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# LICHENS OF THE GENERA *LEPRARIA* AND *LEPROLOMA* FROM THE GORCE MTS (WESTERN CARPATHIANS, POLAND) AND NOTE ON LICHENICOLOUS FUNGUS *PARANECTRIA OROPENSIS* FOUND ON *LEPROLOMA MEMBRANACEUM*

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**Abstract**. The following species of *Lepraria* Ach. and *Leproloma* Nyl. *ex* Cromb. (lichenized fungi) are recognized for the Gorce Mts in Poland: *Lepraria borealis* Lohtander & Tønsberg (new to Poland), *L. caesioalba* (de Lesd.) J. R. Laundon, *L. crassissima* (Hue) Lettau, *L. eburnea* J. R. Laundon, *L. elobata* Tønsberg, *L. incana* (L.) Ach., *L. jackii* Tønsberg, *L. lobificans* Nyl., *L. rigidula* (de Lesd.) Tønsberg, *Leproloma diffusum* J. R. Laundon s.str., *L. membranaceum* (Dicks.) Vain. and *L. vouauxii* (Hue) J. R. Laundon. The lichenicolous fungus *Paranectria oropensis* D. Hawksw. & Piroz. (new host: *Leproloma membranaceum*) is also new to Poland.

**Key words**: Lichenized fungi, *Lepraria*, *Leproloma*, *Paranectria*, lichenicolous fungus, Gorce Mts, Western Carpathians, Poland

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## INTRODUCTION

The lichen genera *Lepraria* Ach. and *Leproloma* Nyl. *ex* Cromb. are poorly known in Poland as well as in other countries in Central and Eastern Europe. They were usually noted in Polish literature as *Lepraria aeruginosa* (Weiss) Sm., *L. incana* (L.) Ach., *Leproloma membranaceum* (Dicks.) Vain. and rarely as *Lepraria neglecta* (Nyl.) Erichsen (e.g., Kiszka 1967; 1997; Nowak 1967; Olech 1973; Kozik 1977; Cieśliński & Tobolewski 1988; Lipnicki 1990; Fałtynowicz 1992; Śliwa 1998), mainly because about half of the taxa were unknown to science and only recently described (see Laundon 1989, 1992; Tønsberg 1992; Leuckert *et al.* 1995; Lohtander 1994, 1995). Since *Lepraria* and *Leproloma* species were formerly identified using thallus color tests (instead of TLC) as the only method of studying chemical characters, earlier records are mainly doubtful and need revision and confirmation.

This work is one of the first to present records of *Lepraria* and *Leproloma* from Poland determined by TLC analyses.

## MATERIALS AND METHODS

Most of the *ca* 70 specimens analyzed were recognized by Czarnota (2000) as *Lepraria aeruginosa* s.l. and collected in Gorce National Park in 1994–1998; hence most of the localities represent a forest environment. Both authors collected additional specimens in May 1999. There are also collections from other parts of the Gorce Mts outside the park boundaries, collected mainly in open localities from agricultural landscape or rocky outcrops. All specimens were determined by TLC in solvent system C (methods according to White & James 1985). The distributions of all taxa are given in the ATPOL grid square system (Cieśliński & Fałtynowicz 1993). Specimens are stored in the Herbarium of the Department of Plant Taxonomy and Nature Protection of the University of Gdańsk (UGDA-L) and in the Herbarium of the Gorce National Park (GPN).

## RESULTS

The authors recognize nine species of *Lepraria* and three of *Leproloma*. *Lepraria borealis*

Lohtander & Tønsberg is reported for the first time for Poland.

There are only a few lichenicolous fungi on *Lepraria* and *Leproloma* noted in the literature (Kümmerling *et al*. 1993; Diederich & Etayo 1995). Only one lichenicolous fungus, *Paranectria oropensis* (Ces.) D. Hawksw. & Piroz. (Ascomycetes) growing on *Leproloma membranaceum*, was found in the area studied. It had not been previously reported from Poland and is marked with an asterisk in the list.

