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MATERIALS TO THE DISTRIBUTION OF HETEROBASIDIOMYCETES IN THE TATRA NATIONAL PARK (POLAND)

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Abstract: Materials to the distribution of heterobasidiomycetes within the Tatra National Park in Poland are provided. Among 34 species occurring there, *Calocera cornea* (Batsch: Fr.) Fr., *Eichleriella deglubens* (Berk. & Broome) D. A. Reid and *Sebacina incrustans* (Pers.: Fr.) Tul. are reported for the first time from the area, and *Calocera furcata* (Fr.) Fr. is new to the whole Tatra Mts.

Key words: Heterobasidiomycetes, Tatra Mts, Poland, distribution

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INTRODUCTION

The Tatra Mts, the highest part of the Carpathians, are situated at the Polish–Slovakian border. The Polish part includes about a quarter of the total 220 km^2 of the Tatras, ranging from *ca* 900 to 2500 m a.s.l. and incorporating all mountain vegetation belts including subalpine and alpine zones. The whole area and part of the Rów Podtatrzański trough in the northern foreland of the High Tatras is protected within the Tatra National Park (Fig. 1).

The paper presents the occurrence of heterobasidiomycetes in the Tatra National Park. Here they are defined as the group belonging to Basidiomycetes and Ustomycetes, and excluding rust and smut fungi. The data are based on papers previously published mainly by Wojewoda (e.g., 1974a, b, 1977, 1979), who considerably expanded our knowledge of the occurrence and distribution of heterobasidiomycetes in Poland, and on his manuscript devoted to Dacryomycetales, Ceratobasidiales and Tulasnellales in Poland. These data are supplemented by specimens from the Herbarium of the Institute of Botany, Polish Academy of Sciences (KRAM F), and my research on Basidiomycetes in the Polish Tatra Mts since 2000. The latter yielded new data on the distribution of fungi and provided a basis for estimates of the frequency of some species there. For each species a map of recorded localities is pro-

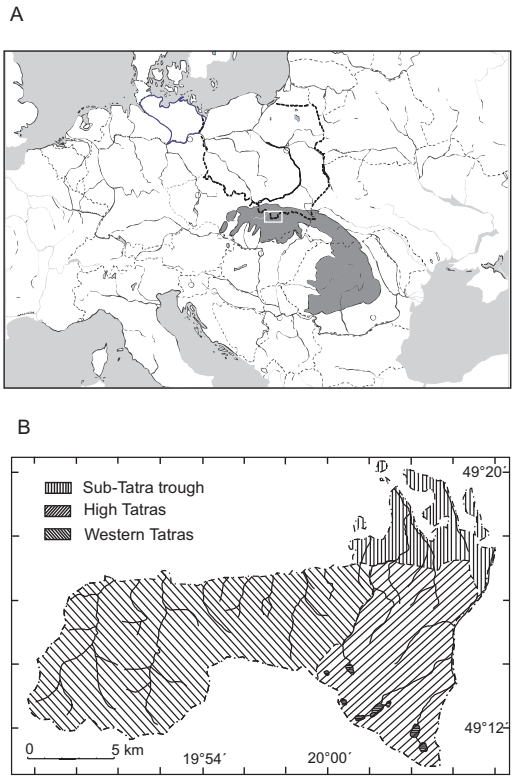

Fig. 1. Location of Tatra Mts. A – Carpathians (dark grey shading); white frame indicates area of Tatra Mts, B – Tatra National Park.

vided; rare species are presented in more detail. There is still not enough information about the occurrence of fungi in the Tatra National Park to present comprehensive maps of their distribution. For some species the recorded localities are concentrated in the center of the park, at its northern border. This region (the Sarnia Skała massif) is now being studied in detail. The frequency of some common species in this region is probably similar to the expected distribution in the whole park area [see map of *Calocera viscosa* (Pers.: Fr.) Fr.].

LIST OF SPECIES

USTOMYCETES

PLATYGLOEACEAE

Occultifur internus (L. S. Olive) Oberw. (Fig. 2)

Occultifur internus is a mycoparasite occurring on dacryomycetous fungi; detailed examination of the host's basidiocarps is needed to detect its presence.

LOCALITIES IN POLISH TATRA MTS. DOLINA STRĄŻYSKA VALLEY: near hiking trail, on pole, in basidiocarps of *Dacryomyces stillatus* Nees: Fr., alt. 900 m, 30 Jan. 1977, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-15907); DOLINA MIĘTUSIA VALLEY: Polana Jaworzynka Miętusia meadow, at edge of spruce forest and windfall, on dead fallen trunk of *Picea abies*, in carpophores of *Dacryomyces stillatus*, alt. 1250 m, 10 May 1983, *leg. W. Wojewoda* (KRAM F-19987).

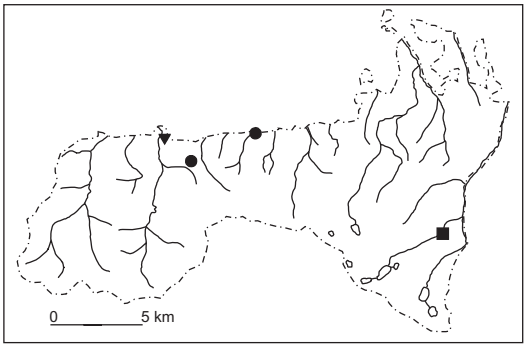

Fig. 2. Localities of: ● – *Occultifur internus* (L. S. Olive) Oberw., ▼ – *Platygloea disciformis* (Fr.) Neuhoff, ■ – *Helicogloea farinacea* (Höhn.) D. P. Rogers in Tatra National Park.

Platygloea disciformis (Fr.) Neuhoff (Fig. 2)

The species forms very tiny basidiocarps on fallen twigs of deciduous trees, mainly *Tilia* spp. (Wojewoda 1977). Two species of *Tilia*, *T. cordata* Mill. and *T. platyphyllos* Scop., are very rare in the Tatra Mts (Radwańska-Paryska 1975).

LOCALITY IN POLISH TATRA MTS. DOLINA KOŚCIELISKA VALLEY: mountain meadow with a few *Tilia* trees, on fallen twigs of *Tilia*, alt. 940 m, 3 July 1977, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-16082).

Helicogloea farinacea (Höhn.) D. P. Rogers (Fig. 2)

The fungus was found in Poland only once, in the Tatra National Park.

LOCALITY IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: between Wodogrzmoty Mickiewicza waterfall and Dolina Pięciu Stawów Polskich valley, spruce forest, on lying trunk of *Picea abies*, alt. 1200 m, 23 July 1972, *leg. Z. Heinrich* (Wojewoda *et al*. 1986, KRAM F-25095).

BASIDIOMYCETES

EXIDIACEAE

Basidiodendron caesiocinereum (Höhn. & Litsch.) Luck-Allen (Fig. 3)

The species is not common in Poland. Its localities are concentrated in S Poland (Wojewoda 1977).

LOCALITY IN POLISH TATRA MTS. SARNIA SKAŁA MASSIF: Wierch Spaleniec Mt., *Dentario glandulosae-Fagetum*, on fallen branch of ?*Abies alba*, alt. 1100 m, 6 May 1972, *leg. Z. Mirek* (Wojewoda 1974a, KRAM F-11749); on fallen branch of *Picea abies* (Wojewoda 1979, KRAM F-14969).

Basidiodendron cinereum (Bres.) Luck-Allen (Fig. 3)

The fungus is rarer than *B. caesiocinereum*. It is known from a few localities in S Poland (Wojewoda 1977).

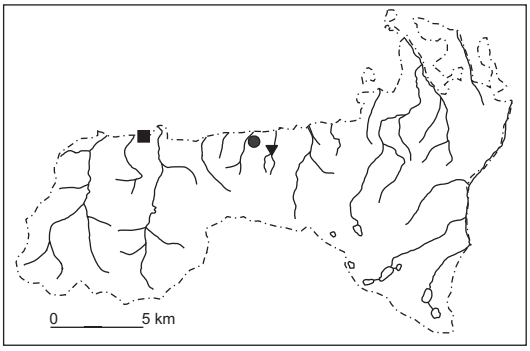

Fig. 3. Localities of: ● – *Eichleriella deglubens* (Berk. & Broome) D. A. Reid, ▼ – *Basidiodendron caesiocinereum* (Höhn. & Litsch.) Luck-Allen, ■ – *Basidiodendron cinereum* (Bres.) Luck-Allen in Tatra National Park.

LOCALITY IN POLISH TATRA MTS. DOLINA KOŚCIELISKA VALLEY: Żleb Jaroniec gully, near Droga pod Reglami hiking trail, spruce forest, on decayed stump of *Picea abies*, alt. 1000 m, 9 May 1983, *leg. W. Wojewoda* (Wojewoda *et al.* 1986, KRAM F-19925).

