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On the Fungusflora of Ruhnu (Runö)
Island

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TARTU ÜLIKOOLI
RAAMATUKOGU

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On the Fungusflora of Ruhnu (Runö) Island.

By E. Lepik.

We have already had several reports on the Phanerogams of Ruhnu Island by Sass (1860), Schmidt (1864), Kupffer (1896), Sresnevsky (1904), Hemmendorf (1909), Hildén (1921, 1922, 1923, 1924), Klein (1924) and Loevis of Menar (1926).

For a specially valuable summary of the flora of this island, we are indebted to Conservator Dr. J. Gröntved (1929). According to his own researches and all the sources of literature, Gröntved has, on the whole, summed up 518 Vascular Cryptogams and Phanerogams on it. The list is supplemented with 30 more species by Vilberg (1934, p. 747), and 38 species by previous authors are to be regarded as doubtful.

During my stay on the island in the Summer of 1934 I noticed a few new species and some new habitats. Therefore by order of the Ministry of Agriculture 2 species (*Rhamnus cathartica* and *Bunias orientalis*) were rooted out and destroyed all over the island.

On the other hand, we entirely lack eventual data on the fungusflora of the island. I, therefore, took it upon myself to note all the fungi I came across during my stay there from the 14th till the 20th of June, 1934¹. These notes, naturally, cannot give a survey of the whole fungusflora of Ruhnu, because at this time of the year there could be gathered only the fungi which develop in early Summer. Of Uredinales there could be found *Aecia* or *Urediniospores* only, and many species, the de-

¹ For the subvention to study the Island of Ruhnu I am indebted to the Ministry of Agriculture and to Mr. J. Ümarik, Chief of Experimental Affairs.

termination of which is impossible without Teliospores, remain open to question for the present. Most Ustilaginales had not come to view yet. These gaps in the fungusflora could not be filled until after observation in an Autumn season.

On the ecological Conditions on Ruhnu Island.

Ruhnu Island (Runö) is the south-western island of Estonia. It is situated at latitude $57^{\circ} 48' N.$ and longitude $23^{\circ} 15' E.$ in the

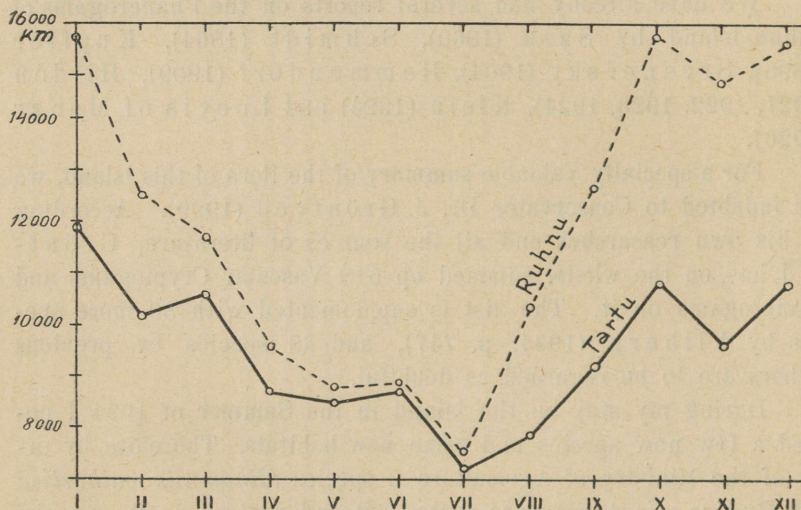


Fig. 1. Ways of Winds in Kilometres at Tartu and in the Island of Ruhnu, average for the years 1931—1934¹.