SPECIES

***Lepraria borealis*** Lohtander & Tønsberg (Fig. 1)

This species is reported for the first time for Poland. It seems to be quite common in mountain regions, but its distribution needs further study.

*Lepraria borealis* has a granular thallus like other members of the *Lepraria neglecta*-group, but it differs chemically and morphologically from them (see Lohtander 1994). The species was earlier known as *Lepraria* sp. A (Tønsberg 1992).

CHEMISTRY. Atranorin and rangiformic acid.

ECOLOGY. The species has been found on sandstone; it also known to occur on tree bark (Tønsberg 1992; Lohtander 1994).

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Gorce National Park, in catchment area of Zapalac stream, the edge of Figurki Dolne glade, alt. 1140 m, on sandstone, 3 Sept. 1996, *leg. P. Czarnota* (GPN 1459/94, UGDA-L).

***Lepraria caesioalba*** (de Lesd.) J. R. Laundon (Fig. 1)

This species was reported for the first time for Poland by Guzow (1997), but the identification was not confirmed by TLC. The presented spe-

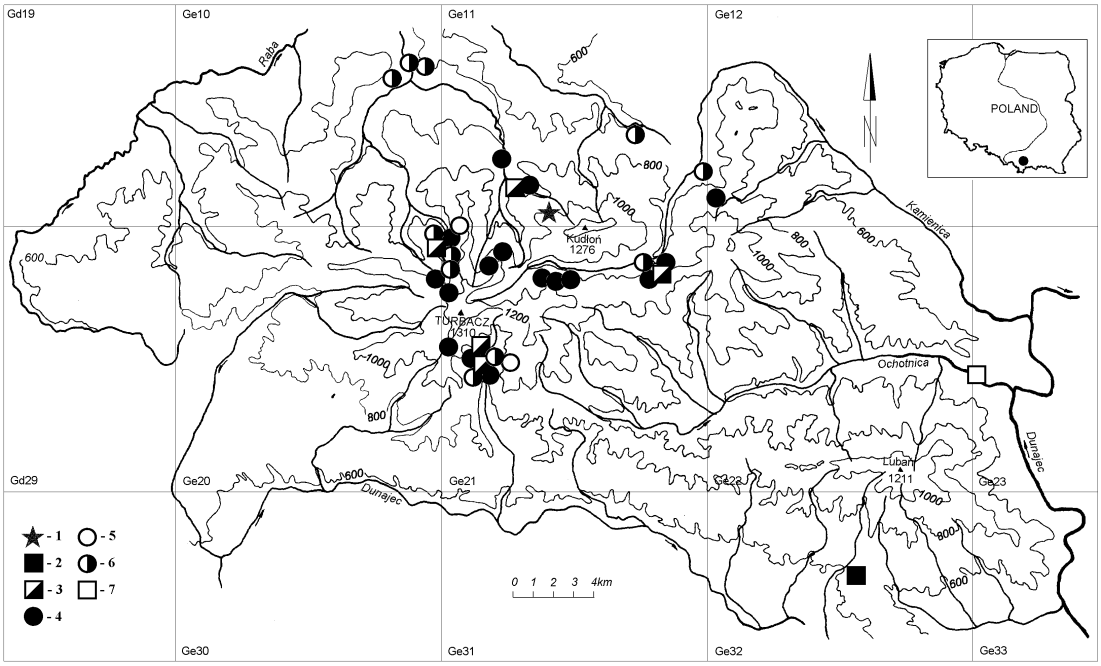


**Fig. 1.** Distribution of species in the Gorce Mts: 1 – *Lepraria borealis* Lohtander, 2 – *L. caesioalba* (de Lesd.) J. R. Laundon, 3 – *L. eburnea* J. R. Laundon, 4 – *L. elobata* Tønsberg, 5 – *L. rigidula* (de Lesd.) Tønsberg, 6 – *L. lobificans* Nyl., 7 – *Paranectria oropensis* D. Hawksw. & Piroz.

