Rare and new Laboulbeniales from Poland. VI.

TOMASZ MAJEWSKI

Institute of Botany, Polish Academy of Sciences, 00-478 Warszawa, Al. Ujazdowskie 4, Poland

Majewski T.: Rare and new Laboulbeniales from Poland. VI. Acta Mycol. 16 (1): 141-153, 1980.

The author describes two new genera of fungi from the order Laboulbeniales: Tavaresiella gen.n., similar to Symplectromyces Thaxter, with the type species T. hebri sp.n., and Triceromyces gen.n., related to Distolomyces Thaxter, with type species T. balazucii sp. n.; both are parasites of Hebrus spp. (Heteroptera). A new species on Sphaerosoma globosum (Coleoptera, Endomychidae), Euphoriomyces rossii sp. n. is also described, and the localities of seven other species new for Poland are presented.

This work on Polish Laboulbeniales gives information about species found for the first time in Poland and about new species. They were mainly collected by the author. The specimens of the described fungi are in the collection of the Mycology Laboratory, Institute of Botany, Warsaw.

Since the last work in this series was published (Majewski 1974) an important change in the administrative division of Poland has taken place. This also affects the description of the localities where the fungi were found. Previously Poland was divided into 17 voivodeships and almost 400 districts, which were described by the author as counties. Since June 1, 1975 Poland is divided into 49 voivodeships and the counties no longer exist.

Asaphomyces agathidii (Maire) Scheloske

On Agathidium badium Er. (Coleoptera, Liolidae): Bieszczady Mts., Wetlina (Krosno voivodeship), Fagetum on eastern slope of Jawornik,

about 700 m above sea level, on the polyporaceous fungi on old trunk of Fagus sylvatica, 29.5.1974 (TM. 1398); the same locality, under bark of lying trunks of Fagus, 2.6.1974 (TM. 1420, 1421); on Agathidium sphaerulum Rtt.: as previously (TM. 1422); on Amphicyllis globus F. (Col., Liolidae): Białowieża National Park (Białystok voivodeship), section 314, Circaeo-Alnetum by river Orłówka, in litter, 22.9.1977 (TM. 1726).

The characteristics of the investigated specimens from Białowieża are in agreement with the observations of Scheloske (1969 p. 92). The dimensions are slightly larger, length up to 125 μm , perithecia up to $68 \times 28~\mu m$. Mature specimens from the Bieszczady Mts. (slide no. 1422) are in agreement with the description of Maire (1920 p. 156-157, fig. 18-19), their length is 90-100 μm , perithecia $40 \times 18~\mu m$. The fungus occured on the pronotum, more rarely on the elytra of the host.

Asaphomyces agathidii is known hitherto from Morocco, the German Federal Republic and Poland.

Corethromyces stilici Thaxter

On Stilicus rufipes Germ. (Col., Staphylinidae): Mikołajki (Suwałki voivodeship), under bits of wood in park by evangelical church, 5.8.1976 (TM. 1629); Białowieża National Park, section 314, Circaeo-Alnetum by river Orłówka, in litter, 23.9.1977 (TM. 1727); on Stilicus similis Er.: Bieszczady Mts., in rotting hay at foot of Połonina Wetlińska, obout 700 m above sea level, 19.6.1978 (TM. 1906).

Numerous specimens of this fungus grew on the abdomen of the host. Mature specimens from the Bieszczady Mts. (slide no. 1906) were up to 185 μ m long, thus were larger than these described by T h a x t e r (1908 p. 319), but were within the limits given by S p e g a z z i n i (1912 p. 182).

The fungus is known from North and South America, from Asia and from several West European countries (Scheloske 1969).

Dimeromyces balazucii Rossi et Cesari Rossi

On Scaphidema metallicum (F.) (Col., Tenebrionidae): Białowieża (Białystok voivodeship), park near pound, in trap with rotting meat, 23.9.1977 (TM. 1728, 1729).

This is the second locality of this species described recently from the environs of Rome (Rossi, Cesari Rossi 1977). Six male and two female specimens were found on the elytra and pronotum of the host and on its eye. They were totally in agreement with the description and figures of this species given in the work of the Italian authors.

