

Notes on Ascomycetes from burnt forest in Poland

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This publication gives the list of species of *Ascomycetes* which fructified on the burnt out ground in Zasięki in April 1983.

The greatest forest conflagration during last years burst out in Poland in August 1982. It took place in a pine forest in the west of Poland (Zasięki, voiv. Zielona Góra). The fire completely destroyed the whole undergrowth on area of 1200 ha; the stand suffered so far that all of it became appropriated for cutting down. Still early in September the fire was being put out. Autumnal rains and a mild winter made possible fructifications of fungi in the west regions of Poland.

During mycological observations which were started on burnt out area early in April 1983 and further were extended in the course of the spring eight species of *Pezizales* were found (Table 1). The aspect to the mycoflora gave *Plicaria leiocarpa* which fructified in such number that every step of a human being caused damage to fruit bodies. Two months later *Rhizina undulata* formed the next aspect.

Specially worth paying attention is *Plicaria leiocarpa* which in accordance with the information obtained from a forest inspector – as early as December fructified in masses. Early in April 1983 this species fructified in unusually great number producing several hundred fruit bodies on areas 10 × 20 m more or less uniformly on the whole area of the burnt out forest. In June *Plicaria leiocarpa* formed only just a few fruit bodies on two habitats. This species was found at pH 5–6. It formed very big fruit bodies – to 10 cm in diameter (dry - 5 cm) and 5 cm

Table 1

Fructification of *Ascomycetes* in April and June

Fungus	Fructification in months	
	IV	VI
<i>Peziza violacea</i> Pers.	+	
<i>Peziza antracophila</i> Dennis	++	
<i>Patella melaloma</i> (Alb. et Schw.) Seaver	++	
<i>Geopyxis carbonaria</i> (Alb. et Schw.: Fr.) Sacc.	+++	
<i>Plicaria leiocarpa</i> (Currey) Boud.	+++	+
<i>Anthracobia macrocystis</i> (Cooke) Boud.	+	+++
<i>Rhizina undulata</i> Fr.		+++
<i>Pyronema omphalodes</i> (Bull.) Fuckel		+++

+++ - unusually numerous (uniform on the whole burnt area)

++ - numerous on many habitats

+ - singly or a few (a dozen or so) fruit bodies on not many habitats

high. K a n o u s e (1974) who exemplifies the habitats of this species in Olympic National Park emphasizes that on one of the habitats some unusually big individuals of *Plicaria leiocarpa* were found. Their diameters after drying reached 4,5 cm. M o s e r (1949) noticed abundant fructification of this species the first spring after burning on the one of the five investigated burnt out places. On the other hand T u r n a u (1981) who investigated the fungus flora of 10 burnt out places in Poland (Gorce Mts.) informed that the fruit bodies of this species appeared only on one habitat three years after burning. P i r k (1950) and L a n g e (1944) did not mention *Plicaria leiocarpa* among the fungus which fructified on 50 and 100 little burnt out places in West Germany and in Denmark. P e t e r s e n (1979) who scrupulously investigated the fungus flora on 300 burnt out places in Denmark, didn't find the fruit bodies of this species either.

On the burnt out ground in Zasieki in April 1983 *Geopyxis carbonaria* fructified near species mentioned above. It formed fruit bodies in troops a dozen or so and several dozens more or less uniformly on area of the whole burnt out forest. This species fructified like *Plicaria leiocarpa* at pH 5-6. *Peziza antracophi-*

la and *Patella melaloma* fructified in small number. There were single fruit bodies of *Peziza violacea* and *Anthracobia macrocystis* at the same time.

Early-spring species disappeared with the coming of very warm and dry spring. In June *Rhizina undulata* fructified unusually numerously. It formed fruit bodies at pH 4 - 6,5. *Geopyxis carbonaria* appeared like *Plicaria leiocarpa* on the whole area of burnt out forest. Beside *Rhizina undulata* *Anthracobia macrocystis* was found very often. It — just like *Geopyxis carbonaria* — formed troops of a dozen or so fruit bodies. *Pyronema omphalodes* also fructified in the same time. These species formed fruit bodies at pH 6 - 7.

The disappearance of *Plicaria leiocarpa* and replacing it by *Rhizina undulata* seems to be closing a certain period of fungus succession. However, there is the possibility that such kind of fructification influenced other factors (e.g. atmospheric or physiological conditions) which could temporarily stop the development of this species. Numerous fructification of *Geopyxis carbonaria* in the time of maximal growth of *Plicaria leiocarpa* may be both the results of mutual tolerance of these two species and also susceptibility *Geopyxis carbonaria* to the same factors, which might stop forming fruit bodies of *Plicaria leiocarpa*.

These problems which appeared during the mycological observations in the burnt out forest in Zasięki inspire to continue investigations on this area.

REFERENCES

- K a n o u s e B., 1974, A Survey of the *Discomycetes* Flora of the Olympic National Park and Adjacent Areas. *Myc.* 39: 635 - 689.
- L a n g e M., 1944, Iagttagelser over Svampefloraen paa Brandpletter Friesia, 3(1): 58 - 61.
- M o s e r M., 1949, Untersuchungen über den Einfluss von Waldbränden auf die Pilzvegetation. I. *Sydowia* 3: 336 - 383.
- P e t e r s e n P., Milian, 1970, Danish Fireplace Fungi. An Ecological Investigation on Fungi on burns. *Dansk. Bot. Arkiv.* 27(3): 1 - 97.
- P i r k W., 1950, Pilze in Moosgesellschaften auf Brandflächen. *Mitt. Flor. — Soziol. Arbeitsgem.* Bd. 2: 3 - 5.
- T u r n a u K., 1981, Antrakofilne workowce z grupy miseczniaków z wypalenisk na Turbaczu i Starych Wierchach w Górcach. (doctor's thesis).