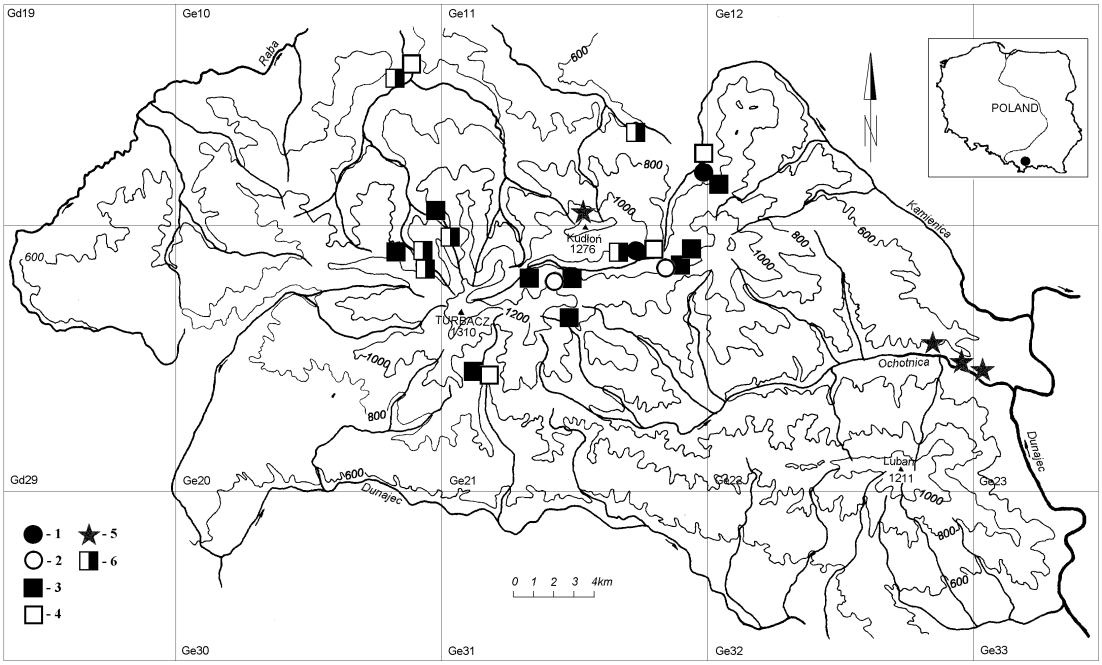


**Fig. 2.** Distribution of species in the Gorce Mts: 1 – *Lepraria crassissima* (Hue) Lettau, 2 – *L. incana* (L.) Ach., 3 – *L. jackii* Tønsberg, 4 – *Leproloma diffusum* J. R. Laundon s.str., 5 – *L. membranaceum* (Dicks.) Vain., 6 – *L. vouauxii* (Hue) J. R. Laundon.

cimen is the first one given with the composition of lichen substances tested by TLC.

It differs from other members of the *Lepraria neglecta*-group found in Poland by the presence of fumarprotocetraric acid in the thallus; it is the only *Lepraria* species known from Poland that produces that substance.

CHEMISTRY. Fumarprotocetraric and angardianic acids, atranorin. The specimen represents chemotype I (Leuckert *et al*. 1995).

ECOLOGY. The specimen occurs on moss cushions on sunny rocks.

SPECIMEN EXAMINED. Grid square Ge-32 – GORCE MTS, Wdżar Mt., alt. 750 m, on moss cushions on sunny rocks, Aug. 1999, *leg. W. Fałtynowicz* (UGDA-L).

***Lepraria crassissima*** (Hue) Lettau (Fig. 2)

This species is known from only a few records confirmed by TLC from southern Poland, but it is probably quite common on calcareous rocks (Kukwa unpubl.).

According to Kümmerling *et al*. (1991), *Lepraria crassissima* is conspecific with *L. incana* (L.) Ach., because of the similar chemistry (divaricatic acid and zeorin), but after a re-examination of the type collection, Boom *et al*. (1994) concluded that *L. crassissima* is a distinct species. It differs morphologically from *L. incana* by its thick, stratified thallus and chemically by the constant presence of large amounts of nordivaricatic acid, which gives a C+ red reaction. The two species differ in their ecology: *L. crassissima* prefers calcareous rocky substrates, whereas *L. incana* grows on acid substrates (on tree bark, soil and other).

