

névé into ice). He considers the cause of the increase to lie in the *overcrystallizing* (Uebercrystallisiren) of one grain at the expense of its neighbor. The known fact that the melting temperature of ice is lowered by excessive pressure and raised by extension, accounts for the plasticity of a crystalline mass; water produced by fusion at points where the pressure is greater is transported and frozen at points of less pressure. It is further supposed that the crystals of ice present differences of compressibility in their different axes; hence crystals differently directed will have unequal power of raising or lowering the temperature of fusion under pressure, and some will tend to grow at the expense of others less favorably directed.—*English Mechanic*.

GEOLOGICAL NEWS.—Professor Zittel in the *Palæontographica* for 1882, describes and figures a number of species of the order Pterosauria from the Solenhofen slate of Bavaria. He corrects and increases our knowledge of the species *Pterodactylus elegans*, *Kochi* and *brevirostris*, and of the species of *Rhamphorhynchus*. He distinguishes three of the latter, *R. longicaudus*, *R. gemmingi*, and *R. muensteri* (= *R. phyllurus* Marsh).

BOTANY.¹

NEW SPECIES OF NORTH AMERICAN FUNGI.—*Mitrula luteola*.—1½–3 centimetres high; head mostly compressed, ½–¾ of a centimetre wide, subplicate, light yellow; stipe shorter than the head, paler and tomentose, often slightly hollow; asci narrow, attenuated below, 90–100 × 5–6 μ . paraphyses none; sporidia uniseriate, elliptical, or often slightly bulging on one side, faintly 1–2 nucleate, yellow, when discharged on paper: 6–7 × 2½–32 μ . Solitary or subcespitose. On the ground among fallen pine leaves in sandy pine woods. Newfield, N. J., Oct., 1882.

Peziza (Mollisia) incrustata.—Gregarious and often sub-confluent, sessile or contracted below into a very short stipe; disk immarginate convex, scarcely becoming concave, when dry honey color, pruinose, appearing as if covered with fine crystals of sugar, about ⅙ mm. in diameter; asci clavate contracted below into a slender base, 30 × 3½–4 μ . paraphyses filiform, simple or branched, sporidia partly biseriate, ovate-oblong, simple, hyaline, 5–6 × 1 μ . On some old resupinate Polyporus, on the under side of a trunk of *Juniperus virginiana* lying on the ground. Newfield, N. J., June, 1882.

Dermatea juniperina.—Erumpent sessile, orbicular, sooty black, disk slightly paler when moist, margin obsolete, about ¼ mm across, contracted below when dry, so as to appear substipitate; asci clavate, cylindrical, 100–114 × 15–18 μ .; paraphyses filiform, scarcely thickened above; sporidia subbiserial, elliptical, nearly hyaline, with a large central nucleus, 18–20 × 7–12 μ . On dead

¹Edited by PROF. C. E. BESSEY, Ames, Iowa.

or dying leaves of *Juniperus communis*. Decorah, Iowa, May, 1882. E. W. Holway.

Bulgaria Ophiobolus.—Cespitose, obconic, subinfundibuliform, $\frac{1}{2}$ – $\frac{3}{4}$ of a centimeter high and broad, composed of two layers, separated by a gelatinous stratum, pruinose and dark olivaceous outside, disk nearly black, margin obtuse, entire; asci cylindrical, 150×10 – 12μ . paraphyses filiform; sporidia vermiform-cylindrical, multinucleate, curved or bent, rather narrower at one end, 40 – $75 \times 34 \mu$. When dry, scarcely distinguishable, externally from *B. inquinans* Fr. On a decaying log. Decorah, Iowa, Sept., 1882. E. W. Holway, No. 280.

Tympanis bicolor.—Cespitose or single, sessile, narrow subundulate margin and outside pale rufous, disk black, nearly plain, $\frac{3}{4}$ – 1 mm in diameter; asci subcylindrical, 75×8 – 9μ .; paraphyses, stout, not distinctly enlarged above; sporidia, mostly uniseriate, oblong-elliptical, often narrower at one end, 2–4 nucleate, yellowish, 13 – $15 \times 3 \frac{1}{2}$ – 4μ . Nearly allied to *T. acerina*, Pk. On dead limbs of (maple?) Decorah, Iowa, Aug., 1882. E. W. Holway, No. 220.

