Spores 4.5–5.5(6) × 4–4.5(5) μ subglobose, white, finely roughened to smooth, strongly amyloid. Basidia 5–7 × 25 μ, clavate, four-spored. Cystidia present as flexuous hyphal structures and scattered gloeocystidia 8–12 μ in diam., originating from oleiferous hyphae (one traced 200 μ to where it joined a normal thick-walled hypha), at times (Wiebe coll. from Willamette, Ore.) more or less moniliform in shape. Hyphae of the fruit body (context, tubercle, branches, and spines) amyloid, flexuous, often bifurcating broadly with the angle as between the thumb and first finger, interwoven, variable in width, 5–12 μ in diam.; thick-walled (lumen filled in some), swollen where the ends of the cells meet, clamp connections usually present at septa. Hymenium 25–30 μ thick, non-amyloid; originating from a layer of thin-walled generative hyphae 3–4 μ in diam. in a compact layer 20–30 μ thick.

Habit, habitat, and distribution: On coniferous logs and trees. It is considered as causing a "typical white pocket rot" of Abies grandis Lindl. Also on A. lasiocarpa (Hook.) Nutt., A. procera Rehd., Tsuga heterophylla (Raf.) Sarg., Pseudotsuga menziesii (Mirb.) Franco.

Material examined: California, Sm 56096A, 56096B; Idaho, Sm 15896; Oregon, Sm 19022, 19454, 19455; Washington, Sm 16648, 27418, 27488, 27489, 27491, 28503, 31208, 31405, 31504, 31781, 40175, 40171, 40336, 40692, 41056, 41057, 41059, 54693.

This is the giant of the hericiums, and is confined to coniferous wood in the Pacific Northwest. In microscopic details it is intermediate between Hericium ramosum (Bull. ex Mérat) Letellier and H. coralloides (Scop. ex Fries) S. F. Gray and has the same range of growth forms. The spores are intermediate in size. The color of the fresh fruit body is salmon buff, occasionally white, staining yellowish, whereas the other two species are white.

The collections in the University of Michigan Herbarium were recognized as a new species in 1960, labelled H. weirii sp. nov., and this name has appeared in The Mushroom Hunter's Field Guide, revised and enlarged by Alexander H. Smith (1963). However, the research by Maas Geesteranus (1960) has shown that the original name Hydnium abietis used by Dr. Weir was validly published by Hubert with a type collection and the change to Hericium is being made at this time. A name is needed as this species is being recognized by foresters as a cause of a disease of conifers. The organism has been isolated and the cultures recognized as distinct by Dr. M. K. Nobles (personal communication).

**Phellodon atratus** K. Harrison, sp. nov.

Pileus 1–5 cm latus, ad centrum depressus, leviter scrobiculatus, asper, fibrillosus, ater, ad marginem vinaceo-griscus et fusco-zonatus; caro coriacea atrata; sapor mitis, odor in sicco graveolens. Aculeae 1–2 mm longae, conferatae, brunneae, decurrentes. Stipes 2.5 cm longus, connatus saepe compressus, radicatus, coriaceus, interdum succosus, atratus, submentosus, asper. Sporae 4.5–5 × 4–5 μ, hyalinae, globosae, asperulae. Typus: Sm 8864 (Mich et DAOI).

Pileus 1–5 cm broad, single or more or less concrescent, irregular; disc depressed, slightly scrobiculate, sometimes bearing small pileoli; surface
uneven, appressed fibrillose, “aniline black” to dull “bluish black”, margin sterile, zoned, pale “brownish drab” to “vinaceous drab”, uneven, in age lacerate fringed; context 2–3 mm thick, tough, rigid, dull violet-black; odor none to smoky fungoid, taste mild. Spines 1–2 mm long, decurrent; close, ending at a sharply demarked “cinnamon brown” line on the stipe, “vinaceous brown” to “Quaker brown”. Stipes 2–5 cm long, compound, irregular, frequently flattened, sometimes rooting, enlarged at ground level by a feltly layer of spongy n~ycel~un, soilletines branched to produce a compound fructification, firm to subwoody in the center although occasionally juice can be squeezed out; surface rough and subtomentose, “dull bluish black” to blackish.

Spores 4.5–5 × 4–5 μ, white in mass, globose to subglobose, finely echinulate, 10–15 processes visible on circumference, with a distinct mucro. Basidia 4.5–5 μ very thin-walled and reviving poorly. Hymenial layer 15–25 μ thick, no clamps were seen at base of basidia. Hyphae flexuous 3.5–4.5 μ in diameter, septa far apart, few branches, no clamps seen. The cells contain dark granules.

Habit, habitat, and distribution: Gregarious, compound and often crescent. Occurring under conifers, (spruce mentioned twice) in California, Oregon, and Washington.

Material examined: California, Sm 8864 Type, 8393, 9343, 56665; C. A. White, 438; Oregon, Sm 3460, 3559, F. P. Sipe 902; Washington, Sm 17374, 17753, 17755, 17863, 17864, 17991, 31730, 31857.

The context turned a deep blue-black in KOH and some of the granules and color leached to form a bluish precipitate in the solution. The context of the spines reacted in the same way. In Melzer’s reagent the context appeared amyloid and the color of the numerous dark granules in the hyphae was intensified. There were no granules in a thin layer of hyphae on the surface of the pileus although it darkened somewhat in Melzer’s.

I have also seen collections from British Columbia. This species is related to P. melaleucus (Fries) Banker but the color differences are sufficient to separate them in the field. In P. melaleucus, unless it is rain soaked, the color is a dark brown shade with a contrasting white margin, while in P. atratus the color is nearly black. In the herbarium, bruised spots, made when collecting the specimens, are brownish on P. melaleucus and on P. atratus blackish. The reaction of the flesh to KOH is a deep bluish black in P. atratus but dark olivaceous in P. melaleucus. In Melzer’s reagent the flesh of P. atratus appears amyloid from the dark granules in the hyphae, while in P. melaleucus the flesh does not appear to be amyloid and dark granules are found only in the cuticular hyphae.

In both P. atratus and P. melaleucus the stipe may be rooted, thick at the ground level, and occasionally may have two or three branches with or without pilei. In some, the stipe appears as though there might have been a succession of pilei on the different branches during the season. Another explanation is that the base branches may be abortive structures, checked during development because of unfavorable weather.

_Hydnum fuligineo-violaceum_ Kalchbr. in Fries, Hym. Europ. 602. 1874; Kalchbr., Icon. sel. Hym. Hung. 4: 58, pl. 32, fig. 2, 1877