Euphoriomyces rossii sp. n.

Habitus hyalinus. Axis receptaculi e sex alis super alias positis cellulis constat. Cellulae receptaculi (basali excepto) paulo compressae vel isodiametrae sunt. Ex secunda et tertia cellula receptaculi breves appendices antheridiales nascuntur, saepe dichotomice ramosae, cum antheridiis apicalibus, solito tantum in externa parte thalli. Ex quarta cellula cellulae pedunculorum peritheciorum oriuntur. In apice altissimae cellulae axis receptaculi duo antheridia vel duae cellulae elongatae cum binis antheridiis. Perithecium longe ovatum, paulum asymmetricum, solito unum maturum.

Longitudo tota 65-86 μ m, perithecia 38-55 \times 15-24 μ m.

Hyaline. The axis of the receptacle consisting of six (exceptionally seven when the basal cell is divided) superposed cells. The basal cell somewhat elongated and narrower at the foot, the remaining cells somewhat flattened or isodiametric. The second and third cell of the receptacle are separated by a vertical septa from the basal cells of the secondary antheridial branches, which are short, simple or dichotomically branched and terminated by the simple antheridium; the branches are fully developed usually only on the outer side of the paired specimens. The fourth cell of the receptacle is separated by a vertical septa from the stalk cells of the perithecia; these cells are almost triangular,

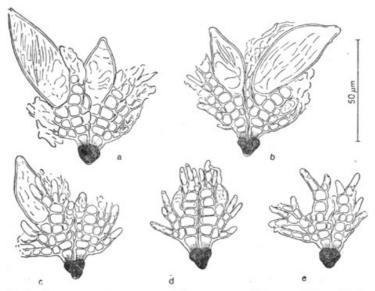


Fig. 1. Euphoriomyces rossi sp.n. on Sphaerosoma globosum, Stare Sioło; a - holotype

their outer margins convex. The upper cell of the axis of the receptacle bears distally two antheridia or two somewhat elongated cells with pairs of antheridia. The perithecium elongated, slightly asymmetrical, tapering to the apex with small lips. The fully developed perithecium is only on the one side of the thallus.

Perithecium 38-55 \times 15-24 μm , total length to the tip of perithecium 65-86 μm .

On Sphaerosoma globosum Sturm. (Col., Endomychidae): Bieszczady Mts., Stare Sioło, in humid forest with Alnus incana by left bank of Wetlinka stream, on fructifications of Collybia peronata (Bolt. ex Fr.) Sing., about 700 m above sea level, 1.6.1974, leg. T. Majewski (TM 1406 — holotype, 1407-1413, 1416, 1417). Fig. 1.

The found specimens always occured in connected pairs on the elytra, more rarely on the pronotum of the host.

This species differs distinctly from the not numerous hitherto described representatives of the genus Euphoriomyces (T haxter 1931; Majewski 1973). Euphoriomyces bilateralis Thaxter and E. guatemalensis Thaxter differ by a built receptaculum with numerous perithecia. The small and simply built E. aglyptonoti Thaxter and E. cybocephali Thaxter have branched appendage-like termination of the axis of receptacle. From these two species as well as from E. cioideus Thaxter and E. octotemni Majewski the new species differs in the formation of branched antheridial branches under the perithecium, from E. cioideus and E. octotemni additionally by short antheridial branches terminating the axis of the receptacle.

The fungus is named after Walter Rossi from Rome (Italy) who has carefully and devotedly investigated the flora of *Laboulbeniales* in his own country.

Herpomyces periplanetae Thaxter

On Blatta orientalis L. (Blattodea, Blattidae): Dziekanów Leśny (Warszawa voivodeship), in field station of the Institute of Ecology, Polish Academy of Sciences, IV-VI.1974, leg. T. Plewka (TM. 1383-1386); Warszawa, in culture of the Institute of Zoology, University of Warsaw, 3.9.1974 (TM. 1387).

Species known from North, Central and South America, Africa, Asia and Europe. The typical form of this species is a parasite of *Periplaneta americana*; the form from *Blatta orientalis* has been described by Spegazzini (1917 p. 551) as a separate species *Herpomyces stylopygae* Speg., but Thaxter (1931 p. 86-87) doubts the validity of Spegazzini's species.