Eichleriella deglubens (Berk. & Broome) D. A. Reid (Figs 3, 4)

Characterized by a ± resupinate, relatively thick, soft coriaceous, greyish lilac or pallid flesh-colored pileus. Margin of pileus usually lighter in color and adnate in young basidiocarps; more often abrupt and reflexed in older specimens. Surface finely granulose to pruinose and covered with scattered or clustered spines up to 1.0 × 0.5 mm. Pink to pinkish buff flesh, gradually becoming vinaceous red when bruised. Hyphal system monomitic. Generative hyphae 2–3 μm in diameter, thick-walled, flexuous with few clamps. Dikaryophyses simple to short branched, 1–4 μm in diameter. Cystidia absent. Probasidia cylindrical then narrowly clavate, hypobasidia clavate with elongated stalk 25–30(46) × 9–15(17) μm, epibasidia tubular 20–21 × 4–5 μm. Spores (12)15–21(23) × 6–9(10) μm, cylindrical, slightly curved to allantoid, hyaline, smooth, germinating and forming secondary spores (Fig. 4).

The fungus is very rare in Poland, known from only two localities so far (Ronikier 2002).

LOCALITY IN POLISH TATRA MTS. DOLINA BIAŁEGO VALLEY: Grześkówki ridge, beech forest, on fallen twig of *Fagus sylvatica*, alt. 960 m, 9 June 2000, *leg. A. Ronikier* (Ronikier 2002, KRAM F-39962).

Exidia pithya (Alb. & Schwein.: Fr.) Fr. (Fig. 5)

The fungus is connected with coniferous trees, mainly *Picea* spp. It was reported from scattered localities in Poland. It occurs more often only in S and NE Poland (Wojewoda 1979). In the Tatra Mts the fungus seems very common in lower and upper montane spruce forest.

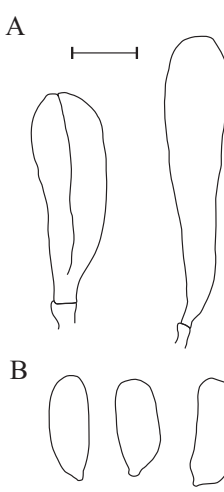

Fig. 4. *Eichleriella deglubens* (Berk. & Broome) D. A. Reid: A – basidia, B – spores. Scale bar: 10 μm.

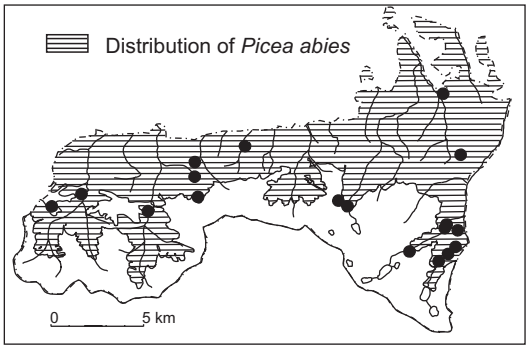

Fig. 5. Localities of *Exidia pithya* (Alb. & Schwein.: Fr.) Fr. in Tatra National Park.

LOCALITIES IN POLISH TATRA MTS. DOLINA BIAŁKI VALLEY: Goły Wierch Mt., alt. 1200 m, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-15920); – DOLINA RYBIEGO POTOKU VALLEY: near 'Wanta', slope of Opalone ridge, *Piceetum tatricum*, on dead standing trunk of *Picea abies*, alt. 1200 m, 21 July 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14493); near 'Włosienica', *Piceetum tatricum subnormale* (?), on stump of *Picea abies*, alt. 1290 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14494); between 'Wanta' and 'Włosienica', spruce forest, on fallen trunk of *Picea abies*, alt. 1190 m, 2 June 1973, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14496); DOLINA ROZTOKI VALLEY: Roztocka Czuba massif, near Droga Oswalda Balzera road, *Piceetum tatricum subnormale*, on stump of *Picea abies*, alt. 1100 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14495); near Wodogrzmoty Mickiewicza waterfall, at hiking trail to Dolina Pięciu Stawów Polskich valley, *Piceetum tatricum*, fallen trunk of *Picea abies*, alt. 1150 m, 1 Nov. 1971, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-12176); at hiking trail to Dolina Pięciu Stawów Polskich valley, *Piceetum tatricum*, on fallen trunk of *Picea abies*, alt. 1350 m, 1 Nov. 1971, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-12177); *Piceetum tatricum normale*, on fallen trunk of *Picea abies*, alt. 1150 m, 4 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13163); DOLINA FILIPKA VALLEY: near Polana Zazadnia meadow, *Abieti-Piceetum montanum*, on fallen branch of *Picea*, alt. 920 m, 11 May 1973, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14241); DOLINA GĄSIENICOWA VALLEY: Las Gąsienicowy forest, in Czarny Potok valley, *Piceetum tatricum myrtilletosum*, on fallen trunk and stump of *Picea abies*, alt. 1480 m, 16 Aug. 1973, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-15279); 'Stawiańskie Rówienki' (Hala Gąsienicowa mountain pasture), spruce forest *Piceetum tatricum myrtilletosum*, on log of *Picea abies*, alt. 1460 m, 17 Aug. 1973, *leg. Z. Heinrich* (KRAM F-15280); SARNIA SKAŁA MASSIF: Grześkówki ridge, *Dentario glandulosae-Fagetum*, on fallen trunk of *Picea abies*, alt. 1100 m, 30 March 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-12661); DOLINA MAŁEJ ŁĄKI VALLEY: below Przysłop Miętusi Mt., spruce forest, on fallen trunk of *Picea abies*, alt. 1100 m, 24 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14278); DOLINA MIĘTUSIA VALLEY: 'Wantule', below Kobylarz, at hiking trail to Czerwone Wierchy massif, in coniferous forest, on fallen trunk of *Picea abies*, alt. 1220 m, 24 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14276); near Hala Miętusia mountain pasture, below Skoruśniak, near hiking trail, spruce forest, on fallen trunk of *Picea abies*, alt. 1250 m, 24 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14277); DOLINA KOŚCIELISKA VALLEY: near Wąwóz Kraków ravine, on old beam of wooden bridge, alt. 1100 m, 3 July 1977, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-16081); DOLINA CHOCHOŁOWSKA VALLEY: upper part of the valley, Skorusi Żleb gully, *Piceetum tatricum subnormale*, on fallen trunk of *Picea abies*, alt. 1320 m, 10 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13168); *Piceetum tatricum subnormale*, on stump of *Picea abies*, alt. 1000 m, 10 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13169).

Exidia plana (Wiggers) Donk

Exidia plana is the most common tremellaceous fungus in Poland (Wojewoda 1977). It should be found at more localities in the Tatra National Park.

LOCALITY IN POLISH TATRA MTS. At 'Droga pod Reglami' hiking trail, on twig of *Alnus incana*, Aug. 1909 (as *E. glandulosa* Bull. – Rouppert 1912). The locality is not precise and cannot be shown on the map.

Exidiopsis calcea (Pers.) Wells. (Fig. 6)

The species is rare in Poland. It occurs in natural spruce forests on wood of *Picea abies*; its occurrence is probably limited to the distribution area of this tree (Wojewoda 1977, 1979).

LOCALITIES IN POLISH TATRA MTS. SARNIA SKAŁA MASSIF: Wierch Spaleniec Mt., *Dentario glandulosae-Fagetum*, on fallen trunk of *Picea abies*, alt. 1100 m, 6 May 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM

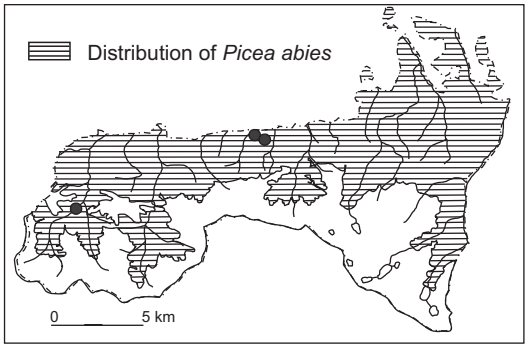

Fig. 6. Localities of *Exidiopsis calcea* (Pers.) Wells. in Tatra National Park.

11750); Grześkówki ridge, *Dentario glandulosae-Fagetum*, on dead standing trunk of *Picea abies*, alt. 1000 m, 30 March 1972, *leg. Z. Mirek* (KRAM F-12662); DOLINA CHOCHOŁOWSKA VALLEY: E slope of Bobrowiec massif, below Mnichy Chochołowskie crest, alt. 1160 m, *leg. Z. Heinrich* (Wojewoda 1979, KRAM 13155).

Exidiopsis effusa (Bref. *ex* Sacc.) Möller (Fig. 7)

Attached to hardwood, it occurs mainly in natural deciduous and mixed forests (Wojewoda 1977). In the Tatra Mts it is probably common in beech forest of the lower montane belt.