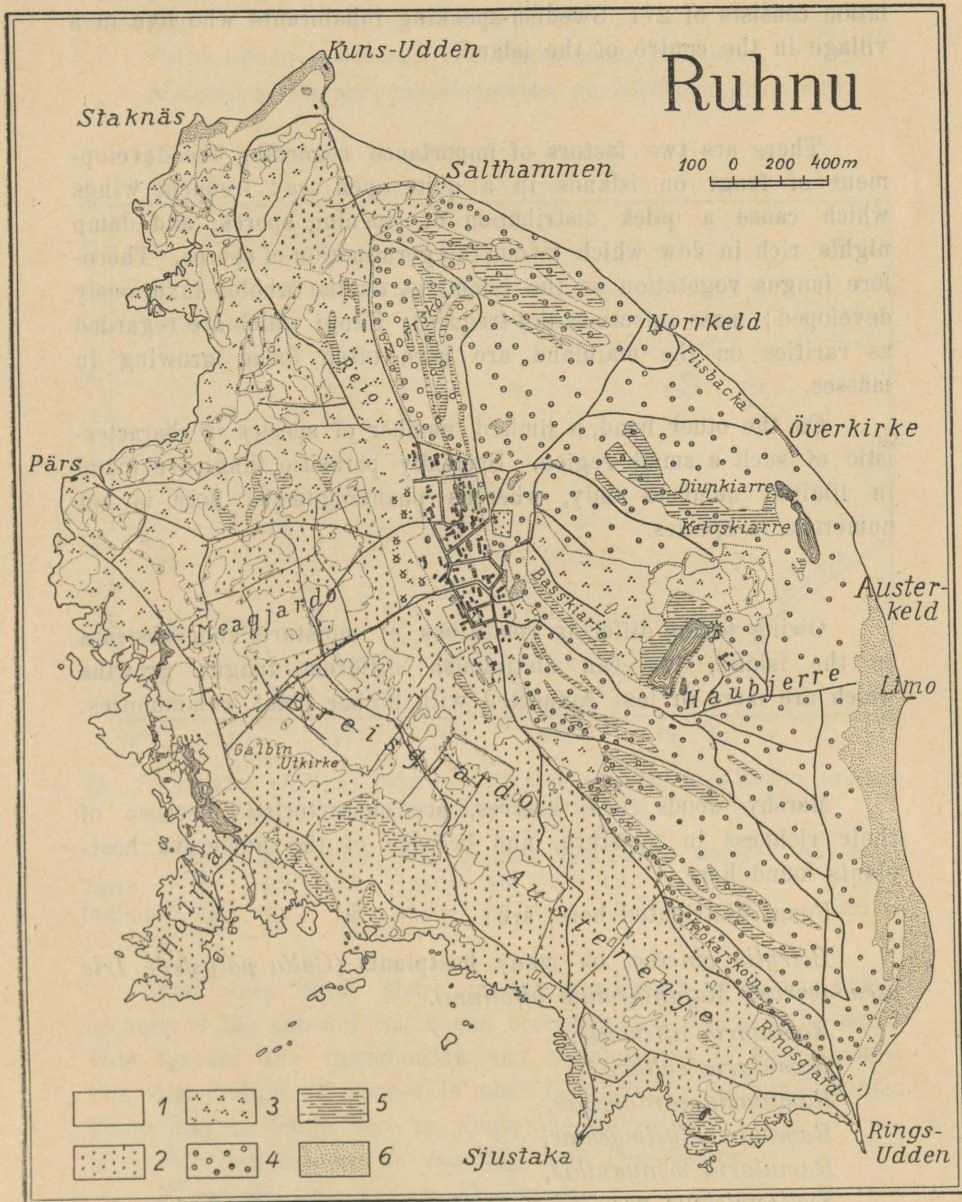
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Tartu	11959	10238	10512	8712	8597	8741	7250	7963	9181	10793	9677	10735
Ruhnu	15710	12622	11786	9648	8820	8791	7524	10303	12715	15782	14868	15475

Gulf of Riga, 70 km. from Kuresaare in the island of Saaremaa, and 110 km. from Riga. Ruhnu Island has no other islands in its vicinity. The nearest point on the mainland is the northern point of Kurland, Domesnās, at 40 km. distance.

The island is 5 km. long from north-west to south-east,

¹ The data have been figured out by Mr. E. Maalman, assistant at the Meteorologic Observatory of the University of Tartu.

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and 3 km. wide with an area of 10,7 sq. km. The population consists of 271 Swedish-speaking inhabitants who live in a village in the centre of the island.

There are two factors of importance regarding the development of fungi on islands in a quite open sea: frequent winds which cause a quick distribution of ripening spores, and damp nights rich in dew which favour the germination of spores. Therefore fungus vegetation on the island is, on the whole, luxuriously developed; mass infections are frequent. Fungi which are regarded as rarities on the mainland are here often found growing in masses.

On the other hand, a limited number of species is characteristic of such a small region. Specially parasitic fungi are found in limited numbers only, whereas phanerogamous flora is not numerous in species.

Owing to the differing conditions of moisture and substrata on the island, we can distinguish different fungus growths which are more or less connected with higher plant communities.

Marshy woods, i. e. kiarres, are characteristic because of their richness in moisture, and because of the numerous host-plants found here.

Fungi distributed here, are:

Botrytis cinerea, on many hostplants (*Calla palustris*, *Iris pseudacorus*, *Majanthemum bifolium*).

Ramularia alismatis,

Ramularia calthae,

Ramularia cardamines,

Ramularia lysimachiae,

Ramularia menyanthi,

Scolicotrichum graminis (on *Alopecurus aequalis* Sob.),

Septogloeum fragariae on *Comarum palustre*,

Septoria callae,

Septoria lycopi,

Peronospora dentariae on *Cardamine amara* and *Cardamine pratensis*,

Peronospora ranunculi on *Ranunculus flammula*,

Melampsorella caryophyllacearum on *Stellaria graminea*.

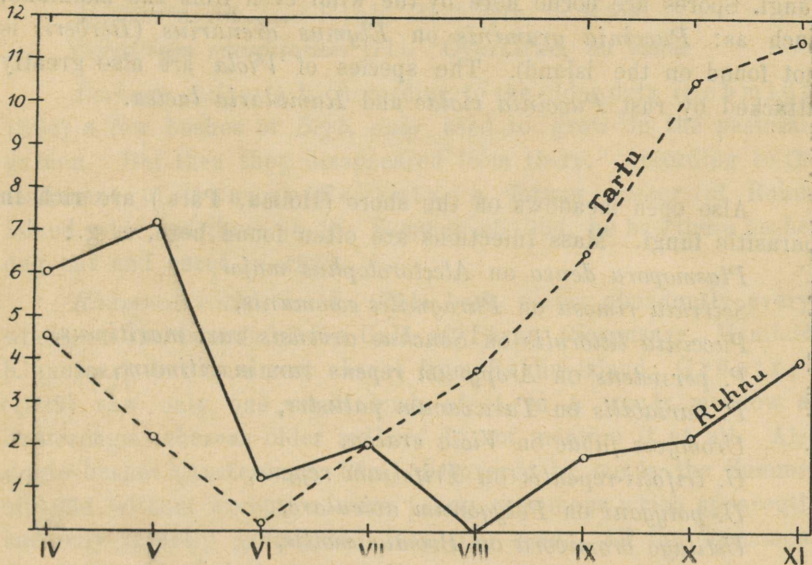


Fig. 2. Number of Foggy Days at Tartu and in the Island of Ruhnu, average for the years 1931-1934¹⁾.