CHEMISTRY. Divaricatic and nordivaricatic acids, zeorin.

ECOLOGY. The species was found on calcareous rocks together with *Leproloma diffusum* J. R. Laundon.

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Rzeki village, in Kamienica stream valley in the vicinity of the former head office of Gorce NP, alt. 700 m, on very shaded calcareous sandstone and loamy slates, 12 July 1999, *leg. P. Czarnota* (GPN 2093, 2106, 2118); Ge-21 – GORCE MTS, Gorce NP, below Stawieniec glade, Kamienica stream valley, alt. 870 m, on calcareous sandstone, 11 June 1996, *leg. P. Czarnota* (GPN 1370/94).

***Lepraria eburnea*** J. R. Laundon (Fig. 1)

This species was recently reported from six localities as new to Poland (Kukwa & Sągin 2001). It is similar in chemistry to *L. neglecta*, but differs in the presence of a leprose, not granular thallus.

CHEMISTRY. Alectorialic acid as a major substance, barbatolic and protocetraric acids in lower concentrations. All specimens represent chemotype I (Orange 1997).

ECOLOGY. *Lepraria eburnea* occurs on sandstone and tree bark.

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Gorce NP, Zapalac stream, below the forest of Konina village, alt. 660 m, on sandstone in the stream, 22 Oct. 1997, *leg. P. Czarnota* (GPN 1751/94); Ge-21 – GORCE MTS, Gorce NP, Łopuszanka stream valley, below Żubrowisko glade, alt. 850 m, on riverside sandstone, 5 May 1995, *leg. P. Czarnota* (GPN 1472/94); Kamienica stream valley, below Bieniowe glade, on sandstone by path, 5 July 1999, *leg. P. Czarnota* (GPN 2102, 2084); Turbacz reserve, below Średnie glade, by blue hiking trail to Turbacz Mt., alt. 1030 m, on bark of *Fagus sylvatica*, 18 June 1996, *leg. P. Czarnota* (GPN 1005/94); Łopuszanka River valley, by Gajówka Mikołaja, alt. 830 m., on sandstone and bark of dead *Fagus sylvatica,* 02 May 1999, *leg. M. Kukwa* (UGDA-L).

***Lepraria elobata*** Tønsberg (Fig. 1)

Recently this species has been reported from four localities in Poland (Kukwa & Owe-Larsson 2000). Detailed studies have shown that it is very common but has been overlooked or mistaken for *L. incana* in the past (Kukwa unpubl.). It differs from *L. incana* chemically and contains divaricatic acid instead of the stictic acid complex (Tønsberg 1992).

CHEMISTRY. Atranorin, stictic acid complex and zeorin. Lindblom (1995) reported divaricatic acid also, but in our opinion it is only contamination from *Lepraria incana*, which frequently occurs together with *L. elobata* (Kukwa unpubl.).

ECOLOGY. *Lepraria elobata* has a wide ecological range, being found on tree bark, decaying wood, sandstone and clayey soil.

