) Macbr.  
On bare rock in *Pinus* litter; Lahemaa. A common and widespread species of pine litter, this specimen had clearly migrated onto the rock.
- \*\***Echinostelium brooksii** Whitney  
On bark of living *Pinus* in moist chamber culture; Lahemaa. Widespread and common.
- \***E. colliculosum** Whitney et Keller  
On bark of living *Pinus* in moist chamber culture; Loodi. Widespread and common.
- \*\***E. fragile** Nann.-Brem.  
On bark of living *Pinus* in moist chamber culture; Loodi. Widespread and common.
- \***E. minutum** de Bary  
On bark of living *Pinus*, *Populus* and *Quercus* in moist chamber culture; Kilingi-Nõmme, Loodi, Viljandi. Common on bark, and occasionally wood and litter, cosmopolitan.
- \***Enerthenema papillatum** (Pers.) Rost.  
On dead *Picea* and *Pinus* wood; Lahemaa, Loodi, Nigula, Rannametsa. Common and widespread on conifer wood but usually very common on *Quercus* bark, although not recorded on this substrate on this occasion.
- \*\***Fuligo rufa** Pers. [*F. septica* var. *rufa* (Pers.) R. E. Fr.]  
On dead *Acer* wood; Loodi. Macro- and microscopically distinct and usually on very rotten wood or straw. Not common.
- F. septica** (L.) Weber var. **flava** (Pres.) Morg.  
On dead *Pinus* and *Populus* wood; Heimtali, Lahemaa, Loodi, Surju. Very common on dead wood, cosmopolitan.
- \*\***Licea inconspicua** Brooks et Keller  
On bark of living *Acer* in moist chamber culture; Viljandi. A rare species, usually associated with lichens, not common outside North America.

\***L. kleistobolus** Martin

On bark of living *Pinus* in moist chamber culture; Lahemaa, Loodi. Common and widespread.

\***L. parasitica** (Zukal) Martin

On bark of living *Fraxinus*, *Populus* and *Tilia* in moist chamber culture; Heimtali, Kilingi-Nõmme, Nigula. Common on bark of all kinds in the temperate regions.

\***L. pusilla** Schrad.

On dead *Pinus* wood; Lahemaa. Frequent on wood but also on bark, widespread.

**Lycogala epidendrum** (L.) Fr.

On dead wood; Heimtali, Lahemaa, Loodi, Nigula, Surju. Very common, cosmopolitan.

**L. exiguum** Morg.

On dead *Pinus* wood; Surju. Cosmopolitan but uncommon, often not distinguished from *L. epidendrum*.

\***Macbrideola cornea** (G. List. et Cran) Alexop.

On mossy bark of living *Fraxinus* and *Ulmus* in moist chamber culture; Heimtali, Nigula. Common in damper woodland — often with an oceanic distribution in Europe and apparently confined to north temperate regions.

**Metatrichia vesparium** (Batsch) Nann.-Brem.

On dead *Betula* wood; Loodi. Frequent and widespread, especially in the tropics.

**Mucilago crustacea** Wiggers [*M. spongiosa* (Leyss.) Morg.]

On living grass stems; Lahemaa. Common, especially in limestone grassland, cosmopolitan.

\*\***Paradiacheopsis cribrata** Nann.-Brem.

On bark of living *Pinus* in moist chamber culture; Lahemaa. Uncommon and apparently confined to Europe.

\*\***P. fimbriata** (G. List. et Cran) Hertel (*Comatricha fimbriata* G. List. et Cran)

On bark of living *Pinus* in moist chamber culture; Lahemaa, Loodi. Common and widespread, often in moderately polluted areas, including town trees.

\***P. solitaria** (Nann.-Brem.) Nann.-Brem. [*C. solitaria* Nann.-Brem.]

On bark of living *Acer* and *Pinus* in moist chamber culture; Lahemaa, Viljandi. Widespread but not very frequently recorded, usually in older forest, away from polluted areas.

\***Perichaena chrysosperma** (Currey) List.

On bark of living *Fraxinus*, *Populus*, *Quercus* and *Ulmus* in moist chamber culture; Heimtali, Kilingi-Nõmme, Nigula. Common and widespread.

**P. corticalis** (Batsch) Rost.

On dead wood; Nigula. Common and widespread.

\*\***Physarum auriscalpium** Cooke

On bark of living *Populus* in moist chamber culture; Kilingi-Nõmme. Frequent but not common, sometimes confused with *P. decipiens*.