LOCALITIES IN POLISH TATRA MTS. NOSAL MASSIF: side of Dolina Olczyska valley, between lower and upper montane zone, on twig of *Fagus sylvatica*, alt. 1000 m, 7 May 1972 *leg. Z. Mirek* (Wojewoda 1979, KRAM F-14788); between lower and upper montane zones, on fallen twig and trunk of *Fagus sylvatica*, 7 May 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-14786); KROKIEW MASSIF: Dolina Białego valley, *Dentario glandulosae-Fagetum*, on fallen branch of *Fagus sylvatica*, alt. 1000 m, 21 May 1973, *leg. W. Wojewoda* (KRAM F-14282); DOLINA BIAŁEGO VALLEY: near hiking trail, on fallen log, 6 May 1972, *leg. Z. Mirek* (KRAM F-14787); SARNIA SKAŁA MASSIF: Wierch Spaleniec Mt., on fallen twig of *Fagus sylvatica*, alt. 1000 m, 6 May 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-14784–5); Dolina ku Dziurze valley, *Dentario glandulosae-Fagetum*, on dead trunk of *Fagus sylvatica*, alt. 960 m, 21 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14280); Grześkówki ridge, *Dentario glandulosae-Fagetum*, on fallen branch of *Fagus sylvatica*, alt. 900–1000 m, 20 March 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-12663); ŁYSANKI MASSIF: Dolina Suchy Żleb valley, *Dentario glandulosae-Fagetum*, on fallen branch of *Fagus sylvatica*, alt. 950 m, 22 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14281).

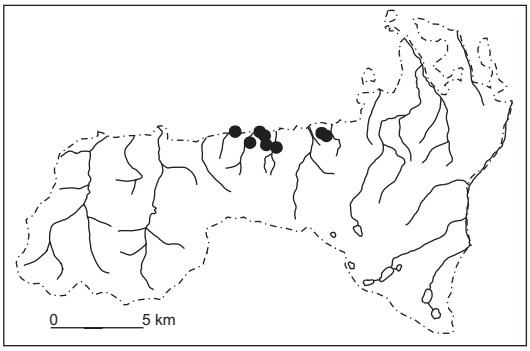

Fig. 7. Localities of *Exidiopsis effusa* (Bref. *ex* Sacc.) Möller in Tatra National Park.

Exidiopsis grisea (Pers.) Bourdot & Galzin (Fig. 8)

In Poland the fungus is common only in the Carpathians (Wojewoda 1979). It should be found at more localities in the Tatra National Park.

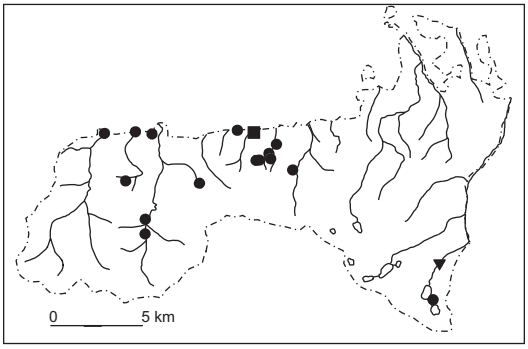

Fig. 8. Localities of: ● – *Tremiscus helvelloides* (DC.: Fr.) Donk, ▼ – *Exidiopsis grisea* (Pers.) Bourdot & Galzin, ■ – *Sebacina incrustans* (Pers.: Fr.) Tul. in Tatra National Park.

LOCALITY IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: slope of Opalone ridge, between Polana Szałasiska meadow and 'Włosienica', *Piceetum tatricum subnormale*, on stump of *Picea abies*, alt. 1290 m, 2 June 1972, *leg. Z. Heinrich* (KRAM F-13157); 12 July 1972, *leg. Z. Heinrich* (Wojewoda 1974b, KRAM F-14676).

Pseudohydnum gelatinosum (Scop.: Fr.) P. Karst. (Fig. 9)

Very common in Poland, it is probably also one of the most common heterobasidiomycetes in the forests of the Tatra Mts. Further observations are needed to determine its real distribution.

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: near 'Wanta', alt. 1200 m, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14608); above Polana Szałasiska meadow, alt. 1400 m, 23 July 1972, *leg.*

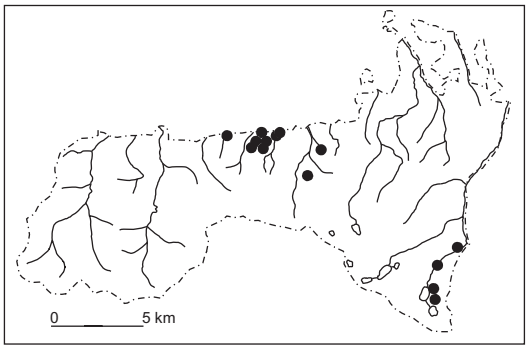

Fig. 9. Localities of *Pseudohydnum gelatinosum* (Scop.: Fr.) P. Karst. in Tatra National Park.

Z. Heinrich (Wojewoda 1979, KRAM F-14609); vicinity of Morskie Oko lake (Anonymous 1968); vicinity of Morskie Oko lake (Frejlak 1973); DOLINA BYSTREJ VALLEY: Dolina Kasprowa, at hiking trail to Myślenickie Turnie massif, near wooden bridge, *Piceetum tatricum*, on wood of *Picea abies*, alt. 1140 m, 8 Aug. 2000, *vid.*; NW of Nosalowa Przełęcz pass, at hiking trail to Nosal massif and Murowaniec shelter, spruce forest, on wood of *Picea abies*, alt. 1000 m, 17 Aug. 2001, *vid.*; at Droga pod Reglami hiking trail, Aug. 1909 (Rouppert 1912); DOLINA BIAŁEGO VALLEY: lower part of valley, *ca* 30 m above Droga pod Reglami hiking trail, N of Kazalnica rock, *Dentario glandulosae-Fagetum*, at base of stump of *Abies alba*, alt. 950 m, 4 July 2000, *leg. A. Ronikier* (KRAM F-50018); lower part of valley, at Droga pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, on wood, alt. 920 m, 11 July 2000, *vid.* 7 July 2001, *vid.*; SARNIA SKAŁA MASSIF: E side of Dolina Spadowiec valley, W of Kazalnica rock, *Dentario glandulosae-Fagetum*, on coniferous stump, alt. 1000 m, 20 July 2000, *leg. A. Ronikier* (KRAM F-50159); Dolina ku Dziurze valley, upper part of valley, N of caves, *Piceetum tatricum*, wood remnants, 7 July 2001, *vid.*; Dolina ku Dziurze valley, lower part of valley, E slope of Grześkówki ridge, *Dentario glandulosae-Fagetum*, coniferous wood, alt. 980 m, 19 Sept. 2000, *vid.*, alt. 1050 m, 21 July 2000, *vid.*, alt. 1020 m, 19 Sept. 2000, *vid.*; ŁYSANKI MASSIF: near mouth of Dolina za Bramką valley, below Jasiowe Turnie crest, beech forest with planted *Pinus* and *Larix*, on wood, alt. 950 m, 7 Aug. 2000, *vid.*

Sebacina incrustans (Pers.: Fr.) Tul. (Fig. 8)

The species is new to the Polish Tatra Mts.

LOCALITY IN POLISH TATRA MTS. SARNIA SKAŁA MASSIF: Grześkówki ridge, *Dentario glandulosae-Fagetum*, on soil, alt. 960 m, 5 Sept. 2001, *leg. M. Piątek* (KRAM F-52316).

Tremiscus helvelloides (DC.: Fr.) Donk (Fig. 8)

In Poland the species is common only in calcareous mountains (Wojewoda 1979). Probably the largest populations in the country are in the Tatra National Park (especially in the western, calcareous part of the mountains).

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: vicinity of Morskie Oko lake (Anonymous 1968); DOLINA BYSTREJ VALLEY: Kalatówki meadow, near hiking trail, on soil, alt. 1200 m, 7 Aug. 1973, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-14317); DOLINA BIAŁEGO VALLEY: N of mouth of Siwarowy Żleb gully, on wooden pole bracing side of hiking trail, alt. 950 m, 1 Aug. 2001, *leg. A. Ronikier* (ZAMU B/97/MT-4280), 11 July 2002, *vid.*; SE slope of Spaleniec Mt., *Dentario glandulosae-Fagetum*, alt. 1000 m, 21 Aug. 2001, *vid.*; at hiking trail, E slope of Igła Mt., *Dentario glandulosae-Fagetum*, alt. 1150 m, 8 Sept. 2001, *vid.*; SARNIA SKAŁA MASSIF: near Czerwona Przełęcz pass, alt. 1300 m, 4 Aug. 1961, *leg. W. Wojewoda* (Skirgiełło 1967); S slopes of massif, near Czerwona Przełęcz pass, spruce forest, among mosses and on remnants of wood, alt. 1300 m, 4 Aug. 1961, *leg. W. Wojewoda* (Wojewoda 1964, 1979); DOLINA STRĄŻYSKA VALLEY: Aug. 1909, Aug. 1911 (Rouppert 1912); ŁYSANKI MASSIF: mouth of Dolina Suchy Żleb valley, at Droga pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, on soil and remnants of wood, alt. 920 m, 7 Aug. 2000, *leg. A. Ronikier* (KRAM F-50206); DOLINA MAŁEJ ŁĄKI VALLEY: Aug. 1958, *leg. A. Skirgiełło* (Rudnicka-Jezierska 1965); DOLINA MIĘTUSIA VALLEY: 'Wantule' (Kotlaba, Lazebníček 1967, Anonymous 1968); DOLINA KOŚCIELISKA VALLEY: Aug. 1909, *leg. K. Stecki* (Rouppert 1912); Sept. 1946, Aug. 1958 (Rudnicka-Jezierska 1965); vicinity of Hala Ornak mountain pasture, in grass along stream (Nespiak 1960); Dolina Smytnia valley, alt. 1100 m, Aug. 1997 (Bzowska 1998); Przednia Kopka massif, N slope, alt. 980 m, spruce-beech forest, *leg. A. Delimat* (KRAM F 51612); DOLINA LEJOWA VALLEY: river bank of Lejowy Potok stream, skirt of spruce forest, alt. 960 m, 24 Aug. 1977, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-16243); at Droga nad Reglami hiking trail, near Hala Kominy Tylkowe mountain pasture, alt. 1250 m (Wojewoda 1979); DOLINA CHOCHOŁOWSKA VALLEY: Aug. 1909, *leg. K. Rouppert* (Rouppert 1912, KRAM F-11412);