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Gorce NP, Zapalac stream, below the forest of Konina village, alt. 660 m, on sandstone in the stream, 22 Oct. 1997, *leg. P. Czarnota* (GPN 1751/94); Konina Natanki hamlet, alt. 600 m, on sandstone in fields, 02 June 1999, *leg. P. Czarnota* (GPN 1946/94); Ge 12 – GORCE MTS, by hiking path to Gorc Kamienicki Mt. below Magorzyca Mt., alt 800 m, on decaying stump, 12 July 1999, *leg. P. Czarnota* (GPN 2110); Ge-21 – GORCE MTS, Gorce NP, Łopuszanka stream valley, below Żubrowisko glade, alt. 850 m, on riverside sandstone, 05 May 1995, *leg. P. Czarnota* (GPN 1472/94); Turbacz reserve, Łocha range, alt. 1020 m, on sandstone in dry stream bed, 20 Aug. 1996, *leg. P. Czarnota* (GPN 2104); Turbacz reserve by park boundary, below Hala Turbacz glade, in catchment area of Olszowy Potok stream, alt. 1160 m, on sandstone, 20 Aug. 1996, *leg. P. Czarnota* (GPN 1324/94); Turbacz reserve, Turbacz stream valley, below Średnie glade, alt. 850 m and 900 m, on bark of *Fagus sylvatica*, 23 May 1996 and 30 May 1996, *leg. P. Czarnota* (GPN 1249/94, 2115); Roztoka stream valley, below Mostownica Mt., alt. 1100 m, on bark of *Acer pseudoplatanus*, 10 Oct. 1995, *leg. P. Czarnota* (GPN 452/94); N slope of Mostownica Mt., above Podmostownica glade, in catchment area of Konina stream, alt. 1060 m, on bark of *Fagus sylvatica,* 01 Apr. 1996, *leg. P. Czarnota* (GPN 866/94); Pod Jaworzyną range, below Jaworzyna Kamienicka glade, Kamienica stream valley, alt. 1100 m, on bark of *Sorbus aucuparia*, 02 July 1999, *leg. P. Czarnota* (GPN 2117); below Bieniowe glade, Kamienica stream valley, alt. 840 m, on sandstone, 01 July 1999, *leg. P. Czarnota* (GPN 2119); Pod Jaworzyną range, Kamienica stream valley, alt. 1080 m, on sandstone, 19 July 1999, *leg. P. Czarnota* (GPN 2080); trail up to Jaworzyna Kamienicka glade, above Borek pass, alt. 1030 m, on clayey soil and decaying stump, 19 July 1999, *leg. P. Czarnota* (GPN 2095); on trail up to Turbacz Mt., in vicinity of Kaplica Papieska chapel, alt. 1220 m, on clayey soil, 01 May 1999, *leg. P. Czarnota & M. Kukwa* (UGDA-L); Łopuszna valley, vicinity of Gajówka Mikołaja, alt. 840 m, on bark of *Picea abies*, 2 May 1999, *leg. M. Kukwa* (UGDA-L).

***Lepraria incana*** (L.) Ach. (Fig. 2)

*Lepraria incana* is the commonest member of the genus in northern Poland (Kukwa unpubl.). In the Gorce Mts it was found only twice and we cannot explain its rarity here; perhaps altitude is the restrictive factor, but this suggestion needs further investigation.

The species is easily recognized by the presence of divaricatic acid (giving UV+ white reaction) and C– thallus.

CHEMISTRY. Divaricatic acid and zeorin.

ECOLOGY. In the Gorce Mts the species occurs on sandstone and tree bark. In northern Poland it is also known from soil and wood.

SPECIMENS EXAMINED. Grid square Ge-21 – GORCE MTS, Gorce NP, below Bieniowe glade, above Kamienica stream, vicinity of Polish Academy of Sciences station, alt. 820 m, on sandstone, 01 July 1999, *leg. P. Czarnota* (GPN 2098); Pod Jaworzyną range, below Jaworzyna Kamienicka glade, Kamienica stream valley, alt. 1100 m, on bark of *Sorbus aucuparia* and *Picea abies,* 02 July 1999, *leg. P. Czarnota* (GPN 2113, 2114).

***Lepraria jackii*** Tønsberg (Fig. 2)

This species is common on different types of substrate. In Poland it is known from just a few localities (Fałtynowicz 1997; Kukwa 2000), but it is more common. In the past it was usually mistaken for *Lepraria incana*.

The combination of atranorin, jackinic acid and powdery thallus makes this species distinct from other *Lepraria* species (Tønsberg 1992; Leuckert *et al*. 1995).

CHEMISTRY. Atranorin, jackinic and roccellic acids.

ECOLOGY. *Lepraria jackii* grows mostly as an epiphytic or epixylic species, but it has been found on rocks also. In northern Poland the species also occurs on sandy soil.