	April	May	June	July	August	September	October	November
Tartu	4.5	2.2	0.2	2.0	3.8	6.5	10.5	11.5
Ruhnu	6.0	7.2	1.2	2.0	0.0	1.8	2.2	4.0

The steep sandy shore in the north-east is always damp, because of the sub-soil water and brooks which intersect the shore. This favours the germination and development of fungi spores. The distribution of spores is also favoured by continual winds. There may be found here in plenty the following:

Puccinia poarum on *Tussilago* and *Poa*-species,

P. epilobii-tetragoni on *Epilobium*,

P. suaveolens on *Cirsium arvense* var. *horridum*,

1) The data have been figured out by Mr. E. Maalman, assistant at the Meteorologic Observatory of the University of Tartu.

Fabraea cerastiorum on *Cerastium caespitosum*,
Fabraea ranunculi on *Ranunculus* sp.,
Epichloe typhina, etc.

Down-plants (Limo) are also greatly infected with parasitic fungi. Spores are borne here by the wind even from the mainland, such as: *Puccinia graminis* on *Elymus arenarius* (*Berberis* is not found on the island). The species of *Viola* are also greatly attacked by rust *Puccinia violae* and *Ramularia lactea*.

Also open meadows on the shore (Holma, Pärs) are rich in parasitic fungi. Mass infections are often found here, e. g.:

Plasmopora densa on *Alectorolophus major*,
Scirrhia rimosa on *Phragmites communis*,
Puccinia littoralis on *Sonchus arvensis* var. *maritimus*,
P. persistens on *Aropyrum repens* var. *maritimum*,
P. variabilis on *Taraxacum palustre*,
Uromyces fabae on *Vicia cracca*,
U. trifolii-repentis on *Trifolium repens*,
U. polygoni on *Polygonum aviculare*,
Ustilago bromivora on *Bromus mollis*,
Mastigosporium album on *Alopecurus ventricosus*,
Ramularia heraclei on *Heracleum sibiricum*,
Fusoma heraclei on *Heracleum sibiricum*.

The woody meadows (Austerenge) and mixed woods are also very rich in various fungi. A great number of fungi enumerated in the present treatise belong to these habitats.

On Higher Plants on Ruhnu Island.

While examining the fungi on Ruhnu Island, I caught sight of a few higher plants, the habitat of which may be of importance in a further study of the vegetation of this place. In the undermentioned list the plants which are missing in the enumeration of plants by Gröntved (1929) are marked with an asterisk (*).

* *Alopecurus aequalis* Sob. was found in several places in marshy woods: Keloskiarre, Haubjerreskiarre.

Koeleria glauca D. C. is found near Limo on the seashore.

* *Poa irrigata* Lindm. is found here and there in dry places.

* *Festuca rubra* L. var. *arenaria* (Osb.) Fries. Limo, on the downs.

* *Carex pseudocyperus* L. Haubjerre, in a marshy wood.

Neottia nidus avis Rich. Haubjerre, in wood.

Cerastium caespitosum Gil. Överkirke, on sand.

Berberis vulgaris L. According to the older data (Schmidt, 1864) a few bushes of *Berb. vulg.* used to grow in the pastorate garden. But then they disappeared from there. According to the statement of Gunnar Schantz, a former pastor of Ruhnu Island who was there in the Summer of 1934, he had these bushes dug out and burnt in 1926.

Rhamnus cathartica L. This bush occurs abundantly everywhere on the islands of the Gulf of Pärnu (Sorgusaar, Manilaid, Kihnusaar), but is almost absent from Ruhnu island. Gröntved (1929) saw only one small bush of it in a woody meadow at Austerenge, whereas older authors do not mention it at all. Also single bushes (Austerenge, Pärs) discovered by me in the Summer of 1934 without exception were young specimens which apparently had only recently germinated from the seed. All the specimens found were destroyed.

Bunias orientalis L. According to the present data this plant grows only in Haubjerre by the lighthouse (Hildén, 1921). In the Summer of 1934 I found 4 specimens of this plant in the abovementioned place, and 35 and many germs in the pastorate. It was not found in other places. All the specimens of *Bunias* found were rooted up and destroyed.

Cardamine impatiens L. According to Gröntved (1929) this plant has been found on Ruhnu island by Ernst Hemmen-dorff (1908) only. In 1934 I found this plant in a damp wood near Överkirke.

Vicia tetrasperma (L.) Moench. var. *leiocarpa* (Gren. et Godr.) Asch. et Graebn. Haubjerre, Austerenge, in the field, often.

* *Crepis paludosa* (L.) Moench. Haubjerre, in a damp wood.