near Polana Molkówka meadow, alt. 1000 m, 20 Jul. 1978, *leg. K. Turnau* (KRAM F-17531).

TREMELLACEAE

Tremella encephala Pers.: Fr. (Fig. 10)

The fungus is common in Poland. It should be found at more localities in the Tatra Mts.

LOCALITIES IN POLISH TATRA MTS. DOLINA BIAŁKI VALLEY: at hiking trail between Łysa Polana and Rusinowa Polana meadow, *Piceetum*, on fallen spruce, alt. 1150 m, 3 Sept. 1977, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-16230); BETWEEN DOLINA BIAŁKI VALLEY AND DOLINA FILIPKA VALLEY: Wierch Poroniec ridge, near Łysa Polana, *Piceetum tatricum*, on fallen twig of *Picea abies*, alt. 1100 m, 27 March 1977, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-15918); DOLINA RYBIEGO POTOKU VALLEY: between 'Stara Roztoka' and 'Wanta', *Piceetum tatricum myrtilletosum*, on coniferous trunk, alt. 1100 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14707); near 'Wanta', on slope of Opalone ridge, on fallen trunk of *Picea abies*, alt. 1200 m, 22 July 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14708); between 'Wanta' and 'Włosienica', *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea abies*, alt. 1200 m, 2 June 1972, *leg. Z. Heinrich* (KRAM F-14704); between 'Wanta' and 'Włosienica', on slope of Opalone ridge, *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea abies*, alt. 1400 m, 23 July 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14706); on slope of Opalone ridge, Głęboki Żleb gully, below Kępa peak, subalpine zone, on dead branch of *Pinus mugo*, alt. 1500 m, 3 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13159); near Polana Szałasiska meadow, *Piceetum tatricum*, on trunk of *Picea abies*, alt. 1320 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13102); Opalony Wierch massif, on slope, on dead branch of *Pinus mugo*, alt. 1460 m, 3 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14990); Opalony Wierch massif, on the slope, dwarf pine forest, on branch of *Pinus mugo*, alt. 1520 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13165); DOLINA ROZTOKI VALLEY: at 'Stara Roztoka', near shelter in Dolina Roztoki valley, *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea abies*, alt. 1000 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14703); near Wodogrzmoty Mickiewicza waterfall, *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea abies*, alt. 1080 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14701); on fallen trunk of *Picea abies*, alt. 1000 m, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14705); *Piceetum tatricum myrtilletosum*, on stump of *Picea abies*, alt. 1100 m, 23 July 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14702); KROKIEW MASSIF: between Kuźnice and Kalatówki meadow, spruce forest, on fallen branch of *Picea abies*, alt. 1200 m, 2 July 1964, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-11420); At Droga pod Reglami hiking trail, on wood of *Picea abies*, Sept. 1909 (Rouppert 1912); DOLINA MIĘTUSIA VALLEY: near Hala Miętusia mountain pasture, below 'Skoruśniak', near hiking trail, spruce forest, on branch of *Picea abies* alt. 1250 m, 24 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-14279); DOLINA CHOCHOŁOWSKA VALLEY: near Polana Huciska meadow, *Piceetum* tatricum, on wooden fence (*Picea abies*) alt. 1000 m, 9 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13154).

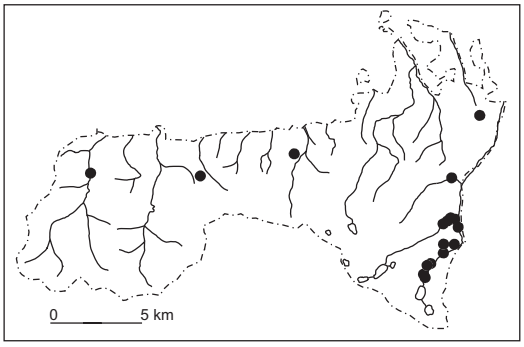

Fig. 10. Localities of *Tremella encephala* Pers.: Fr. in the Tatra National Park.

Tremella foliacea Pers.: Fr. (Fig. 11)

Two forms of the species are known from Poland: the typical form *foliacea* and the violet, smaller form *succinea* (Pers.) Neuhoff. In the Tatra Mts the form *succinea*, associated with wood of coniferous trees, is common. It occurs also in N Poland. The form *foliacea* occurs in Polish lowlands (Wojewoda 1977).

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: near 'Wanta', alt. 1300 m, 23 July 1972, *leg. Z. Heinrich* (KRAM F-14714); near Polana pod Czubą meadow, on slope of Opalone ridge, alt. 1300 m, 23 July 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14715); DOLINA ROZTOKI VALLEY: near Wodogrzmoty Mickiewicza waterfall, spruce forest

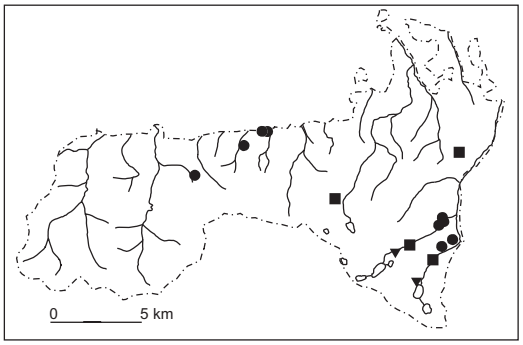

Fig. 11. Localities of: ● – *Tremella foliacea* Pers.: Fr., ▼ – *Tremella obscura* (Olive) M. P. Christ., ■ – *Tremella simplex* Jacks. & Martin in Tatra National Park.

Piceetum tatricum, on fallen trunk of *Picea abies*, alt. 1100 m, 2 June 1972, *leg. Z. Heinrich* (KRAM F-13101); NE slope of Roztocka Czuba massif, near Wodogrzmoty Mickiewicza waterfall, on carpophores of *Stereum sanguinolentum*, on fallen trunk of *Picea abies*, alt. 1150 m, *leg. A. Ronikier, M. Ronikier* (KRAM F-52264); on log of *Picea*, alt. 1100 m, 23 July 1972 (Wojewoda 1979, KRAM F-14716); SARNIA SKAŁA MASSIF: at Droga pod Reglami hiking trail, between Dolina Białego valley and Dolina Spadowiec valley, *Abieti-Piceetum montanum*, on fallen trunk of *Picea abies*, alt. 920 m, 5 Sept. 2000, *leg. A. Ronikier* (KRAM F-50604); at Droga pod Reglami hiking trail, near Dolina Spadowiec valley, *Abieti-Piceetum montanum*, on wood covered with *Stereum sanguinolentum*, alt. 930 m, 8 Nov. 2000, *leg. A. Ronikier* (KRAM F-50393); Grześkówki ridge, alt. 1100 m, *Dentario glandulosae-Fagetum*, on fallen trunk of *Picea abies*, 30 Mar. 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-12660); DOLINA MIĘTUSIA VALLEY: near Hala Miętusia mountain pasture, below Skoruśniak, at hiking trail, spruce forest, on fallen trunk of *Picea abies*, alt. 1250 m, 24 May 1973, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-16573).

Tremella mycetophiloides Kobayasi (Fig. 12)

The fungus is common only in the mountains of S Poland (Wojewoda 1979). Its distribution is limited by the presence of *Aleurodiscus amorphous* and its host *Abies alba*.