The specimens found in and around Warsaw are in agreement with the description and dravings of Thaxter (1908 p. 285-286, pl. 46 fig. 6-13).

Laboulbenia acupalpi Spegazzini

On Acupalpus brunneipes Sturm. (Col., Carabidae): Dziekanów Leśny (Warszawa voivodeship, Kampinos National Park), 11.8.1972, leg. T. Plewka (TM. 1154 — together with L. inflata); the same locality, 16.8.1972, leg. T. Plewka (TM. 1160); on Acupalpus dorsalis F.: Tarczyn near Grójec (Warszawa voivodeship), 2.8.1972 (TM. 1061 — with L. inflata); Dziekanów Leśny (Warszawa voivodeship), 11.8.1972, leg. T. Plewka (TM. 1153); the same locality, 16.8.1972, leg. T. Plewka (TM. 1156 — with L. inflata, 1161 — with L. inflata); on Acupalpus meridianus L.: Owczary near Busko-Zdrój (Kielce voivodeship), 13.6.1965, leg. T. Plewka (TM. 183). Fig. 2 a, b.

The fungus often occured on the same hosts as L. inflata. The length of the Polish specimens was $180\text{-}316~\mu\text{m}$, the appendage length up to $230~\mu\text{m}$, the perithecia $76\text{-}103\times38\text{-}56~\mu\text{m}$. These dimensions agree fairly well with the dimensions given by Spegazzini (1917 p. 617) for the specimens from Argentina and Uruguay, but are much larger than those given in the first description of L. acupalpi on the basis of specimens from Austria (Spegazzini 1915 p. 458). The photograph given by Rossi (1975 fig. 8) also portrays the characteristics of the Polish specimens very well. In young specimens single antheridia on the top of a single short antheridial appendage are visible, growing out from its basal cell linked laterally to the basal cell of the outer branched appendage.

Laboulbenia acupalpi is known from South America (Spegazzini 1917), Austria (Spegazzini 1915), Italy (Rossi 1975), Hungary (Bánhegyi 1940) and Japan (Sugiyama 1978), it has been also reported from France (Balazuc 1973-74).

Laboulbenia bradycelli Balazuc

On Trichocellus placidus Gyll. (Col., Carabidae): Białowieża (Białystok voivodeship), park near pond, 5.5.1971 (TM. 505); the same locality, 19.5.1973 (TM. 1225).

Numerous specimens of this species have been found by the author on two beetles: on the elytra, pronotum, legs and antennae. Their characteristics correspond to the description of Balazuc (1974 p. 15-16, fig. 17). This species is hitherto known only from France.

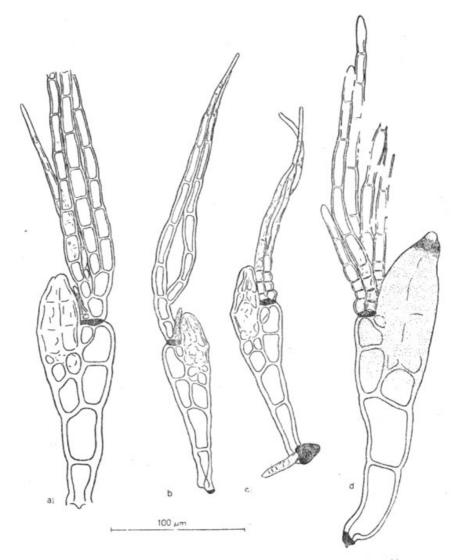


Fig. 2. Laboulbenia acupalpi Speg. on Acupalpus dorsalis: a, b — immature specimens, Dziekanów Leśny. Laboulbenia inflata Thaxter on Acupalpus dorsalis: c — immature specimen, Smrock; d — mature specimen, Dziekanów Leśny

Laboulbenia inflata Thaxter

On Acupalpus brunneipes Sturm. (Col., Carabidae): Dziekanów Leśny (Warszawa voivodeship, Kampinos National Park), 6.8.1972, leg.