* *Crepis mollis* (Jacq.) Asch. (test. P. Thomson). This

plant was formerly found in Estonia in the environs of Tartu, by C. A. Meyer (1920) and Glehn (1860). But Kupffer (1907) took these discoveries as erroneous and marked Kurland as the limit of the geographical distribution of *Crepis mollis*. But the present discovery and also a few recent discoveries in the environs of Tartu (Kauer), confirm the presence of the plant in Estonia, thereby moving the geographical distribution of the plant perceptibly to the north.

List of Species.

Phycomycetes.

Peronosporaceae.

Cystopus candidus (Pers.) Lév. on *Capsella bursa pastoris* (L.) Moench. Haubjerre 15. VI., not often found. Ringsgjardo, 18. VI.

Cystopus tragopogonis Schröt. on *Scorzonera humililis* L. Austerenge, 18. VI.

Peronospora alta Fuck. on *Plantago major* L. Haubjerre 15. VI.

Peronospora dentariae Rabh. on leaves and stalks of *Cardamine amara* L., Haubjerre, 19. VI; on *Cardamine pratensis* L., Haubjerre in a half-dried swamp to the West of the lighthouse, 15. VI.

Peronospora effusa Rabenh. on *Chenopodium album* L., by the lighthouse, 15. VI.

Peronospora ranunculi Gäumann on *Ranunculus flammula* L., Keloskiarre, in a marshy wood, 17. VI.

Peronospora parasitica Tul. on *Capsella bursa pastoris* (L.) Moench., Haubjerre, 15. VI, often. Ringsgjardo, 18. VI.

Phytophthora infestans De Bary on tubers, *Solanum tuberosum* L. lighthouse, 19. VI.

Plasmopara densa (Rabh.) Schr. on *Alectorolophus major* Rchb. (*Rhinanthus major* Ehrh.) Pärs, 16. VI.; Keloskiarre, 17. VI; Holma, 19. VI.

Plasmopara nivea Schroeter on *Aegopodium podagraria* L. Austerenge, not common, 18. VI; on *Anthriscus silvestris* L. Pastorate, 16. VI.

Plasmopara pygmaea on *Anemone nemorosa* L. Austerenge, in the meadow, not common, 18. VI.

Ascomycetes.

Chlorosplenium aeruginascens (Nyl.) Rehm. on *Alnus glutinosa* Gaertn. Austerkeld, in a wood, 17. VI.

Claviceps purpurea Tul. on rye, *Secale cereale* L., common. Breisgjardo, Haubjerre, Utkirke, etc.

Epichloe typhina (Pers.) Tul. on *Dactylis glomerata* L. Austerenge, in a level woody meadow, 18. VI, on *Poa pratensis* L. Keloskiarre, in the wood 17. VI; Nordkeld, by the seashore, 17. VI.

Erysiphe graminis DC. on *Agropyrum repens* P. Beauv. var. *vulgare* (Döll.) Volkart. Kungsgjardo, 16. VI; Breisgjardo, 19. VI; on *Agropyrum repens* P. Beauv. var. *maritimum* Koch, Holma, 19. VI; Kuns-Udden, 16. VI; on *Apera spica venti* L., in a rye-field by the lighthouse, often, 15. VI; on *Poa angustifolia* L. Kungsgjardo, 16. VI; on *Poa pratensis* L. Kungsgjardo, 16. VI, Austerkeld, 17. VI; on *Secale cereale* L. in rye-fields often. The rye allotments cultivated in forest-tracts have suffered especially badly this year, whereas in the open much less rye-mildew occurs (in a rye-field in the wood by the lighthouse often, by Breisgjardo sporadically).

Fabraea cerastiorum (Wallr.) Rehm on *Cerastium caespitosum* Gil. (det. K Eichwald) Överkirke, on the damp sandy soil, at the foot of a steep hillside in masses, otherwise not often, 15. VI.

Fabraea ranunculi Karst. on *Ranunculus auricomus* L. Överkirke, 15. VI; on *Ranunculus cassubicus* L. Haubjerre, by the lighthouse, 15. VI.

Lophodermium juniperinum (Fr.) on needles of *Juniperus communis* L. often (Haubjerre, Austerenge, Staknäs, Salthammen, ect.)

Lophodermium macrosporum R. Hart. on needles of *Picea excelsa* (Lam.) Link often (Haubjerre, Austerenge, Limo, etc.).

Lophodermium pinastri (Schrad.) Chév. on needles of *Pinus silvestris* L. in pinewoods all over the island often.

Microsphaera alphitoides Griffon et Maublanc on *Quercus robur* L. Pärs, 16. VI. A few young oaks were attacked by mildew. Perithecia of fungus were not to be found.

Mycosphaerella fragariae (Tul.) Lindau on *Fragaria* sp. cult. in the garden by the lighthouse 19. VI.

Mycosphaerella stemmatea (Fr.) Vesterg. on the leaves of

Vaccinum vitis idaea L., rather widely spread. Austerenge, 18. VI; Haubjerre, in the wood, 18. VI; Överkirke, 15. VI.

Scirrhia rimosa (Alb. et Schw.) Winter on *Phragmites communis* L. Austerenge, in shallow coves, often, 18. VI.

Sclerotinia cinerea Schroet. on *Prunus cerasus* L. in gardens, often, 16. VI.