LOCALITIES IN POLISH TATRA MTS. DOLINA FILIPKA VALLEY: near Polana Zazadnia meadow, *Abieti-Piceetum montanum*, on carpophore of *Aleurodiscus amorphous*, alt. 950 m, 11 May 1973, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-14242); SARNIA SKAŁA MASSIF: Dolina Ku Dziurze valley, on slope of Grześkówki ridge, *Fagetum*, on *Aleurodiscus amorphous* carpophore, alt. 900 m, 30 March 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-5641); Grześkówki ridge, *Fagetum*, on *Aleurodiscus amorphous* carpophore, on

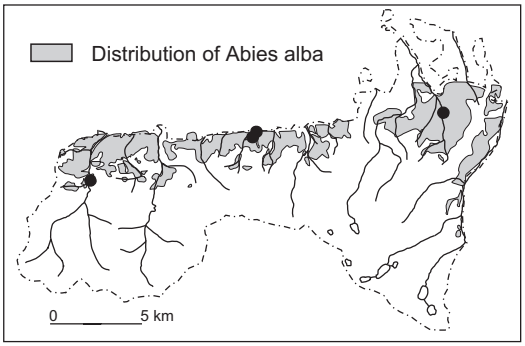

Fig. 12. Localities of *Tremella mycetophiloides* Kobayasi in Tatra National Park.

fallen twig of *Abies alba*, alt. 1000 m, 30 March 1972, *leg. Z. Mirek* (Wojewoda 1979, KRAM F-14034); DOLINA CHOCHOŁOWSKA VALLEY: near Chochołowski Potok stream, *Piceetum tatricum*, on carpophore of *Aleurodiscus amorphous*, alt. 1000 m, 9 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13152).

Tremella obscura (Olive) M. P. Christ. (Fig. 11)

The species occurs on carpophores of various *Dacryomycetaceae*. It is probably more common but overlooked. The locality in the Dolina Roztoki valley is the highest in Poland (Wojewoda 1977).

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: slopes of Opalony Wierch massif, alt. 1500 m, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13187); DOLINA ROZTOKI VALLEY: *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea abies*, alt. 1420 m, 4 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-13179).

Tremella simplex Jacks. & Martin (Fig. 11)

The fungus is very rare in Poland; it is relatively more frequent only in mountains in S Poland (Wojewoda 1979).

LOCALITIES IN POLISH TATRA MTS. DOLINA BIAŁKI VALLEY: Goły Wierch massif, spruce forest *Piceetum tatricum*, on fallen twig of *Picea abies*, on basidiocarps of *Aleurodiscus amorphous*, alt. 1200 m, 27 March 1977, *leg. W. Wojewoda* (Wojewoda 1979, KRAM F-15917); DOLINA RYBIEGO POTOKU VALLEY: near 'Włosienica', at hiking trail to Morskie Oko lake, *Piceetum tatricum myrtilletosum*, on basidiocarps of *Aleurodiscus amorphous*, alt. 1300 m, Aug. 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-15485); on basidiocarps of *Aleurodiscus amorphous*, on twig of fallen spruce, 2 June 1972, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-15484); DOLINA ROZTOKI VALLEY: at hiking trail, *Piceetum tatricum*, on *Aleurodiscus amorphous* carpophore, alt. 1300 m, 1 Nov. 1971, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-12171); DOLINA GĄSIENICOWA VALLEY: Hala Gąsienicowa, 'Stawiańskie Rówienki', *Piceetum tatricum myrtilletosum*, on branch of standing spruce, alt. 1460 m, 17 Aug, 1973, *leg. Z. Heinrich* (Wojewoda 1979, KRAM F-15171).

DACRYOMYCETACEAE

Calocera cornea (Batsch: Fr.) Fr. (Fig. 13)

The fungus is new to the Polish Tatra Mts.

LOCALITIES IN POLISH TATRA MTS. DOLINA BIAŁEGO VALLEY: lower part of valley, about 30 m above Biały Potok stream, beech forest, alt. 1000 m, 5 Sept. 2000, *vid.*; lower part of valley, between Kazalnica rock and Droga pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, hardwood (*Fagus sylvatica*), alt. 950 m, 4 July 2000, *leg. A. Ronikier* (KRAM F-50019); 20 July 2000, *leg. A. Ronikier* (KRAM F-50182); SARNIA SKAŁA MASSIF: lower part of Dolina Białego valley, near Droga pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, on wood, alt. 930 m, 20 July 2000, *vid.*; Łomik ridge on E side of Dolina Spadowiec valley, *Dentario glandulosae-Fagetum*, on wood, alt. 1150 m, 20 July 2000, *vid.*; 7 Sept. 2000, *leg. A. Ronikier* (KRAM F-52279); W slope of Spaleniec ridge, lower montane belt, *Dentario glandulosae-Fagetum*, hardwood (*Fagus sylvatica*), alt. 1000 m, *leg. A. Ronikier* (KRAM F-39941); Grześkówki ridge, *Dentario glandulosae-Fagetum*, on wood of *Fagus sylvatica*, alt. 1100 m, 6 July 2001, *leg. A. Ronikier* (ZAMU B/97/MT-4261); Łomik ridge E side of Dolina Spadowiec valley, *Piceetum tatricum*, on wood of ?*Sorbus aucuparia*, alt. 1150 m, 12 July 2002, *leg. A. Ronikier* (KRAM F-52393).

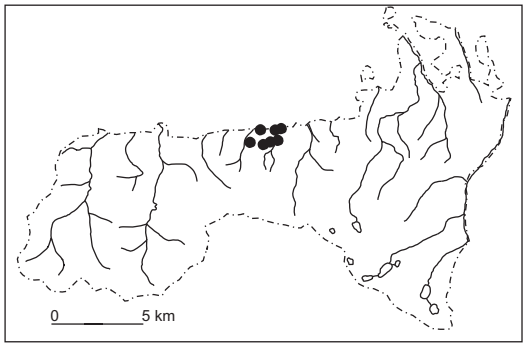

Fig. 13. Localities of *Calocera cornea* (Batsch: Fr.) Fr. in Tatra National Park.

Calocera furcata (Fr.) Fr. (Figs 14, 15)

The fungus forms cylindrical, single or more rarely dichotomously branched, firm-gelatinous, yellow to orange carpophores up to 2 cm high. Hyphae 3–4 μm wide, smooth or rough, without clamps. Basidia 30–60 × 3–5 μm, bifurcate. Dicaryophyses cylindrical or slightly swollen at apex. Spores 8–14 × 3–4 μm ellipsoid to allantoid, hyaline, thin-walled 1–3 septate (Fig. 14).

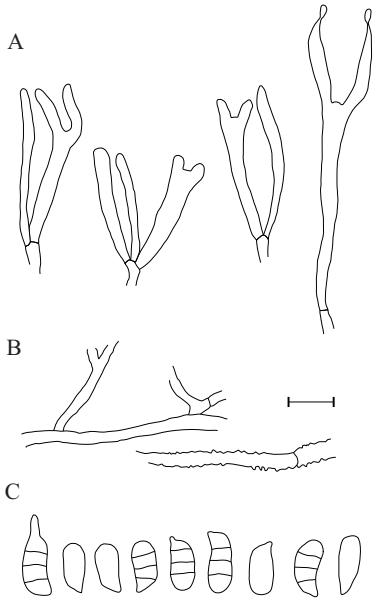

Fig. 14. *Calocera furcata* (Fr.) Fr.: A – basidia and dikaryophyses, B – hyphae, C – spores. Scale bar = 10 μm.

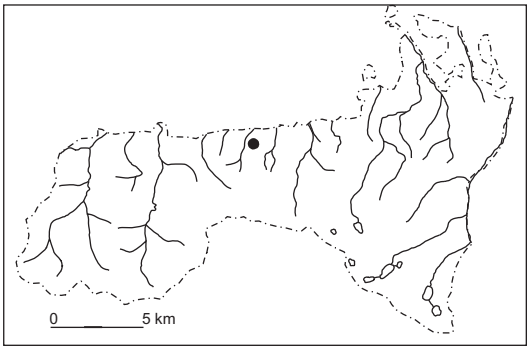

Fig. 15. Localities of *Calocera furcata* (Fr.) Fr. in Tatra National Park.

The fungus has scattered localities in Poland (Wojewoda, manuscript). It is new to the Tatra Mts, both the Polish and Slovakian parts. It was not included in the checklist of fungi of Slovakia (Lizoň & Bacigálová 1998).

LOCALITIES IN POLISH TATRA MTS. SARNIA SKAŁA MASSIF: Grześkówki ridge, beech forest with *Vaccinium myrtillus*, on coniferous wood, alt. 1100 m, 19 Sept. 2000, *leg. A. Ronikier* (KRAM F-50685).

Calocera viscosa (Pers.: Fr.) Fr. (Fig. 16)

Calocera viscosa is one of the most common and most easily recognized heterobasidiomycetes.