T. Plewka (TM. 1151); the same locality, 11.8.1972, leg. T. Plewka (TM. 1154, together with L. acupalpi); on Acupalpus dorsalis F.: Smrock near Maków Mazowiecki (Ostrołęka voivodeship), 2.8.1968 (TM. 117, 118, 120, 122, 123); the same locality, 3.8.1968 (TM. 134); Topiło in Białowieża Forest (Białystok voivodeship), 22.7.1964, leg. T. Plewka (TM. 169); Kurzeszyn Nowy near Rawa Mazowiecka (Skierniewice voivodeship), 14.6.1972 (TM. 1008); the same locality, 21.8.1972 (TM. 1011); Tarczyn near Grójec (Warszawa voivodeship), 2.8.1972 (TM. 1061, with L. acupalpi); Dziekanów Leśny (Warszawa voivodeship), 11.8.1972, leg. T. Plewka (TM. 1156 — with L. acupalpi, 1157, 1158, 1159, 1161). Fig. 2 c, d.

This fungus occurs probably more often than Laboulbenia acupalpi. Numerous found specimens were in agreement with the description of Thaxter (1896 p. 327, pl. 3 fig. 5, pl. 17 fig. 4-6) but were generally larger. The length of the Polish specimens of L. inflata was 180-320(-380) μm , the length of the appendages up to 290 μm , perithecia 75-118×28-63 μm . Identical specimens, judging by the illustrations were found by Balazuc (1974, fig. 27) and Rossi (1975, fig. 9). The author has never seen an antheridial appendage, even in very young specimens.

Laboulbenia inflata is known from North America, France and Italy.

Tavaresiella gen. n.

Cellula basalis receptaculi parva, cellula subbasalis et cellula superior receptaculi parallelae sunt. Cellulae basales perithecii distinctae. Perithecium asymmetricum. Series perpendiculares cellularum externi parietis perithecii ex quinque cellulis. In cellula inferiore appendicis duo vel plures rami oriuntur; ramus internus ex elongata cellula cum uno vel duobus ramulis apicalibus constat, ramus externus ex perpendiculari serie cellularum, quae compressae sunt (probabiliter antheridia).

Basal cell of the receptacle small, subbasal cell parallel to the upper cell of the receptacle. Basal cells of the perithecium prominent. Perithecium asymmetrical, with five outer wall cells in each vertical row. Lowest cell of appendage bears two or more erect branches — an inner branch consisting of an elongated cell, which subtends one or more small cells or branchlets, and one or more outer branches, each of which consists of a vertical series of flattened cells with lateral necks, probably functioning as simple antheridia.

Etymology: named in the honor of Isabelle I. Tavares, University of California, Berkeley, prominent specialist in Laboulbeniales.

Type species: Tavaresiella hebri Majewski.

Tavaresiella hebri sp. n.

Habitus hyalinus, venter perithecii ferrugineus. Cellula basalis receptaculi minima, ex ea processus tenuis et obscurus oritur. Cellula subbasalis receptaculi et cellula pedunculi perithecii elongatae, parallelae, cellulae basales perithecii magnae. Perithecium irregulariter ovatum, cum parvis labiis, margo eius externa convexa, margo interna paene recta est. Residuum trichogyni distinctum. Cellula basalis appendicis asymmetrice obtriangularis. Cellula inferna appendicis compressa, laterale antheridium et in apice duos ramos habet: ramus sterilis ex cellulis elongatis et ramus antheridialis ex 6-8 antheridiis simplicibus constat.

Longitudo tota ad apicem perithecii 78-100 μ m, perithecia 48-60 \times 18-27 μ m, appendix 25-43 μ m longus, processus basalis 17-35 μ m longus.