Sclerotinia fructigena Schroet. on *Pirus malus* L. and *Pirus communis* L. in gardens, common, 16. VI.

Sphaerotheca mors uvae (Schw.) Berk. et Curt. on *Ribes grossularia* L. in gardens, widespread.

Taphrina turgida Sadeb. on *Betula verrucosa* Ehrh. in the village, 16. VI.

Venturia inaequalis (Cooke) Aderh. on *Pirus malus* L. in gardens. Often on the wild *Pirus malus* L. Breisgardo, 16. VI.

Venturia pirina Aderh. on *Pirus communis* L. in gardens, rarer than *Venturia inaequalis*. 16. VI.

Basidiomycetes.

Uredinales.

Chrysomyxa empetri (Pers.) Rostr. II on *Empetrum nigrum* L. Salthammen, in a dry wood, 17. VI.

Chrysomyxa Ledi (Alb. et Schw.) De Bary. I on *Picea excelsa* (Lam.) Link. Haubjerre, often, 17. VI; II on *Ledum palustre* L. Keloskiarre, in a marshy wood, widely spread, to be seen from an infection of a previous year.

Chrysomyxa pirolae (DC.) Rostrup. II on *Pirola minor* L. Austerkeld, in the wood, 17. VI

Coleosporium senecionis Lé v. I on *Pinus silvestris* L. not especially often. Salthammen, 17. VI; II on *Senecio vulgaris* L. Salthammen, 17. VI; Rings-Udden, 18. VI.

Gymnosporangium juniperinum (L.) Mart. I on *Sorbus aucuparia* L., common. Austerenge, 15. VI.

Gymnosporangium mali-tremelloides Kleb. I on *Pirus malus* L., seldom on a wild apple-tree. Breisgardo, 16. VI.

Melampsorella caryophyllacearum Schroeter. II on *Stellaria graminea* L. Kiloskiarre, in a half-marshy wood, often 17. VI; Nordkeld, in the wood, 17. VI.

Melampsora lini (Pers.) Desmaz II on *Linum catharticum* L. Kungsjardo, 16. VI.

Phragmidium rubi-idaei (Pers.) Karst. I, II on *Rubus idaeus* L. Austerenge, 15. VI, often.

Phragmidium subcortitium (Schrank) Winter (?) I on *Rosa canina* L. Breisgjardo, in a meadow, 16. VI, II on *Rosa glauca* Vill. (?). Meagjardo, 16. VI.

Puccinia chaerophylli Purton II on *Anthriscus silvestris* (L.) Hoffm. Pastorate, 16. VI.

Puccinia coronata Corda I on *Rhamnus frangula* L. in mixed woods and in woody meadows spread everywhere and regularly attacked by rust. Austerenge, Haubjerre etc.; II on *Apera spica venti* P. Beauv. Breisgjardo, in a rye field, 19. VI; II on *Festuca rubra* L. Nordkeld, 17. VI; II on *Poa nemoralis* L. Austerenge 18. VI.

Puccinia crepidis Schroet. I. on *Crepis tectorum* L. Ringsgjardo, often, 18. VI.

Puccinia dispersa Erikss. II on rye, *Secale cereale* L. spread rather widely everywhere. Aecia on *Anchusa arvensis*, which is met as a weed everywhere in the fields, had not yet been developed (Haubjerre, Breisgjardo, etc.).

Puccinia epilobii-tetragonii (DC.) Wint. I on *Ebilobium palustre* L. Överkirke, 17. VI, not often.

Puccinia graminis Pers. (II) III on *Elymus arenarius* L. Limo, 18. VI. Teliospores wintered on *Elymus*. Since *Berberis vulgaris* is not found on the island of Ruhnu, the Aeciospores have apparently been carried there from the continent by wind.

Puccinia litoralis Rostr. I on *Sonchus arvensis* L. var. *maritimus* Wahlb. Holma, in the meadow by the sea, often, 19. VI.

Puccinia lolii Niels. (*Pucc. coronifera* Klebh.) I on *Rhamnus cathartica* L. Austerenge, not often, 16. VI; II on *Festuca pratensis* Huds. Nordkeld, on a damp shore, not often, 17. VI.

Puccinia major Dietel. I on *Crepis paludosa* (L.) Moench. Haubjerre, 19. VI, not often.

Puccinia obscura Schroet. II on *Luzula pilosa* Willd. Nordkeld, in the wood, 17. VI.

Puccinia Opizii Bubàk I on *Lactuca muralis* Fres. Haubjerre, in a wood by the lighthouse, 15. VI; Staknäs, 16. VI.

Puccinia paludosa Plowr. I on *Pedicularis palustris* L. Austerenge, 15. VI.

Puccinia persistens Plowr. II on *Agropyrum repens* P. Beauv. var. *maritimus* Koch. Holma, 19. VI; II on *Agropyrum repens* P. Beauv. var. *vulgare* (Döll.) Volkart in the fields, Breisgardo, 19. VI.

Puccinia pimpinellae (Strauss), Martius I on *Pimpinella saxifraga* L. Kungsgardo, 16. VI.

Puccinia poarum Nielsen I on *Tussilago farfara* L. Austerkeld, 17. VI. On a small stretch along the seashore a mass-infection, whereas the plants off this place were quite healthy. Nordkeld, the same, 17. VI. There were developed 300 and more Aeciapustules on a leaf. II on *Poa annua* L. Nordkeld, 17. VI; II on *Poa irrigata* Salthammen, in a dry place, 17. VI; II on *Poa pratensis* L. Austerkeld, by the seashore, 17. VI; Nordkeld, 17. VI.