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: near 'Wanta', the vicinity of Morskie Oko lake; *Piceetum tatricum subnormale*, alt. 1200 m, 23 July 1972, *leg. Z. Heinrich* (KRAM F-31625); above 'Włosienica', *Piceetum tatricum subnormale*, alt. 1400 m, 23 July 1972, *leg. Z. Heinrich* (KRAM F-31955); Grań Żabiego crest and below, July, Aug. ? (Frejlak 1973); vicinity of Morskie Oko lake (Nespiak 1960); DOLINA PAŃSZCZYCY VALLEY (Nespiak 1960); DOLINA GĄSIENICOWA VALLEY: Hala Gąsienicowa mountain pasture, 'Stawiańskie Równienki', *Piceetum tatricum myrtilletosum*, on log of *Picea abies*, alt. 1460 m, 17 Aug. 1973, *leg. Z. Heinrich* (KRAM F-31944); DOLINA JAWORZYNKI VALLEY: at hiking trail from Kuźnice to Hala Gąsienicowa mountain pasture, at Boczań ridge, spruce forest, alt. 1200 m, 22 Aug. 2001, *vid.*; DOLINA BYSTREJ VALLEY: at hiking trail to Myślenickie Turnie massif, *Piceetum tatricum*, coniferous wood, twig of *Picea abies*, alt. 1100 m, 8 Oct. 2000, *vid.*; SARNIA SKAŁA MASSIF: lower part of Dolina Białego valley, *ca* 50 m above Droga pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, on wood, alt. 930 m, 20 July 2000, *leg. A. Ronikier* (KRAM F-50127); lower part of Dolina Białego valley, between Kazalnica rock and Dolina pod Reglami hiking trail, *Dentario glandulosae-Fagetum*, alt. 930 m, 7 July 2001, 22 Aug. 2001, *vid.*; lower part of Dolina Białego valley, *Dentario glandulosae-Fagetum*, alt. 930 m, 5 Sept. 2001, *vid.*; upper part of Dolina Białego valley, spruce forest, on wood of *Picea abies*, alt. 1170 m, 5 Sept. 2000, *vid.*; near Igła Mt., spruce forest, alt. 1120 m, 22 Aug. 2001, 8 Sept. 2001, *vid.*; upper part of Dolina Spadowiec valley, near Łomik ridge, spruce forest, alt. 1200 m, 20 Aug. 2001, 9 Sept. 2001, *vid.*; N slope of Spaleniec ridge, between Dolina Spadowiec valley and Dolina ku Dziurze valley, *Dentario glandulosae-Fagetum*, on decayed stump of ?*Picea*, alt. 980 m, 3 July 2002, *leg. A. Ronikier* (KRAM F-52333); between Dolina Spadowiec valley and Dolina ku Dziurze valley, near Droga pod Reglami hiking trail, *Abieti-Piceetum montanum*, on trunk, alt. 920 m, 5 Sept. 2000, *vid.*; upper part of Dolina ku Dziurze valley, W side of valley, beech/spruce forest, alt. 1100 m, 7 July 2001, *vid.*; lower part of Dolina ku Dziurze valley, E slope of Grześkówki ridge, *Dentario glandulosae-Fagetum*, on wood, alt. 980 m, 19 Sept. 2000, *vid.*; near top of massif (*ca* 200 m SW of top), *Piceetum tatricum*, alt. 1300 m, 5 Sept. 2001, *vid.*; Grześkówki ridge, *Dentario glandulosae-Fagetum*, alt. 1100 m, 6 July 2001, 22 Aug. 2001, *vid.*; upper part of Grześkówki ridge, *Piceetum tatricum*, alt. 1200 m, 5 Sept. 2001, *vid.*; W slope of Grześkówki ridge, *Dentario glandulosae-Fagetum*, on wood, alt. 1000 m, 19 Sept. 2000, *vid.*; ŁYSANKI MASSIF: near Przełęcz w Grzybowcu pass, alt. 1300 m, 21 Aug. 1967, *leg. M. Ławrynowicz* (KRAM

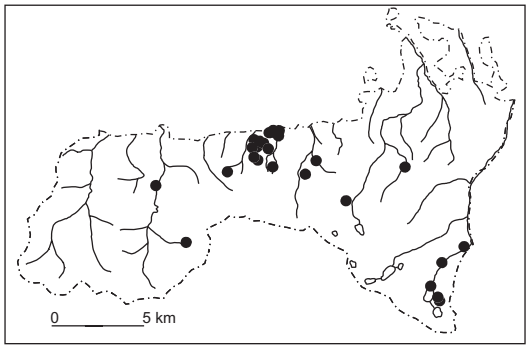

Fig. 16. Localities of *Calocera viscosa* (Pers.: Fr.) Fr. in Tatra National Park.

F-31622); DOLINA TOMANOWA POLSKA VALLEY (Nespiak 1960); DOLINA KOŚCIELISKA VALLEY: at hiking trail from Dolina Kościeliska valley to Polana na Stołach meadow, spruce forest, on wood of *Picea abies*, alt. 1100 m, 18 July 2000, *vid.*; in the valley, Sept 1946, Aug. 1958 (Rudnicka-Jezierska 1965); Aug, Sept. 1909, *leg. K. Rouppert* (Rouppert 1912, KRAM F-31596); DOLINA CHOCHOŁOWSKA VALLEY: Aug., Sept. 1909, *leg. K. Rouppert* (Rouppert 1912, KRAM F-31596).

Dacryomyces chrysospermus Berk. & M. A. Curtis (Fig. 17)

The fungus is rare in Poland, and common only in the Białowieża National Park (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: near Wodogrzmoty Mickiewicza waterfall, spruce forest, on lying trunk of *Picea abies*, alt. 1200 m, 10 July 1961, *leg. W. Wojewoda* (Wojewoda *et al*. 1986, KRAM F-25096); E slope of Opalone ridge, *Piceetum tatricum*, on bark of dead standing trunk of *Picea abies*, alt. 1300 m, *leg. A. Ronikier, M. Ronikier* (KRAM F-52262).

Dacryomyces microsporus P. Karst. (Fig. 17)

In Poland the species is known from only a few localities, concentrated in the Carpathians (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: slope of Opalone ridge, subalpine region, on branch of *Pinus mugo*, alt. 1480 m, *leg. Z. Heinrich* (KRAM F-13182).

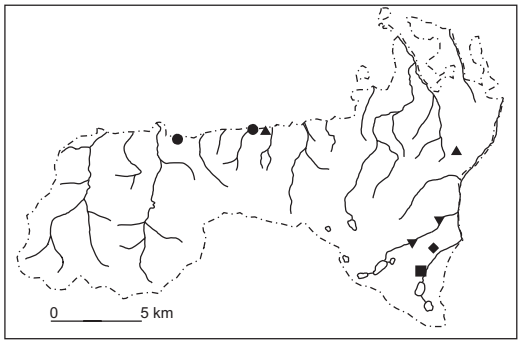

Fig. 17. Localities of ▼ – *Dacryomyces chrysospermus* Berk. & M. A. Curtis, ◆ – *Dacryomyces microsporus* P. Karst., ● – *Dacryomyces minor* Peck, ▲ – *Dacryomyces tortus* (Willd.: Fr.): Fr., and ■ – *Dacryomyces variisporus* McNabb in the Tatra National Park.

Dacryomyces minor Peck (Fig. 17)

The fungus is noted frequently in S Poland; in the rest of the country it is reported only from scattered localities (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. SARNIA SKAŁA MASSIF: between Dolina ku Dziurze valley and Dolina Strążyska valley, near Droga pod Reglami hiking trail, forest edge, coniferous log, 18 June 1979, *leg. W. Wojewoda* (KRAM F-37455); between Dolina ku Dziurze valley and Dolina Strążyska valley, near Droga pod Reglami hiking trail, mixed forest, 30 Jan. 1977, *leg. W. Wojewoda* (KRAM F-37483); HRUBY REGIEL MASSIF: Staników Żleb gully, near Droga pod Reglami hiking trail, spruce forest, on beam of wooden bridge (?*Picea abies*), alt. 1000, 10 May 1983, *leg. W. Wojewoda* (Wojewoda *et al*. 1986, KRAM F-19933).

Dacryomyces stillatus Nees: Fr. (Fig. 18)

This common fungus can be found very often on wooden bridges and benches along hiking trails.