Hyaline, the venter of perithecium orange-yellow. Basal cell of the receptacle very small, forming an opaque thin upgrowth reaching just above the base of the antheridial branch. Subbasal cell of the receptacle and stalk cell of the perithecium elongated, the latter being broader; they are separated by a horizontal septum. Basal cell of the perithecium large, the inner one somewhat longer than broad, the others isodiametrical or flattened. Perithecium greatly inflated externally, internally nearly straight, the indistinct neck tapering to the apex, which has small lips. The base of the trichogyne is often visible as a small protuberance at the boundary between the venter and neck of the perithecium. Upper cell of the receptacle asymmetrically obtriangular, connected laterally with the subbasal cell of the receptacle along its whole length. The lowest cell of the appendage flattened, separated by an

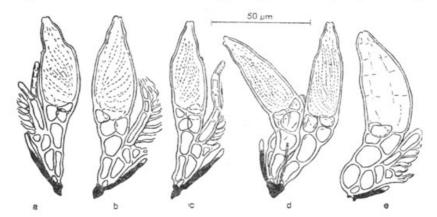


Fig. 3. Tavaresiella hebri sp.n., Diugie; a-d: on Hebrus ruficeps (a — holotype), e — on Hebrus pusillus

oblique septum from a small lateral cell (antheridium ?) and distally subtending the antheridial branch and the inner sterile branch. The main cell of the sterile branch is elongated and it bears one or two short simple branches distally. The antheridial branch consists of a vertical row of 6-8 simple antheridia, whose oblique necks extend outward and upward.

Total length 78-100 μ m, perithecium 48-60 \times 18-27 μ m, appendage 25-43 μ m, basal upgrowth 17-35 μ m.

On Hebrus ruficeps Thoms. (Heteroptera, Hebridae): Długie near Izbica Kujawska (Włocławek voivodeship), muddy borders of shallow ditches at a meadow on the Northern end of Długie Lake, 22.5.1976, leg. T. Majewski (TM. 1583, 1586, 1587, 1589, 1590 — holotype, 1593, 1594); Tuszyn near Serock (Warszawa voivodeship), muddy borders of drainage ditches, 12.6.1976 (TM. 1607). On Hebrus pusillus (Fall.): Długie, as above, 22.5.1976 (TM. 1595). Fig. 3.

Of more than 20 specimens investigated, the majority grew on the lateral surfaces of the abdomen of the host and a few grew on the legs. The occurrence of specimens in pairs with feet together is characteristic of this species. Because no young specimens have been found so far, no accurate study of the structure of the appendage has been possible. Nevertheless, a survey of the material available indicates that the described specimens differ greatly from known taxa. According to Dr. Tavares (personal communication) species classified by Thaxter (1896) as Sphaleromyces seem to be most closely related to the new species. However, they differ greatly in the structure of the appendage; in representatives of Sphaleromyces the appendage consists of a vertical series of superposed cells, each of which gives rise from its inner upper angle to a single short septate antheridial branch. Each lateral antheridial branch in Sphaleromyces lathrobii Thaxter consists of a terminal antheridium subtended by a series of elongated cells with lateral necks.

Besides Triceromyces, which is described below, Tavaresiella hebri is the only representative of the Laboulbeniales known to parasitize semi-aquatic Hemiptera of the genus Hebrus in Europe. In California, Benjamin (1967) has found Rhizopodomyces merragatae Thaxter on representatives of this genus.

Triceromyces gen. n.

Cellula basalis receptaculi parva, cellula subbasalis receptaculi et cellula basalis appendicis elongatae et parallelae sunt. Perithecium cum magnis asymmetricis processibus, qui ab cellulis externis parietis perithecii oriuntur, sed non ab cellulis apicalibus. Series perpendiculares cellularum externi parietis perithecii ex duabus longis et duabus brevibus cellulis constant. Appendix antheridialis libera, erecta, paucis cellulis completur, ita ut altera alteri superponatur. In apice appendicis simplicia iunctaque antheridia sunt.

Basal cell small, subbasal cell of the receptacle and basal cell of the appendage long and parallel to each other. Perithecium with large asymmetrical outgrowths from the outer wall cells below the apical cells; the vertical rows of outer wall cells with two long and two short wall cells. Appendage erect, consisting of a few superposed cells, with a terminal group of closely associated simple antheridia.

Etymology: treis — three, ceras — horn, myces — fungus (gr.).

Type species: Triceromyces balazucii Majewski.

Triceromyces balazucii sp. n.