Puccinia ribesii-caricis Kleb. I on *Ribes grossularia* L. spread in gardens. I on *Ribes rubrum* L. Austerenge, 15. VI; Utkirke, 16. VI.

Puccinia suaveolens (Pers.) Rostr. O, II on *Cirsium arvense* (L.) Scop. Ringsgardo, in the fields, often, 18. VI; O, II on *Cirsium arvense* var. *horridum* Vimm. Överkirke, 15. VI; Staknäs, 16. VI; Haubjerre, 16. VI, often.

Puccinia symphyti-bromorum F. Müller (?) II on *Bromus secalinus* L. Breisgardo, in the rye-field, 19. VI. The Aecia were not to be found, therefore the existence of this species is open to question.

Puccinia urticae-caricis (Schum.) Rebert. I on *Urtica dioica* L. Pastorate, 16. VI; II, III on *Carex pseudocyperus* L. Haubjerre, in a marshy wood, 19. VI.

Puccinia variabilis Greville I on *Taraxacum palustre* DC. Holma, on the meadows by the seashore, 19. VI.

Puccinia violae (Schum.) DC. I on *Viola palustris* L. (det. K. Eichwald). Austerenge, in a damp wood of leafy trees, 17. VI. I on *Viola silvestris* Rchb. (det. K. Eichwald). Haubjerre, in a wood by the lighthouse, 15. VI; Kuns-Udden, in the wood, 16. VI; II on *Viola canina* (L.) Rchb. (det. K. Eichwald). Limo, on lower sandy plains on the downs, 18. VI.

Triphragmium ulmariae (Schum.) Link I on *Filipendula ulmaria* Maxim. Austerenge, in the meadow, 15. VI.

Uredo anthoxanthiana Bubàk II on *Anthoxanthum odoratum* L. badly infected, Utkirke, 16. VI; Breisgardo, in the meadow, 16. VI.

Uredo on *Crepis mollis* (Jacq.) Asch. could not be determined more closely, since at that time there were to be found only Urediniospores. According to H. Sydow (in litt.) the fungus might be identic with *Puccinia Crucheti* Hasler or with *Puccinia major* Dietel. *Puccinia major* (I) has been found on *Crepis paludosa* on Ruhnu Island, whereas *Puccinia Crucheti* has not been found till now in Estonia.

Uromyces acetosae Schroet. II on *Rumex acetosa* L. Rings-Udden, 18. VI; Austerenge, 18. VI.

Uromyces dactylidis Otth. I on *Ranunculus acris* L. Kungjardo, 16. VI; on *Ranunculus polyanthemus* L. Kungjardo, 16. VI.

Uromyces fabae (Pers.) De Bary I on *Vicia cracca* L. Holma, in the meadows by the seashore, 19. VI.

Uromyces polygoni (Pers.) Fuck. I on *Polygonum aviculare* L. Holma, by the shore, often, 19. VI; II on *Polygonum convolvulus* L. Ringsjardo, 18. VI.

Uromyces trifolii-repentis (Castagne) Liro. I, II, III on *Trifolium repens* L. Holma, by the shore, often, 19. VI.

Ustilaginales.

Urocystis occulta (Wallr.) Rabh. on *Secale cereale* L., often.

Ustilago bromivora (Tul.) Fischer v. Waldheim on *Bromus mollis* L., Holma on the seashore, 19. VI.

Ustilago scorzonerae (Alb. et Schw.) Schroeter on *Scorzonera humilis* L. Austerenge, 18. VI, often.

Tuburcinia Kmetiana (Magn.) Liro in Annales Univ. Fenn. Aboensis, A, I, 1923, p. 94 on *Viola tricolor* L. subsp. *arvensis* Murr., not often.

This fungus, new to Estonia, has been hitherto found only in Finland, Hungary, France and Sweden. On the Island of Ruhnu it was found isolated on a *Viola* that grew as a weed in a rye-field. I happened to gather 10 specimens in all. The blossoms of all the specimens found were infected with fungi, whereas the leaves and stalks were entirely free from them.

Tuburcinia trientalis Berk. et Br. on *Trientalis europaea* L. Austerenge, often, 18. VI.

Tremellales.

Sebacina calcea (Pers.) Bres. on *Picea excelsa* (Lam.) Link. Haubjerre, in the wood, 19. VI (det. V. Litschauer — Innsbruck).

Cantharellales.

Exobasidium vaccinii Woron. on *Vaccinium vitis idaea* L. common, Haubjerre, in the wood by the lighthouse, 17. VI.

Peniophora incarnata (Pers.) Karst. on *Alnus glutinosa* Gaertn. Haubjerre, in the wood by the lighthouse, 18. VI (det. V. Litschauer — Innsbruck).

Thelephora terrestris Ehrh. on the ground in a dry pine-wood, Haubjerre, 18. VI.

Polyporales.

Bjerkandera adusta (Eilld. ex Fries) Karst. on *Populus tremula* L. Haubjerre, 19. VI (det. V. Litschauer — Innsbruck).

