

A Contribution to the Distribution and Importance of
Phellinus pini (Thore ex Fr.) Pil. var. *abietis* (P. Karst.) Pil.
in the Carpathian Range, Czechoslovakia included

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When studying heart rot of our main coniferous forest tree species, the problem of healthiness of our Norway Spruce, *Picea excelsa*, which covers 47.9 per cent of forest land in Czechoslovakia, is of considerable importance from the economic point of view. For this reason, besides red rot — *Fomes annosus* (Fr.) Cooke the problem of rot caused by *Phellinus pini* (Thore ex Fr. var. *abietis* P. Karst.) Pil. in Czechoslovakia and neighbouring countries should be taken into consideration. The author's own experiences concern the occurrence of this disease in a part of the Carpathian range and in other regions of Czechoslovakia. The purpose of the present paper is to draw attention to the distribution of this disease as established by forest pathologic research from 1934 through 1938 in our and in the Soviet Carpathians in the Transcarpathian Soviet Ukraine. The data are to be further completed.

OWN OBSERVATIONS

The disease occurred most frequently and was most virulent in the known mountain Norway spruce, submontane Norway spruce and silver fir zone of the Transcarpathian Soviet Ukraine region. Numerous forest stands of Norway spruce were attacked from Trebušany, over Rachovo, Jasina, Brustura, Nēm. Mokrā up to Sinjevirská Poljana as it is apparent from the map.

I found the fungus in Slovakia in regions of the High Tatra from Tatranská Lomnica, Vyšné Hágy up to the region of Kriváň (Smrečinská dolina). In the western parts of the Carpathians in the Moravské Beskydy Mountains I found this fungus in the region of the Lysá hora Mountains and further on Kněhyně near Radhošť.

The occurrence of the fungus in Bohemia is scarcer in the foothills and neighbouring mountains (Šumava, Kleť), Jelení vrchy under Plešný, Mariánské Lázně, on the hill of Karlovarská vysočina, Krušná Hora north from Horní Litvínov. It occurred in central Bohemia in Písecké hory, on Mohelník and in the Brdy Hills near Třemšín not far from Vacíkov. Specimens were collected from elevations above sea level with mass occurrence of Norway spruce, as a rule from 800—1000—1100—1370 m, rarely also from lower elevations.

When completing these own collections by known, relatively rare data from literature and herbaria it is obvious that *Phellinus pini* var. *abietis* is common in mountainous forests of the Carpathian range of Czechoslovakia and USSR. The fungus grows in higher situations of mountainous old and overmature Norway spruce stands, it occurs far less in extensive forest region in the interior of the country. The fungus is bound mainly with large-diameter stands of Norway spruce aged over 100 years. Its frequency decreases, or it even disappears as the representation of old Norway spruce stands is reduced. It is most often represented in preserved natural forest stands with natural distribution of Norway spruce.

Damage is limited as regards Norway spruce in Czechoslovakia to a small percentage. But in the Transcarpathian Soviet Ukraine damage in 1934—38 was relatively more considerable. Here the difficulty of logging of old forest stands due to difficult transport conditions (many stems with rot left in felling areas) favoured development of rot and eliminated often the most valuable part of the stem. In the Czechoslovak part, the occurrence was limited to very small groups of Norway spruce stands. I believe that it is necessary to complete this report by communications on other localities in order that a more complete picture of the extent of damage by this disease in Norway spruce area of Central Europe may be obtained.

The question of the independence of the above mentioned species on Norway spruce in view with *Phellinus pini* on Scots pine is not solved in our country in more detail.

It is known that host plants of *Phellinus pini* are very numerous outside Czechoslovakia. In this country the following host plants are listed: *Pinus silvestris* (abundant), *P. austriaca* (rare). The fungus occurs parasitically. Norway spruce exhibits in our country also in known localities other similar Norway spruce diseases due to the genus *Phellinus*, as for instance, *Ph. isabellinus* (Fr.) Bourd. et Galz., *Ph. nigro-limitatus* (Romell.) Bourd. et Galz.

To summarize, it should again be stressed that the shorter rotation period of Norway spruce forest plantations will lead to reduction or even disappearance of this fungus species. This is in contrast to its

more frequent and more harmful occurrence in virgin forests, virgin-like forests and natural forest formations. Investigations on this problem in Czechoslovakia will be continued.

LOCALITIES

Phellinus pini var. *abietis* on *Picea excelsa* (leg. A. Kalandra)

USSR — Transcarpathian region: Rachovo Region — Bilyj Potok, Strudzen grun 8.8.35; Kvasny near Bogdan 1100 m 23.7.38; Kvasny, valley 25.7.38; Stohovec, valley near Bogdan 28 and 30.7.38; Balzatul (Lensky) near Bogdan 27.7.38; Vascul 1100 m near Balzatul 28.7.38; Balzatul Clausure 1100 m 28.7.38; Maslokut under Tomnatek grun 1100 m 25.7.38. Brustura Region — Gorgany 14.8.35; Playske valley 14.8.35; Playske valley beneath Uryč 14.8.35; Janovec valley near Ruska Mokra 6.7.37; Moločno 1200 m 8.8.37; Beneath Popadye ca 1000 m 9.8.37; water basin of Mokranka near Bradula, Ném. Mokré 10.8.37. Sinjevirska Polyana Region — Čierny Diel near Sin. Polyana 13.8.37; a. Secul 1100 m a. s. l. near Sin. Polyana 14.8.37; Ozirna near Sin. Polyana 14.8.37; Kanč 1100 m near Sin. Polyana 16.8.37; Sin. Polyana 16.8.37; Suchar valley near Niž. Koločavy 17.8.37.

Czechoslovakia — Slovakia: High Tatra — near Tatranská Lomnica 30.6.36; beneath Lomnický štít 1360 m 30.6.36; Vyš. Hagý 1170 m a. s. l. 30.6.36; Smrečinská valley 1470 3.7.36; Muranska vysočina Hills — near Muran 23.7.34. Bohemia and Moravia — Lysá Hora, Mor. Beskydy 4.8.39; Kněhyně 1180 m a. s. l. 6.8.39; Klet in Šumava (Bohemian Forests) ca 800 m 1.10.65; Jelení vrchy in Šumava, beneath Plešný 5.8.66; Krušné hory Mountains, Jiřího návrší near H. Litvinov 14.9.64; Vel. Mohleník near Písek, Písecké hory 12.8.41; Brdy Hills, near Vacíkov 6.41; near Mariánské Lázně, eastern, Karlovarská vrchovina 1953.

Przyczynek do znajomości rozmieszczenia i znaczenia Phellinus pini
(Thore ex Fr.) Pilát var. *abietis* (P. Karsten) Pilát
w obrębie Karpat oraz Czechosłowacji.

Streszczenie

Autor interesował się powodowanymi przez grzyby chorobami świerka. Przyczyną poważnych schorzeń tego drzewa w Karpatach oraz w Czechosłowacji był *Phellinus pini* (Thore ex Fr.) Pil. var. *abietis* (P. Karst.) Pil. Najczęściej atakowane były osobniki prawie 100-letnie. Autor załącza listę 35 stwierdzonych przez siebie stanowisk grzyba.