\***P. leucophaeum** Fr.

On bark of living *Fraxinus* in moist chamber culture; Heimtali. Usually on dead wood, rare on bark, otherwise common and widespread.

**P. nutans** Pers.

On dead wood; Heimtali, Lahemaa, Loodi, Nigula, Surju. One of the commonest myxomycetes, cosmopolitan.

- \***P. oblatum** Macbr.  
On bark of living *Quercus* in moist chamber culture; Loodi. Cosmopolitan but uncommon on wood and bark.
- \***P. virescens** Ditmar  
On living terrestrial mosses; Lahemaa. Widespread but not a common species, often with an oceanic distribution pattern in Europe.
- Stemonitis axifera** (Bull.) Macbr.  
On dead wood; Loodi, Nigula, Surju. Cosmopolitan and usually common.
- \***S. flavogenita** Jahn  
On dead wood; Nigula. Widespread and frequent, but less common than preceding species.
- S. fusca** Roth  
On dead wood; Heimtali, Lahemaa, Loodi, Nigula, Surju. Very common, cosmopolitan.
- \*\***Stemonitopsis gracilis** (G. List.) Nann.-Brem. [*Comatricha pulchella* var. *gracilis* (Wing.) G. List.]  
On dead *Pinus* wood; Nigula. Widespread but uncommon, not recognised as distinct by all workers.
- \*\***S. hyperopta** (Meyl.) Nann.-Brem. [*Stemonitis hyperopta* Meyl.]  
On dead *Picea* and *Pinus* wood; Lahemaa, Loodi, Surju. Widespread and frequent.
- S. typhina** (Wiggers) Nann.-Brem. [*Comatricha typhoides* (Bull.) Rost.]  
On wet, dead wood; Nigula, Surju. Very common, cosmopolitan.
- \***Symphytocarpus flaccidus** (List.) B. Ing et Nann.-Brem. [*Stemonitis splendens* var. *flaccida* List.]  
On dead *Pinus* wood; Rannametsa, Surju. Widespread and frequent, not recognised as distinct by all workers.
- \***S. impexus** B. Ing et Nann.-Brem. [*Stemonitis confluens* p. p.]  
On forest litter; Nigula. Uncommon, apparently confined to Europe.
- \***Trichia botrytis** (Gmel.) Pers.  
On dead *Picea* and *Pinus* wood; Lahemaa, Loodi, Nigula, Surju. Very common in temperate regions, less so in the tropics.
- T. decipiens** (Pers.) Macbr.  
On dead wood; Lahemaa, Loodi, Surju. Very common, cosmopolitan.
- \***T. persimilis** P. Karst.  
On dead wood; Lahemaa. Common in temperate regions but only in the mountains in the tropics; not separated by some modern authors but in Europe it is distinct both morphologically and ecologically from *T. affinis* and *T. favoginea*.
- T. scabra** Rost.  
On dead *Betula* wood; Loodi. Common and cosmopolitan.
- T. varia** (Pers.) Pers.  
On very rotten wood; Lahemaa, Loodi, Nigula. Common and cosmopolitan.
- Tubifera ferruginosa** (Batsch) Gmel.  
On dead *Pinus* wood; Lahemaa. Common and cosmopolitan.

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## UUSI ANDMEID LIMASEENTE KOHTA EESTIS

Tallinnas 1989. aasta augustis peetud X Euroopa mükoloogide kongressi ekskursioonidel leidis autor 63 liiki limaseeni, millest 38 on esmaleid Eestist. Määramiseks kasutati nii kogutud herbaareksemplare kui ka elusate puude kooretükkidest niiskes kambris ajatatud kultuure.

Nimestikus tähistab üks tärn limaseene nime ees esmaleidu Eestist, kaks täрни tõenäoliselt esmakordset märkimist NSV Liidust.

Брус ИНГ

## НОВЫЕ ДАННЫЕ О МИКСОМИЦЕТАХ ЭСТОНИИ

Во время экскурсий, организованных в рамках X конгресса европейских микологов (Таллинн, август 1989 г.), автором обнаружено 63 вида миксомицетов; из них 38 являются первоходками в Эстонии. Для идентификации видов были использованы как гербарные экземпляры, так и культуры, полученные во влажной камере из кусков коры живых деревьев.

В списке видов перед названием миксомицета одной звездочкой обозначены перво находки в Эстонии, двумя звездочками — виды, которые, по всей вероятности, отмечены впервые в СССР.