Cloeocystidium ochraceum (Fries.) Litschauer on a decaying stump of *Pinus silvestris* L. Salthammen, in the wood, 17. VI (det. V. Litschauer — Innsbruck).

Coriolus abietinus (Dicks.) Quél. on *Picea excelsa* (Lam.) Link. common. Austerenge, 15. VI.

Coriolus hirsutus (Wulf.) Quél. (*Polystictus hirsutus* Wulf., *Polyporus hirsutus* Fr.) on *Sorbus aucuparia* L. Austerenge, 15. VI; Haubjerre, 17. VI. Rather common. On *Alnus glutinosa* Gaertn. Austerenge, 15. VI.

Coriolus versicolor (L.) Quél. (*Polyporus versicolor* Fr.) on *Alnus glutinosa* Gaertn., common. Austerenge, 18. VI.

Ganoderma applanatum (Pers.) Pat. on *Alnus glutinosa* Gaertner. Austerenge, in a damp wood, 18. VI.

Lenzites abietina (Bull.) Fr. on *Picea excelsa* (Lam.) Link. generally on old beams and sticks, less often than the preceding one (on a wooden fence by the lighthouse, Breisgjardo).

Lenzites sepiaria (Wulf.) Fr. on *Picea excelsa* (Lam.) Link., on old trunks especially, in the wood by the lighthouse, Austerenge, Ringsgjardo and Meagjardo, Austerkeld.

Leptoporus adustus (Willd.) Quél. on *Alnus glutinosa* Gaertn. Reijo, 16. VI.

Leptoporus amorphus (Fr.) Quél. (*Polyporus amorphus* Fr.) on *Picea excelsa* (Lam.) Link. Salthammen, in a fir-wood, 17. VI.

Leucoporus brumalis (Pers.) Quél. (*Polyporus brumalis* Fr.) on the ground, Austerenge, 18. VI.

Merulius silvestris R. Hart. (?) on *Pinus silvestris* L. on a decaying stump, although without fructifications, Austerkeld, in the wood, 17. VI.

Phellinus nigricans (Fr.) Pat. on *Betula verrucosa* Ehrh. in the village, 16. VI.

Phlebia macra Litschauer in litt. in Pilat, Bull. Soc. Myc. France, Vol. 49, 1933, p. 288. On an old stump of *Picea excelsa* (Lam.) Link. Haubjerre, in the wood by the lighthouse, 17. VI (det. V. Litschauer — Innsbruck).

Poria sinuosa Fries. on old pine-beams, *Pinus silvestris* L. Rings-Udden, 18. VI (det. V. Litschauer — Innsbruck).

Trametes odorata (Wulf.) Fr. on an old *Picea excelsa* (Lam.) Link. stumps, common. Haubjerre, in the wood, 15. VI; Austerenge, 15. VI.

Trametes serialis Fr. on *Picea excelsa* (Lam.) Link. Haubjerre, in the wood, 19. VI.

Stereum hirsutum (Willd.) Pers. on *Alnus glutinosa* Gaertn. Austerenge, 18. VI; Haubjerre, 19. VI.

Stereum purpureum Pers. on *Alnus glutinosa* Gaertn. Austerenge, 18. VI.

Stereum rugosum Pers. on *Alnus glutinosa* Gaertn. Austerkeld, in the wood, 17. VI.

Ungulina fuliginosa (Scop.) Pat. (*Polyporus benzoinus* Fr., *P. resinus* Fr.) on an old *Picea excelsa* (Lam.) Link. stump; is rather widely spread in woods and occurs often. Haubjerre, 15. VI; Austerenge, 15. VI.

Ungulina marginata (Fr.) Pat. (*Fomes marginatus* Fr., *Fomes pinicola* Sw.), on an old *Picea excelsa* (Lam.) Link. stump, common. Haubjerre, 15. VI, by the lighthouse in the wood; on *Pinus silvestris* L., Rings-Udden, 18. VI; on a pine-tree, *Pinus silvestris* L. less often. Haubjerre, on a pine-tree, on the margin of the swamp, the fructifications rises as high as 10 metres. On *Alnus glutinosa* Gaertn. Keloskiarre, in the wood, 17. VI.

Xanthochrous pini (Brot.) Pat. (*Trametes pini* Fr.) on *Pinus silvestris* L. Haubjerre, in the pine-wood, 19. VI; on an old pine-tree the fructifications rises as high as 15 to 20 metres i. e. half the length of the pine. The biggest fructification was 40 cm. wide, 25 cm. long and 10 cm. thick.

Xanthochrous radiatus (Sow.) Pat. (*Polyporus radiatus* Fr.) on *Alnus glutinosa* Gaertn. Austerenge, 15. VI; Austerkeld, in the wood, 17. VI.

Agaricales.

Armillaria mellea Vahl. on *Pinus silvestris* L. as *Rhizomorpha subcorticalis* in the wood by the lighthouse on 15. VI found once only; seems to appear more often in Autumn.

Coprinus comatus Fr. on horse-dung, Holma 19. VI.

Schizophyllum commune Fr. on *Alnus glutinosa* Gaertn. Austerenge, 18. VI; Haubjerre, 19. VI.

Deuteromycetes.