Habitus pallide fuscus, cellula subbasalis receptaculi, cellula superior receptaculi et apex perithecii obscurior, antheridia cum processu longissimo lutea sunt. Cellula basalis receptaculi minima, cellula subbasalis receptaculi elongata, cellula pedunculi perithecii brevior sed latior est. Perithecium irregulaliter ovatum, labia inaequalia et irregularia. Ex pariete perithecii tres processus oriuntur: processus infimus hemisphaericus vel conicus, paullo super eo secundus processus longus, incurvatus et prope apicem incrassatus, tertius ad apicem perithecii, incurvatus. Cellula superior receptaculi et cellula subbasalis perithecii parallelae et conjunctae in tota longitudine sunt. Axis appendicis ex tribus isodiametricis cellulis compositus. In apice appendicis antheridia tria, simplicia, colla conjuncta.

Longitudo tota ad apicem perithecii 190-230 μ m, perithecia 125-150 \times 58-68 μ m, appendix 60-68 μ m longus, processus longissimus perithecii 70-96 μ m longus.

Pale brownish, the subbasal cell of the receptacle, upper cell of the receptacle and the top of the perithecium darker, antheridia and the longest perithecial outgrowth orange-yellow. Basal cell of the receptacle very small, indistinct. Subbasal cell of the receptacle elongated, 3-3½× longer than broad, hemicylindrical. Stalk cell of the perithecium not as long but broader, especially in the upper part. Basal cells of the perithecium indistinct. Perithecium irregularly obovate, with the apical lips forming two different, somewhat flattened, large protuberances, and with three lateral outgrowths. The lowest outgrowth is not prominent, but forms a hemisphaerical or somewhat pointed protuberance; it is not higher than one half of the perithecium. The second outgrowth,



Fig. 4. Triceromyces balazucii sp. n. on Hebrus ruficeps, Długie; a — holotype

which is just above it, is long, irregularly tapering to the end, and somewhat bent and thickened at the distal part. The third outgrowth is near the top of the perithecium on the opposite side, not as long as the second one, irregularly cylindrical, bent, rounded on the top, with a distinct septum near the base. Below the apex of the perithecium there is a circular dark area. Upper cell of the receptacle is connected laterally with the subbasal cell of the perithecium along its whole length; it tapers to the foot. Axis of the appendage free, consisting of three isodiametrical superposed cells, with a terminal group of three closely associated antheridia whose necks are relatively short and connected laterally. The antheridial group is separated from the appendage by a dark thick septum.

Total length to the top of perithecium 190-230 μm , perithecium 125-150 \times 58-68 μm , appendage 60-68 μm , longest perithecial outgrowth 70-96 μm .

On Hebrus ruficeps (Thoms.): Długie near Izbica Kujawska, together with Tavaresiella hebri, 22.5.1976, leg. T. Majewski (TM. 1583 — holotype, 1585, 1586, 1588-1592, 1594). Fig. 4.

More than 20 specimens of this species were found on the legs of the host. They differ strikingly from Tavaresiella hebri from the same host,

except for one common character, i.e. a very small basal cell of the receptacle. Dr. Tavares (personal communication) has called the author's attention to the relatively great similarity of the new taxon to species of Distolomyces Thaxter, however, Triceromyces balazucii differs from them in having a receptacle consisting of a long subbasal and a long upper receptacle cell superposed upon a small basal cell (in Distolomyces, the basal cell is longer than the cells above it), three lateral perithecial outgrowths (in Distolomyces, the perithecial outgrowths are apical), and a compact cluster of antheridia terminating the appendage (in Distolomyces, if there is more than one antheridium, they are more loosely arranged).

The species is named for Dr. Jean Balazuc, Eaubonne, France, excellent specialist of this group of fungi to whom the author is grateful they are more loosely arranged).

Corrigendum

In one of the previous works of the author "The genus Coreomyces Thaxter (Laboulbeniales) in Poland" (Acta Mycol. 9: 217-228, 1973) a long fragment of text was left out by mistake, which makes part of the paper impossible to understand. The last sentence on page 222 (first line from bottom) should be changed as follows:

,... my specimens were in general 170-240 $\mu m.$ The size of the perithecium is also an important character; in C. corisae the body of the perithecium is in general wider than the basal cell, and is more stumpy. This can also be seen in the dimensions of the perithecia: in C. corisae the perithecium is 100-110×25-35 $\mu m,$ in my specimens 75-90(-100)×27-40 $\mu m.$ "