LOCALITIES IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: at 'Stara Roztoka' near Wodogrzmoty Mickiewicza waterfall, near hiking trail, *Piceetum tatricum*, on coniferous wood, alt. 1100 m, 1 Nov. 1971, *leg. Z. Heinrich* (KRAM F-12155); E slope of Roztocka Czuba Mt., between 'Wanta' and Stara Roztoka shelter, spruce forest, fallen trunk of *Picea abies*, alt. 1100 m, 6 June 1983, *leg. H. Komorowska* (KRAM F-25080); *Piceetum tatricum myrtilletosum*, on fallen trunk of *Picea*, alt. 1420 m, 4 June 1972, *leg. Z. Heinrich* (KRAM F-13179); DOLINA BYSTREJ VALLEY: Kuźnice, at beginning of hiking trail to Polana Kalatówki meadow, at stream, spruce forest, fallen spruce, alt. 1040 m, 13 May 2002, *leg. A. Ronikier* (KRAM F-52278); DOLINA KONDRATOWA VALLEY: at hiking trail between Polana Kalatówki meadow and Kondratowa Polana meadow, *Piceetum tatricum*, stump of *Picea abies*, alt. 1300 m, 13 May 2002, *leg. A. Ronikier* (KRAM F-52270); KROKIEW MASSIF: Przełęcz Białego pass, alt. 1300 m, spruce forest, trunk of *Picea abies*, 2 July 1964, *leg. W. Wojewoda* (KRAM F-19972); Dolina nad Capkami valley, bottom of valley, fallen trunk, alt. 1000 m, 3 Nov, 1982, *leg. H. Komorowska* (KRAM F-35115); DOLINA BIAŁEGO VALLEY: lower part of valley, near wooden bridge, coniferous stump, alt. 930 m, 1 June 2000, *leg. A. Ronikier* (KRAM F-52273); *Dentario glandulosae-Fage-*

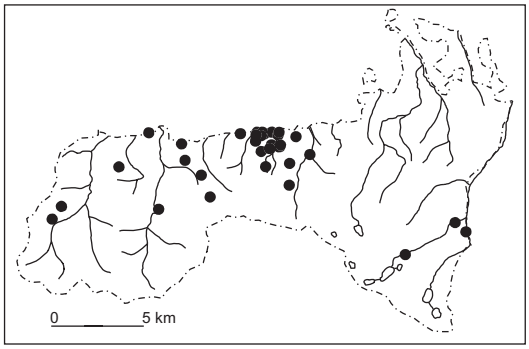

Fig. 18. Localities of *Dacryomyces stillatus* Nees: Fr. in Tatra National Park.

tum, coniferous wood, alt. 930 m, 6 June 2001, *leg. A. Ronikier* (KRAM F-52274); between Droga pod Reglami hiking trail and Kazalnica rock, *Dentario glandulosae-Fagetum*, fallen trunk of *Fagus sylvatica*, alt. 930 m, 7 July 2000, *leg. A. Ronikier* (KRAM F-52276); at hiking trail, near mouth of Siwarowy Żleb gully, W side of valley, about 30 m above stream, *Dentario glandulosae-Fagetum*, on wood, alt. 1000, 5 Sept. 2000, *leg. A. Ronikier* (KRAM F-50590); SARNIA SKAŁA MASSIF: near Dolina Spadowiec valley, at Droga pod Reglami hiking trail, *Abieti-Piceetum montanum*, fallen twigs of coniferous tree, alt. 930 m, 7 Aug. 2000, *leg. A. Ronikier* (KRAM F-50209); Dolina Spadowiec valley, W of Kazalnica rock, *Dentario glandulosae-Fagetum*, branch of *Fagus sylvatica*, alt. 950, 8 Nov. 2000, *leg. A. Ronikier* (KRAM F-50391); Dolina Spadowiec valley, upper part of valley, at stream, *Dentario glandulosae-Fagetum*, fallen trunk, alt. 1100 m, 7 July 2000, *leg. A. Ronikier* (KRAM F-52277); upper part of Dolina Spadowiec valley, near stream, *Dentario glandulosae-Fagetum*, wood, alt. 1100 m, 4 July 2000, *leg. A. Ronikier* (KRAM F-52271); lower part of Dolina ku Dziurze valley, *Dentario glandulosae-Fagetum*, wood, alt. 930 m, 7 July 2000, *leg. A. Ronikier* (KRAM F-52272); lower part of Dolina ku Dziurze valley, W slope of Spaleniec ridge, *Dentario glandulosae-Fagetum*, on wood, alt. 980 m, 2 June 2001, *vid.*; Dolina ku Dziurze valley, *Dentario glandulosae-Fagetum*, wood, alt. 920 m, 7 July 2000, *leg. A. Ronikier* (KRAM F-52275); upper part of Dolina ku Dziurze valley, spruce forest with *Sorbus*, coniferous stump, alt. 1000, 2 June 2001, *leg. A. Ronikier* (ZAMU B/97/MT-4278); between Polana Białego meadow and Czerwona Przełęcz pass, wood, alt. 1260 m, 10 June 2002, *leg. A. Ronikier* (KRAM F-52300); between Dolina Spadowiec valley and Dolina Strążyska valley, *Dentario glandulosae-Fagetum*, fallen log of *Abies*, alt. 1100 m, 30 March 1972, *leg. Z. Mirek* (KRAM F-35415); DOLINA STRĄŻYSKA VALLEY: lower part of valley, W slope of Grześkówki ridge, *Dentario glandulosae-Fagetum*, wood of ?*Fagus sylvatica*, alt. 950 m, 4 July 2000, *leg. A. Ronikier* (KRAM F-52302); near hiking trail, on pole, alt. 900 m, 30 Jan. 1977, *leg. W. Wojewoda* (with *Occultifur internus*), (Wojewoda 1977, KRAM F-15907); ŁYSANKI MASSIF: Suchy Żleb gully, near Dolina za Bramką valley, alt. 940 m, fallen twig of *Abies alba*, 22 May 1973, *leg. W. Wojewoda* (KRAM F-35414); DOLINA MIĘTUSIA VALLEY: Polana Jaworzynka Miętusia meadow, at edge of spruce forest and windfall, on dead fallen trunk of *Picea abies*, alt. 1250 m, 10 May 1983, *leg. W. Wojewoda* (KRAM F-19987) (with *Occultifur internus*); slopes of Kobylarz Mt., at hiking trail to Małołączniak massif, coniferous wood, alt. 1420 m, 9 June 2002, *leg. A. Ronikier* (KRAM F-52301); W slope of Skoruśniak ridge, above Niżnia Miętusia Równień plateau, coniferous wood, alt. 1200 m, 9 June 2002, *leg. A. Ronikier* (KRAM F-52299); HRUBY REGIEL MASSIF: lower part of Staników Żleb gully, on little wooden bridge, alt. 1000 m, 10 May 1983, *leg. W. Wojewoda* (KRAM F-19932); DOLINA KOŚCIELISKA VALLEY: mouth of Wąwóz Kraków ravine, barked beam of *Picea abies*, alt. 950 m, 2 July 1978, *leg. W. Wojewoda* (KRAM F-35371); AREA BETWEEN DOLINA KOŚCIELISKA VALLEY AND DOLINA LEJOWA VALLEY: Żleb Jaroniec gully, spruce forest, trunk of *Picea abies*, alt. 960 m, 9 May 1983, *leg. W. Wojewoda* (KRAM F-19931); DOLINA LEJOWA VALLEY: Polana Siodło Lejowe meadow, on remnants of shepherd's shelter, alt. 1200 m, 24 Aug. 1977, *leg. Z. Mirek* (KRAM F-35370); DOLINA CHOCHOŁOWSKA VALLEY: near shelter on Polana Chochołowska meadow, spruce forest, on fallen trunk of *Picea*, alt. 1150 m, 2 Aug. 1978, *leg. W. Wojewoda* (KRAM F-35377); Skorusi Żleb gully, *Piceetum tatricum subnormale*, on trunk of *Picea abies*, alt. 1250 m, 10 June 1972, *leg. Z. Heinrich* (KRAM F-13166).

Dacryomyces tortus (Willd.: Fr.): Fr.

(Figs 17, 19)

Dacryomyces tortus forms small, firm-gelatinous, pustulate then pulvinate dirty yellow-brownish basidiocarps, gregarious or coalescing and forming large groups. Hyphal system monomitic. Thin-walled hyphae with clamps. Dikaryophyses simple with clamps. Basidia 27–45 × 3–4 μm with two sterigmata. Spores 9–15 × 4–5 μm, ellipsoid to slightly allantoid, thin-walled, with 0–3 septa (Fig. 19).

The fungus is known from a few localities in S Poland (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA BIAŁKI VALLEY: Goły Wierch massif, spruce forest, on rotten stump of *Picea abies*, 27 March 1977, *leg. W. Wojewoda* (Wojewoda *et al.* 1986, KRAM F-15923); SARNIA SKAŁA MASSIF: lower part of Dolina Spadowiec valley, *Dentario glandulosae-Fagetum*, on fallen trunk, alt. 950 m, 1 Dec. 2000, *leg. A. Ronikier* (KRAM F-50461, ZAMU B/97/MT-4279).

Dacryomyces variisporus McNabb (Fig. 17)

The species is very rare in Poland, known only from the Tatra Mts and the Bieszczady Zachodnie Mts, SE Poland (Wojewoda, manuscript).

LOCALITY IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: Opalony Wierch massif, spruce forest, on lying twigs of coniferous tree (?*Picea abies*), 3 June 1972, *leg. Z. Heinrich* (Wojewoda *et al*. 1986, KRAM F-13187).

Ditiola radicata (Alb. & Schwein.) Fr. (Fig. 20)

The fungus is rare in Poland, known from a few localities (Wojewoda, manuscript).