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Gorce NP, by Stara Huta clearing, stream in Turbacz stream valley, alt. 760 m, on bark of *Abies alba*, 26 Oct. 1995, *leg. P. Czarnota* (GPN 561/94); Ge 12 – GORCE MTS, by the blue hiking trail to Gorc Kamienicki Mt. below Magorzyca Mt., alt 800 m, on decaying stump, 12 July 1999, *leg. P. Czarnota* (GPN 2110); Ge-20 – GORCE MTS, Gorce NP, E slopes of Obidowiec Mt. in Olszowy Potok stream valley, alt. 960 m, on bark of *Picea abies*, 09 Nov. 1994, *leg. P. Czarnota* (GPN 149/94); Ge-21 – GORCE MTS, Gorce NP, below Bieniowe glade, above Kamienica stream, vicinity of Polish Academy of Sciences station, alt. 820 m, on decaying stump, 01 July 1999, *leg. P. Czarnota* (GPN 2109, 2111); below Bieniowe glade in Kamienica stream valley, by the trail to Gorc Kamienicki Mt., alt. 880 m, 01 July 1999, *leg. P. Czarnota* (GPN 2089); Pod Jaworzyną range, Kamienica stream valley, alt. 1080 m, on sandstone, 19 July 1999, *leg. P. Czarnota* (GPN 2097, 2080); Czerwony Groń range, below Jaworzyna Kamienicka glade, Kamienica stream valley, alt. 1060 m, on bark of *Fagus sylvatica*, 19 July 1999, *leg. P. Czarnota* (GPN 2108); at source of Forędówki stream, below Jaworzyna Kamienicka Mt., alt. 1100 m, on decaying stump, 06 Nov. 1999, *leg. P. Czarnota* (GPN 2102); vicinity of Gajówka Mikołaja, Łopuszanka stream valley, alt. 840 m, on bark and wood of *Picea abies*, 02 May 1999, *leg. M. Kukwa* (UGDA-L).

***Lepraria lobificans*** Nyl. (Fig. 1)

This species is a common lichen taxon in moist and shaded places. In the past it was mistaken for *Leproloma membranaceum*, but these two taxa can be differentiated easily by their chemistry.

*Lepraria lobificans* is identical in its chemistry with *L. elobata*. However, the first differs in having a distinctly stratified thallus with lobes, and soredia with long projecting hyphae, whereas the thallus of *L. elobata* is unstratified and unlobate and the soredia do not possess projecting hyphae (Tønsberg 1992).

CHEMISTRY. Atranorin, stictic acid complex and zeorin.

ECOLOGY. *Lepraria lobificans* is found on tree bark, sandstone and mosses, rarely on soil, in shaded places with fairly high moisture.

SPECIMEN EXAMINED. Grid square Ge-10 – GORCE MTS, Poręba Wielka village, in manorial park, alt. 520 m, on bark of *Acer pseudoplatanus,* 23 Nov. 1993, *leg. P. Czarnota* (GPN 7/94); Niedźwiedź village, by Porębianka stream, alt. 500 m, on calcareous sandstone, 30 June 1999, *leg. P. Czarnota* (GPN 2092, 2099); Niedźwiedź Witów hamlet, wayside shrine at Stramów-