Acknowledgements

I am very grateful to Dr. S. Mazur, Institute of Forest Protection, Agricultural Academy, for determination of beetles from the families Endomychidae, Liolidae and Staphylinidae, to Doc. Dr. A. Warchałowski, Institute of Zoology, University of Wrocław, for determining a representative of Tenebrionidae, to Dr. T. Plewka, Institute of Ecology, Polish Academy of Sciences, for determining Carabidae and for the interesting material of beetles infected with Laboulbeniales, and to Mgr. Iwona Trębicka for help in translating Latin diagnoses. I am particularly grateful to Dr. I. I. Tavares from the University of California for numerous and valuable remarks on fungi parasitizing on Hebrus.

REFERENCES

Balazuc J., 1973, 1974, Laboulbeniales de France. Bull. mens. Soc. Linn. Lyon 42: 244-256, 280-285; 43: 12-21, 57-64, 73-79, 253-262, 295-315, 346-368.

- Bánhegyi J., 1940, Études préliminaires sur les *Laboulbeniales* de la Hongrie. Index Horti Bot. Univ. Budapest. 4: 39-59, t. 7-10.
- Benjamin R. K., 1967, Laboulbeniales on semi-aquatic Hemiptera. Aliso 6(3): 111-136.
- Maire R., 1920, Troisième contribution a l'étude des Laboulbéniales de l'Afrique du Nord. Bull. Soc. Hist. Nat. Afrique Nord 11: 123-138, 143-170.
- Majewski T., 1973, Rare and new Laboulbeniales from Poland, IV. Acta Mycol. 9: 229-238.
- Majewski T., 1974, Rare and new Laboulbeniales from Poland. V. ibid. 10: 267-282.
- Rossi W., 1975, Su alcune Laboulbeniali (Ascomycetes) nuove per l'Italia, Giorn, Bot. Ital. 109: 71-85.
- Rossi W., Cesari Rossi M. G., 1977, Due nuove specie di *Dimeromyces* (*Laboulbeniales*). Rivista di Parassitol. 38: 109-113.
- Scheloske H.-W., 1969, Beiträge zur Biologie, Ökologie und Systematik der Laboulbeniales (Ascomycetes) unter besonderer Berücksichtigung des Parasit-Wirt-Verhältnisses, Parasitol, Schr. Reihe 19: 1-176.
- Spegazzini C., 1912, Contributión al estudio de las Laboulbeniomicetas Argentinas. An. Mus. Nac. Hist. Nat. Buenos Aires 23: 167-244.
- Spegazzini C., 1915, Laboulbeniali ritrovate nelle collezioni di alcuni musei italiani, ibid. 26: 451-511.
- Spegazzini C., 1917, Revisión de las Laboulbeniales Argentinas, ibid. 29: 445-688.
- Sugiyama K., 1978, The Laboulbeniomycetes of eastern Asia (3). On nine species including two new species. Journ. Japan. Bot. 53: 281-288.
- Thaxter R., 1896, Contribution towards a monograph of the Laboulbeniaceae. Mem. Amer. Acad. Arts Sci. 12 (3): 187-429, pl. 1-26.
- Thaxter R., 1908, Contribution towards a monograph of the Laboulbeniaceae. Part II, ibid. 13 (6): 217-469, pl. 28-71.
- Thaxter R., 1931, Contribution towards a monograph of the Laboulbeniaceae. Part V, ibid. 16(1): 1-435, pl. 1-60.

Rzadkie i nowe Laboulbeniales z Polski. VI

Streszczenie

Autor opisuje dwa nowe rodzaje grzybów z rzędu Laboulbeniales: Tavaresiella gen. n., zbliżony do Symplectromyces Thaxter. z gatunkiem typowym T. hebri sp. n., oraz Triceromyces gen. n., spokrewniony z Distolomyces Thaxter, z gatunkiem typowym T. balazucii sp. n.; oba pasożytują na Hebrus spp. (Heteroptera). W pracy opisano także nowy gatunek z Sphaerosoma globosum (Coleoptera, Endomychidae), Euphoriomyces rossi sp. n., oraz podano stanowiska siedmiu innych nowych dla Polski gatunków.