Hysterium sphaeriaceum.—Erumpent minute, $\frac{1}{4}$ – $\frac{1}{3} \text{ mm}$ long, by $\frac{2}{3}$ – $\frac{3}{4}$ as wide, densely gregarious, black and nearly smooth, but not polished, opening narrow, lips not prominent; asci subcylindrical, nearly sessile, 55×7 ; paraphyses obscure; sporidia biserial fusiform, hyaline and nucleate, becoming yellowish and 3 septate, and often slightly constricted at the septa, 12 – 20×3 – $3 \frac{1}{2} \mu$. The perithecia are mostly sparingly clothed with pale, short, weak, sub-glandular hairs. Much resembles *Glonium parvulum* Ger, but the fruit is very different. On decaying wood. Decorah, Iowa, Aug. 23, 1882. E. W. Holway, No. 223.

Hypoxylon Holwayii.—Stroma $\frac{1}{4}$ – $\frac{1}{2}$ centimeter in diameter, rather thin, orbicular, black within, surface covered with a white pruinose coat, except the projecting, acutely papillose, black ostiola; perithecia, in a single layer, 20–30 in each stroma; asci cylindrical; sporidia uniseriate, oblong, brown, 1–2 nucleate, 22 – $27 \times 11 \mu$, resembling the spores of a *Sphaeropsis*. Surrounding the stromata and standing out obliquely like a coarse fringe, are short coarse black bristle-like teeth, like the teeth of a *Hydnum* or *Irpe*x. This curious growth also arises from the surface of the inner bark, for some distance around the stromata, soon throwing off the epidermis, and leaving the blackened surface of the inner bark exposed. This growth is analogous to that of *Institale acariforme* Fr., in connection with *Hypoxylon coccineum*. On dead trunks or limbs of *Populus*. Decorah, Iowa, July 1882. E. W. Holway, No. 145.

Hypoxylon piceum.—Stroma effused, sub-elliptical, or elongated, often by confluence, forming patches 4–8 centimeters long, by half as wide, dark brown, nearly black within, surface wrinkled, and covered with the dull yellow conidial growth, which also

spreads over the surface of the wood adjacent, and consists of short rudimentary irregularly branched hyphæ, which are thickly covered with the minute, dust-like conidia; perithecia, in two or three layers, densely crowded and angular by compression, the lower layer much elongated, ostiola minute scarcely visible: asci —? sporidia navicular brown, $11-12 \times 4$. The stromata resemble blotches of black pitch dusted over with yellow meal, and are of about the consistence of beeswax. On rotten wood. Decorah, Iowa, Oct., 1882. E. W. Holway, No. 287. (Allied to *Hypoxyton crocatum* Mont.)

Nectria lasioderma.—Perithecia mostly single, subamorphous, obtuse-conic, broadly perforated above, $\frac{1}{4}$ mm high, shagged with short, septate, obtuse, imperfectly developed hairs, dull red when dry, pale orange when moist; asci cylindrical, $75-80 \times 7\frac{1}{2}$; sporidia uniseriate, elliptical hyaline, uniseptate, scarcely constricted, $11-12 \times 4-5 \mu$. Parasitic on old *Valsa lutescens* Ell. On dead limbs of *Quercus coccinea* lying on the ground. Newfield, N. J., June, 1882. On account of its small size and dull color easily overlooked.

Nectria Rexiana.—Perithecia minute, not over $\frac{1}{4}$ mm in diam, flesh color, becoming black, slightly compressed laterally. Solitary or 2-3 together, enveloped in white down which forms little tufts, appearing under the lens like some minute, tufted mucedinous growth; asci linear, $35-40 \mu$. long, evanescent; sporidia uniseriate, oblong, hyaline, 1-2 nucleate (becoming uniseptate)? $5-6 \times 1\frac{1}{2}-2 \mu$. Parasitic on *Chondrioderma spumarioides*. Adirondack mountains, N. Y., Aug. 1882. Dr. Geo. A. Rex.

Nectria truncata.—Perithecia gregarious, minute, $\frac{1}{10} - \frac{1}{8}$ mm in diameter; flesh color, subglobose, the apex flattened into a circular, granular roughened disk with the edge slightly projecting; ostiolum in the centre of the disk, minute, papilliform, brown; asci sublanceolate, 35×5 ; sporidia biseriate, oblong-fusiform, sub-hyaline, slightly constricted across the middle and uniseptate, $11-13 \times 2\frac{1}{2} - 3 \mu$. Under the pocket lens resembles *Illosporium pallidum* Cke.