ka, alt. 550 m, on sandstone and the mosses on them, 10 June 1999, *leg. P. Czarnota* (GPN 2083); Ge-11 – GORCE MTS, Rzeki village, Kamienica stream valley, alt. 700 m, on very shaded calcareous sandstone and loamy slates, 12 July 1999, *leg. P. Czarnota* (GPN 2120); Lubomierz Borki hamlet, alt. 620 m, on epigeic mosses on streamside slope, 12 July 1999, *leg. P. Czarnota* (GPN 2096); Ge-21 – GORCE MTS, Gorce NP: Turbacz reserve, below Średnie glade, Turbacz stream valley, alt. 900 m, on bark of *Fagus sylvatica*, 30 May 1996, *leg. P. Czarnota* (GPN 2115), and alt. 1030 m, on bark of *Fagus sylvatica*, 18 June 1996, *leg. P. Czarnota* (GPN 1005/94); Turbacz reserve, Na Piaski range, below Średnie glade, alt. 940 m, on sandstone by Turbacz stream, 30 May 1996, *leg. P. Czarnota* (GPN 2100/94); below Bieniowe glade, by Kamienica stream, in vicinity of Polish Academy of Sciences station, alt. 820 m, on mosses over bark of *Fagus sylvatica* and sandstone, 01 July 1999, *leg. P. Czarnota* (GPN 2112, 2107, 2091); below Żubrowisko glade, Łopuszanka stream valley, alt. 840 m, on sandstone and saxicolous mosses, 01 May 1999, *leg. P. Czarnota & M. Kukwa* (UGDA-L); vicinity of Gajówka Mikołaja, Łopuszanka stream valley, alt. 830 m, on soil and bark of *Picea abies* and *Fagus sylvatica*, 02 May 1999, *leg. M. Kukwa* (UGDA-L).

***Lepraria rigidula*** (de Lesd.) Tønsberg (Fig. 1)

*Lepraria rigidula* was reported for the first time in Poland from a single locality by Kümmerling *et al.* (1995), but it is quite common in the country (Kukwa unpubl.). The presence of nephrosteranic acid and usually long projecting hyphae on the soredia are the discriminating features (Tønsberg 1992; Leuckert *et al.* 1995).

CHEMISTRY. Atranorin and nephrosteranic acid.

ECOLOGY. *Lepraria rigidula* has been found only on bark of *Fagus sylvatica* in the Gorce Mts. In other parts of the country it also occurs on mosses and other tree species.

SPECIMENS EXAMINED. Grid square Ge-21 – GORCE MTS, Gorce NP, above Polanka Aniołka glade, by path in Turbacz stream valley, alt. 830 m, on bark of *Fagus sylvatica,* 23 May 1996, *leg. P. Czarnota* (GPN 1396/94); Jonkówki glade, alt. 1050 m, on bark of *Fagus sylvatica*, 01 May 1999, *leg. M. Kukwa* (UGDA-L).

***Leproloma diffusum*** J. R. Laundon var. ***diffusum*** (Fig. 2)

This taxon was first time reported for Poland from the Gorce Mts by Czarnota (2000). In the present paper the identification is corroborated by TLC. The species can be confused in the field with *Leproloma membranaceum* or *L. vouauxii*, but it differs in the presence of 4-oxypannaric acid-2-methylester detectable by TLC.

CHEMISTRY. 4-oxypannaric acid-2-methylester.

ECOLOGY. *Leproloma diffusum* grows on clayey soil, rocks, and mosses growing over these two substrates.

SPECIMENS EXAMINED. Grid square Ge-10 – GORCE MTS, Niedźwiedź village, by Porębianka stream, alt. 500 m, on clayey soil and epilithic mosses, 02 July 1999, *leg. P. Czarnota* (GPN 2105); [Ge 11] – Rzeki village, in Kamienica stream, alt. 700 m, on soil, epilithic mosses and loamy slates, 12 July 1999, *leg. P. Czarnota* (GPN 2094, 2106); Ge 21 – GORCE MTS, Gorce NP, by blue hiking trail below Stawieniec glade, Kamienica stream valley, alt. 870 m, on calcareous sandstone, 11 June 1996, *leg. P. Czarnota* (GPN 1370/94); Łopuszanka river valley, by Gajówka Mikołaja, alt. 830 m, on sandstone, 01 May 1999, *leg. M. Kukwa* (UGDA-L).

***Leproloma membranaceum*** (Dicks.) Vain. (Fig. 2)

This species has been reported many times from Poland, but the revision of some herbarium specimens suggests that most of the records probably belong to *Lepraria lobificans* or *Leproloma vouauxii* (Kukwa unpubl.). *Leproloma membranaceum* seems to be restricted to mountain areas. The presence of large amounts of pannaric acid and the markedly lobed thallus are the discriminating features (e.g., Tønsberg 1992).

CHEMISTRY. Atranorin and pannaric and roccellic acids.