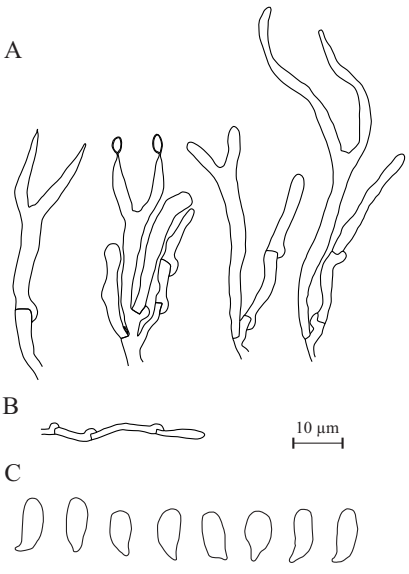

Fig. 19. *Dacryomyces tortus* (Willd.: Fr.): Fr.: A – basidia and dikaryophyses, B – hypha, C – spores. Scale bar: 10 µm.

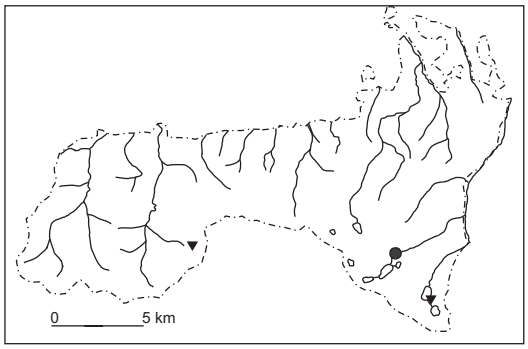

Fig. 20. Localities of ● – *Ditiola radicata* (Alb. & Schwein.) Fr., and ▼ – *Guepiniopsis chrysocoma* (Bull.: Fr.) Brasf. in Tatra National Park.

LOCALITY IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: upper part of valley, below Siklawa waterfall, *Pinetum mugi carpaticum*, alt. 1450 m, on bark of *Pinus mugo*, 9 July 1977, *leg. A. Bujakiewicz* (KRAM F-16328).

Guepiniopsis chrysocoma (Bull.: Fr.) Brasf. (Fig. 20)

The fungus is rare in Poland (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA RYBIEGO POTOKU VALLEY: on bank of Morskie Oko lake, forest with *Pinus cembra* and *Picea abies*, on coniferous stump, alt. 1400 m, 21 June 1979, *leg. W. Wojewoda* (KRAM F-37490); DOLINA TOMANOWA VALLEY: at hiking trail to Przełęcz Tomanowa pass and Czerwone Wierchy massif, *Pinetum mugi carpaticum*, on dead branches of *Pinus mugo*, *leg. P. Lutyk* (Lutyk 1978, Wojewoda manuscript).

Guepiniopsis suecica (McNabb) Jülich (Figs 21, 22)

Guepiniopsis suecica forms soft-gelatinous, bright yellow pustulate to cupulate substipitate carpophores. Hyphal system monomitic. Hyphae thin- or slightly thick-walled, smooth or rough, with clamps. Hairs thick-walled, cylindrical, clavate, numerous. Basidia 50–85 × 5–6 µm with clamps. Spores 16–24 × 6–7 µm cylindric-curved, thin-walled with 3–7 septa (Fig. 21).

The fungus is very rare in Poland (Wojewoda,

manuscript). Nevertheless, it is probably common in *Pinetum mugi carpaticum* in the Tatra Mts. It occurs on dead branches of *Pinus mugo*. The author collected it during each of a few visits to various regions of the Park in July 2002, after a period of rain. Dry specimens are hardly visible. Further investigations probably will confirm its frequent occurrence in the Tatra National Park.

LOCALITIES IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: Świstówka Roztocka valley, NW slopes of lower (N) summit of Opalony Wierch massif, *Salicetum kitaibelianae*, alt. 1726 m, 11 July 1977, *leg. H. Bujakiewicz* (KRAM F-16326); E slope of Świstowa Czuba Mt., at hiking trail to shelter in Dolina Pięciu Stawów valley, *Pinetum mugi carpaticum*, on dead branch of *Pinus mugo*, alt. 1500 m, 31 May 2002, *leg. A. Ronikier, M. Ronikier* (KRAM F-52265); between Szeroki Żleb Buczynowy gully and Żleb pod Krzyżnem gully, at hiking trail to Krzyżne pass, *Pinetum mugi carpaticum*, on dead branch of *Pinus mugo*, alt. 1670 m, 1 June 2002, *leg. A. Ronikier, M. Ronikier* (KRAM F-52266); SARNIA SKAŁA MASSIF: at top (N side), *Pinetum mugi carpaticum*, branch of *Pinus mugo*, alt. 1375 m, 10 June 2002, *leg. A. Ronikier* (KRAM F-52295); DOLINA MIĘTUSIA VALLEY: below Kobylarzowy Żleb gully, near hiking trail, *Pinetum mugi carpaticum*, branch of *Pinus mugo*, alt. 1540 m, 9 June 2002, *leg. A. Ronikier* (KRAM F-52298).

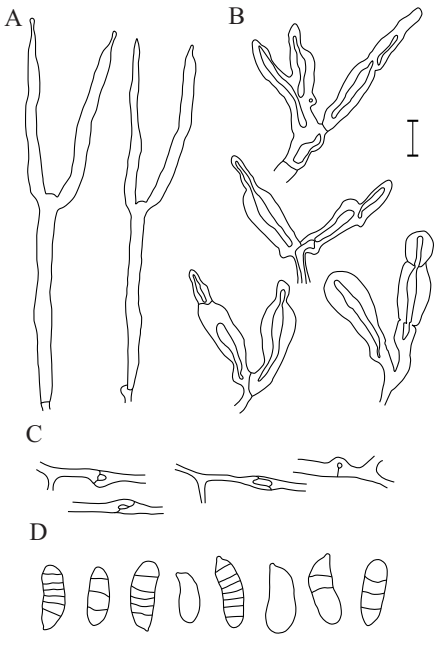

Fig. 21. *Guepiniopsis suecica* (McNabb) Jülich: A – basidia, B – hairs, C – hyphae with clamps, D – spores. Scale bar: 10 μm.

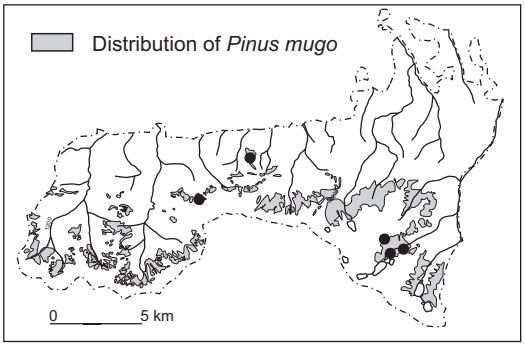

Fig. 22. Localities of *Guepiniopsis suecica* (McNabb) Jülich in Tatra National Park.

TULASNELLALES

Tulasnella deliquescens (Juel) Juel

The fungus is very rare in Poland (Wojewoda, manuscript). The locality in the Tatra National Park is one of two in the country.

LOCALITY IN POLISH TATRA MTS. DOLINA PAŃSZCZYCY VALLEY (Roberts 1999), no precise locality, not presented on map.

Tulasnella rubropallens Bourdot & Galzin (Fig. 23)

The species is known from only two localities in the Polish Carpathians (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA BYSTREJ VALLEY: near Kuźnice, on slope of Nosal massif, in coniferous forest, at hiking trail, on a wooden pole, alt. 1040 m, 23 May 1973, *leg. W. Wojewoda* (KRAM F-15712).

Tulasnella violea (Quél.) Bourdot & Galzin (Fig. 23)

The fungus is known from scattered localities in Poland (Wojewoda, manuscript).

LOCALITIES IN POLISH TATRA MTS. DOLINA ROZTOKI VALLEY: at hiking trail, *Piceetum tatricum*, on stump of *Picea abies*, alt. 1300 m, 1 Nov. 1971, *leg. Z. Heinrich*

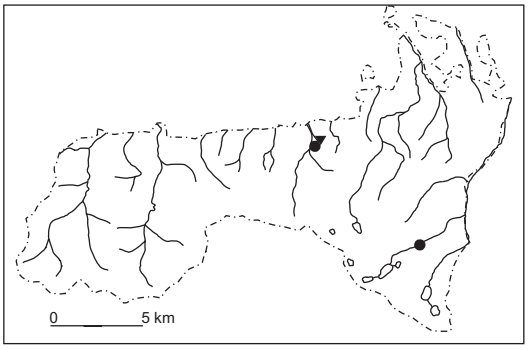

Fig. 23. Localities of: ▼ – *Tulasnella rubropallens* Bourdot & Galzin, ● – *Tulasnella violea* (Quél.) Bourdot & Galzin in Tatra National Park.

(KRAM F-12156); DOLINA BYSTREJ VALLEY: Kuźnice, below Nosal massif, *Dentario glandulosae-Fagetum*, fallen twig of *Fagus sylvatica*, alt. 1000 m, 23 May 1973, *leg. W. Wojewoda* (KRAM F-37363).

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