Melanconis apocrypta.—Perithecia subcircinate ($\frac{1}{8}$ mm) membranaceous, 8-12, buried in the inner bark without any distinct stroma, entirely concealed by the epidermis, which, without being ruptured, is raised into slight, whitish pustules by the pressure of the short fasciculate ostiola; sporidia $25-30 \times 11-13 \mu$, at first surrounded with a hyaline, gelatinous envelope, and more or less perfectly biseriate in asci $114 \times 22 \mu$, but at length becoming brown, uniseptate and uniseriate in elongated asci $120-150 \times 12 \mu$. On dead poplar branches. Decorah, Iowa, July, 1882. E. W. Holway, No. 164. The conidial stage is probably *Melanconium populinum* Pk. This is closely allied to *M. occulta* (Fckl.) Sacc., but differs in its narrower asci and smaller brown sporidia without appendages.

Melanconis (Melanconiella) Decoraensis.—Perithecias ubglobose, coriaceous, $\frac{1}{2}$ mm diam. 8–12 circinating in a cortical stroma covered by the thick epidermis; ostiola scarcely prominent, united in an elliptical, erumpent, dirty gray disk; asci cylindrical, briefly stipitate, spore-bearing part $95-115 \times 8-11\mu$; sporidia uniseriate, elliptical, and obtuse olivaceous, uniseptate, $15-20 \times 8-10\mu$. The accompanying Melanconium mostly in a separate stroma with abundant pip-shaped olive black spores of about the same size as the ascospores. On dead limbs of birch. Decorah. Iowa, Aug., 1882. E. W. Holway.

Cryptosporella lentaginis Rehm (in literis).—Perithecia globose, $\frac{1}{2}$ mm diam. membranaceous, mostly 3–4 together in a cortical stroma, their bases sunk into the subjacent wood; ostiola short, barely piercing the epidermis, which is raised into numerous little tuberculiform pustules; asci clavate-cylindrical, $45 \times 7-8\mu$; sporidia biseriate, cylindrical, hyaline, straight or slightly curved, $11-12 \times 2-2\frac{1}{2}\mu$, with 2 or 3 minute nuclei. The substance of the bark is blackened by the mycelium. On dead *Viburnum lentago*. Decorah, Iowa, June, 1882. E. W. Holway, No. 119, partly.

Diatrype tiliacea.—Perithecia subelongated ($\frac{1}{2} \times \frac{1}{3}$ mm) buried in the scarcely altered substance of the inner bark, in clusters of 5–10 or more, their rough, conic or cylindric-conic ostiola bursting through the epidermis in compact clusters, but scarcely united in a disk; asci broad, oblong, $80-90 \times 18-22\mu$; paraphyses? sporidia in 2 or 3 series or lying obliquely, 8 in an ascus, oblong-cylindrical, slightly curved, obtuse, hyaline, becoming uniseptate, slightly constricted in the middle with a single large nucleus in each cell, $22-30 \times 7-8\mu$. The clusters of perithecia often longitudinally confluent, are surrounded by a faint circumscribing line visible only near the surface. The ostiola ($\frac{1}{2}-1$ mm long), are at length ruptured at their tips with a broad, irregular opening. The ascigerous nucleus is white. On bark of dead *Tilia americana*. Ames, Iowa, Oct. 1882. J. C. Arthur, No. 86.

Diatrype phæosperma.—Stroma small (1 mm diam.) tuberculiform closely embraced by the imperfectly laciniate-cleft epidermis; perithecia 6–8, $\frac{1}{3}$ mm diam. with thick coriaceous walls, lying in a single layer under the white stroma, which is circumscribed by a black line that scarcely penetrates to the wood beneath; asci (spore bearing part) about $55 \times 7\mu$; sporidia imperfectly biseriate, cylindrical, curved, continuous, brown, $10-12 \times 3-3\frac{1}{2}\mu$, ends obtuse. Ostiola obtuse, black, not prominent, dotting the pale brown or wood-colored disk. On dead limbs. Decorah, Iowa, Aug. 1882. E. W. Holway, No. 228.

Diatrype radiata.—Perithecia membranaceous, 8–15, bedded in a light-colored tuberculiform stroma, which splits the epidermis in a laciniate manner, and is circumscribed by a black line, which does not, however, penetrate to the wood; ostiola obtuse, scarcely prominent; asci clavate, $75-80 \times 6\mu$; sporidia cylindrical, yel-



Ellis, Job Bicknell. 1883. "New species of North American fungi." *The American naturalist* 17, 192–196.

View This Item Online: <https://www.biodiversitylibrary.org/item/130062>

Permalink: <https://www.biodiversitylibrary.org/partpdf/246348>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.