ECOLOGY. In the Gorce Mts *Leproloma membranaceum* is a saxicolous species, as other records from Poland confirmed (Leuckert & Kümmerling 1991; Kukwa unpubl.). Outside Poland it was also found on tree bark (e.g., Tønsberg 1992).

SPECIMENS EXAMINED. Grid square Ge-11 – GORCE MTS, Gorce NP, catchment area of Zapalac stream, below Kudłoń, alt. 1120 m, on sandstone walls of Kudłoński Baca tower, 29 Sept. 1995, *leg. P. Czarnota* (GPN 1722/94); Ge-22 – GORCE MTS, S slopes of Twarogi Mt., above Ochotnica Dolna Brysiówka hamlet, alt. 520 m, on rocks, 05 Aug. 1999, *leg. P. Czarnota* (GPN 2085, 2043); S slopes of Twarogi Mt., above Ochotnica Dolna Barbarówka hamlet, alt. 530 m, on rocks, 05 Nov. 1999, *leg. P. Czarnota* (GPN 2086); Ge-23 – GORCE MTS, Ochotnica Dolna, Michałki hamlet above main road, alt. 430 m, on shaded, slightly calcareous sandstone, 05 Aug. 1999, *leg. P. Czarnota* (GPN 2210).

***Leproloma vouauxii*** (Hue) J. R. Laundon (Fig. 2)

*Leproloma vouauxii* was reported for the first time from Poland by Laundon (1989). It is a quite common species in the country (Kukwa unpubl.). The presence of large amounts of pannaric acid-6-methylester is the discriminating feature.

CHEMISTRY. Pannaric acid-6-methylester with satellite substances.

ECOLOGY. The species occurs on tree bark and rocks.

SPECIMENS EXAMINED. Grid square Ge-10 – GORCE MTS**,** Poręba Wielka village, in manorial park, alt. 520 m, on bark of *Malus domestica,* 23 Nov. 1993, *leg. P. Czarnota* (GPN 2101); Ge-11 – GORCE MTS, Lubomierz Borki hamlet, alt. 620 m, on bark of *Fraxinus excelsior* at edge of hamlet, 12 July 1999, *leg. P. Czarnota* (GPN 2081); Ge-20 – GORCE MTS, Gorce NP, Turbacz reserve, below Malarka in Olszowy Potok stream valley, alt. 810 m, on shaded sandstone, 26 June 1996, *leg. P. Czarnota* (GPN 1478/94); by boundaries of Turbacz reserve, gorge of Olszowy Potok stream valley below Malarka, alt. 820 m, on bark of *Fagus sylvatica,* 26 June 1996, *leg. P. Czarnota* (GPN 1111/94, 1329/94); Ge-21 – GORCE MTS, Gorce NP, below Stawieniec range by Kamienica stream by blue hiking trail, alt. 870 m, on sandstone, 11 June 1996, *leg. P. Czarnota* (GPN 1369/94); Turbacz reserve, below Średnie glade, Turbacz stream valley, alt. 900 m, on bark of *Fagus sylvatica*, 30 May 1996, *leg. P. Czarnota* (GPN 939/94).

****Paranectria oropensis*** (Ces.) D. Hawksw. & Piroz. (Fig. 1)

This lichenicolous fungus has not been reported from Poland previously. It is also reported for the first time from the thallus of *Leproloma*. In our opinion it spread from the thallus of *Lecidella scabra* (Taylor) Hertel & Leuckert, on which it also grew, and it is probably facultatively parasitic on *Leproloma membranaceum.* The collection well fits the description given by Hawksworth (1983).

ECOLOGY. On thalli of *Lecidella scabra* and *Leproloma membranaceum*.

SPECIMEN EXAMINED. Grid square Ge-23 – GORCE MTS, Ochotnica Dolna, Michałki hamlet above main road, alt. 430 m, on *Lecidella scabra* and *Leproloma membranaceum* on shaded, slightly calcareous sandstone, 05 Aug. 1999, *leg. P. Czarnota* (GPN 2210).

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