Botrytis cinerea Pers. on *Calla palustris* L. in swamps in the wood, often. Austerenge, 18. VI; Haubjerre, 19. VI. On *Iris pseudacorus* L. Haubjerreskiarre, 19. VI, often; on *Majanthemum bifolium* L. Austerenge, 18. VI. The fungus is widely spread in forest-swamps, i. e. „kiarren“.

Cladosporium graminum Corda. on *Elymus arenarius* L. Limo, on the shore, 18. VI.

Darlucula filum Cast. on Urediniospores of *Uredo anthoxanthiana* Bubák on *Anthoxanthum odoratum* L. Breisgjardo, 16. VI.

Fusidium eburneum Schröt. on *Ranunculus sceleratus* L. Austerkeld, in the wood, 17. VI.; Keloskiarre, in a marshy wood, 17. VI; Djupkiarre, 17. VI.

Fusoma heraclei Oudem. on *Heracleum sibiricum* L. Ståknas, 16. VI; Holma, by the seashore, 19. VI, often.

Graphium pallescens (Fuck.) Lindau on *Stellaria nemorum* L. Austerenge, in the wood of leafy trees, 18. VI.

Isariopsis alborosella (Desm.) Lindau on *Stellaria holostea* L. Austerenge, wood of leafy trees, 18. VI.

Mastigosporium album Riess on *Alopecurus ventricosus* Pers. Holma, by the seashore often, 19. VI.

Ovularia obliqua (Cooke) Lindau on *Rumex crispus* L. Överkirken, 15. VI; Austerkeld, in meadows, 17. VI; Salthammen, on the shore, 17. VI.

Ovularia haplospora (Spegazz.) Lindau on *Alchemilla pubescens* Buser. Kunsgjardo, 16. VI.

Ramularia aequivoca (Ces.) Lindau on *Ranunculus auricomus* L. Överkirke, 15. VI.

Ramularia alismatis Fautr. on *Alisma plantago* (L.) Mich. Keloskiarre, 17. VI.

Ramularia anchusae Massal. on *Anchusa officinalis* L. Ringsgjardo, 18. VI; Rings-Udden, 18. VI.

Ramularia buniadis Vestergren on *Bunias orientale* L. Pastorate, 16. VI, not often.

Ramularia calthae Liro on *Caltha palustris* L. Keloskiarre, 17. VI; Haubjerre, 19. VI.

Ramularia cardamines Syd. on *Cardamine amara* L. Keloskiarre, in the marshy wood, 17. VI.

Ramularia epilobii rosei Lindau (1907) on *Epilobium adnatum* Griseb. (= *Epilobium tetragonum* L., det. K. Eichwald), nov. hosp. Kungsjardo, 16. VI, by the sea, often.

No species of *Ramularia* are as yet known in *Epilobium adnatum* wherefore it is not impossible that we have to deal with a new species. Judging from the morphologic features, the present *Ramularia* is, in outward appearance, similar to the *R. epilobii rosei* described by Lindau. The conidia are round, large and without a brown ring. The size of the conidia of my specimen is more varied than the size of that given by Lindau (20—42 μ \times 5 μ). One-celled conidia in Ruhnu material are 3—5, 8 \times 8—29 μ ; two-celled 4—5, 8—23—41 μ ; three-celled 5, 8 \times 33—38 μ .

Ramularia heraclei (Oudem.) Lindau on *Heracleum sibiricum* L. Holma, on the shore, 19. VI.

Ramularia lactea (Desm.) Lindau on *Viola canina* (L.) Reichb. Limo, on the downs, 18. VI; on *Viola tricolor* L. subsp. *arvensis* Murr. in a rye-field, often, 19. VI.

Ramularia lysimachiae v. Thuem. on *Lysimachia thyriflora* L., Austerenge, in the marshy wood, 18. VI.

Ramularia melampyrina Mass. on *Melampyrum pratense* L., Austerenge, 18. VI.

Ramularia menyanthis Magnus on *Menyanthes trifoliata* L., Haubjerre, 19. VI.

Scolicotrichum graminis Fuck. on *Alopecurus aequalis* Sob. (*A. fulvus* Sm.) Keloskiarre 17. VI; Haubjerreskiarre, 19. VI.

Septogloeum fragariae (Br. et Har.) v. Hoehnel, on

Comarum palustre L., Keloskiarre, in a half-dried swamp, often, 17. VI.

Septoria agropyri Ell. et Ev. on *Agropyrum repens* B. Beauv. var. *maritima* Koch. Holma, in the meadow by the shore, often, 19. VI.

Septoria callae (Lasch.) Sacc. on *Calla palustris* L. Haubjerreskiarre, swamp, not often, 19. VI.

Septoria lycopi Passer. on *Lycopus europaeus* L. Haubjerreskiarre, 19. VI.

Septoria orchidearum West. on *Listera ovata* R. Br. Haubjerre, in the wood, not often, 19. VI.

Septoria stellariae Rob. et Desm. on *Stellaria holostea* L. Austerenge, in the meadow, 18. VI.

Septoria trientalis (Lasch.) Sacc. on *Trientalis europaea* L. Austerenge, in the meadows, often, 18. VI.

Stagnospora hygrophila Sacc. on *Oxalis acetosella* L. Haubjerre, in the pine-wood, here and there, 19. VI.

Mycelia sterilia.

Sclerotium rhizodes Auersw. on *Alopecurus ventricosus* Pers. Ringsjardo, on the damp seashore, often, 18. VI.

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