PHELLINUS HIPPOPHAECOLA H. JAHN, A NEW SPECIES

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Phellinus hippophaecola H. Jahn, sp. nov.


Species ex affinitate Phellini robusti, a quo praecipue differt carposomatis minoribus, poris paulum latioribus, superficie porarum obscure brunnea. Pileo ungulato-pulvinato, dimidiatō, saepe dorsali adnato, reniformi, rotundatō vel subrotundatō, 3–7(–9) cm longo, 2–5 cm lato et 1.5–5 cm crasso, in statu juvenili breviter tomentoso, glabrescente, remote concentricae sulcato, opaco, primo ochraceo-ferrugineo, acetate fusco vel sordide cinereo, saepe alga tecto. Contexto duro, sicco lignoso, ochraceo-ferrugineo, fracto paulum iridescente. Tubulis stratosis, stratis 2–5 mm longis, saepe inaequalibus. Poris minutis, 5–7 per mm, rotundatis usque subangulatis; superficie porarum in statu fertili obscure brunnea. Basidia ut in Phellino robusto. Setae rarissimae vel nullae.

Sporae globulosae vel subglobulosae, 6.0–7.5 × 5.5–6.5 µm, tunicis laevis, incrassatis, hyalinis, inamyloideis sed fortiter dextrinoideis et cyanophilis. Ad trunci ramosum vivos, moribundos vel mortuos Eleagnacearum generum Hippophae et Eleagnus.

Phellinus hippophaicola and P. robustus. (a–e) P. hippophaicola. (a–c) typical basidiocarps, ca 3/4 nat. size; (d) basidium and spores, ×2000; (e) two cystidioles, ×2000. (f) P. robustus, cystidiole with thickened brown wall (pseudoseta), ×2000.

Fig. 1. Phellinus hippophaicola and P. robustus. (a–e) P. hippophaicola. (a–c) typical basidiocarps, ca 3/4 nat. size; (d) basidium and spores, ×2000; (e) two cystidioles, ×2000. (f) P. robustus, cystidiole with thickened brown wall (pseudoseta), ×2000.

walled, hyaline, hyphae-like necks (Fig. 1, e). Hymenium containing many crystals. Basidia subglobose to ovoid, about 10 × 13 µm. Spores subglobose, 6.0–7.5 × 5.5–6.5 µm, hyaline, with thickened walls, inamyloid but strongly dextrinoid and cyanophilous (Fig. 1, d).

This pretty little Phellinus, common on old shrubs of Hippophae rhamnoides L. (sea buckthorn) in Europe and Asia, was first mentioned by Donk (1933, p. 248) in a footnote in the German text, as a form of Ochroporus robustus (Karst.) Schrot., with a short description: occurring in the Netherlands near the coast on Hippophae, the basidiocarps dimidiate, or enclosing the branch on which they grow, or circular and dorsally attached, 3–7 cm large. Donk himself did not name the form. Apparently S. Lundell, in Lundell & Nannfeldt, Fungi Exsiccati Suecici, 1937, No. 449, was the first author who introduced the scientific name “forma hippophaes Donk.” Since then, this name has been used by several European authors (Pilát 1942, p. 507; Bondartsev 1953, p. 363; Domanski et al. 1973, p. 258, etc.), but none of them made a more thorough study. Since no Latin diagnosis exists, the name hippophaes cannot be used as a basionym for a species, therefore a new (but similar) name is given.

Most authors do not comment on the taxonomic position of this fungus. Donk (1974, p. 248), while admitting that the form on Hippophae looks “rather distinct from that on oak” presumes that “this seems to be due chiefly to its smaller size and the much thinner branches from which it develops, resulting in a dif-
different attachment." This means that the different habit of the fungus on *Hippophae* would be merely an adaption of the basidiocarps to a host with thinner branches, and that a mycelium originating from spores of the typical *P. robustus* on oak, but developing on *Hippophae*, would produce such different basidiocarps. Studying the habit, ecology, frequency and the pattern of distribution of the fungus on *Hippophae* this seems highly improbable. In fact, besides the smaller size and the deviating form of the basidiocarps there exist some other constant differences which have been overlooked hitherto. *Phellinus hippophaecola* certainly is an independent species of the *Phellinus robustus* group [like *P. hartigii* Allesch. & Schnabl.] Bond. and *P. punctatus* (Fr.) Pilát], which has specialized on the family Elaeagnaceae with the genera *Hippophae* and *Eleagnus*.

The main features which differentiate *P. hippophaecola* from *P. robustus* are:

1. The basidiocarps of *P. hippophaecola* are always smaller (2–7–9 cm) than those of *P. robustus* (5–25–50 cm), even if the carpophores grow on thicker trunks. The smaller size is obviously caused by genetical factors and not by the host.
2. The colour of the pores of ripe specimens of *P. hippophaecola* is dark brown or dark chocolate brown, always darker than in *P. robustus* which has more or less ferrugineous pores.
3. The pores of fertile specimens of *P. hippophaecola* always are wider than those of *P. robustus*. The number of pores per mm is about the same in both species, but *P. hippophaecola* has narrower dissepiments. This character has been checked on a large number of specimens of the two species, and it is evident if one compares the pores side by side.
4. Setae and pseudosetae (in the sense of H. Jahn, 1967, p. 95, viz. cystidioles or basidioles growing out from a ventricose basis into a short neck or slender hyphae, with rounded tips, at first hyaline, but later often with thickening brown walls suggesting true setae) (Fig. 1, f) are lacking (or very rare) in *P. hippophaecola* but nearly always present in *P. robustus*, at least in certain places of the tubes (European specimens). The tubes of *P. robustus*, even the youngest ones, are often partly or wholly filled by outgrown cystidioles or other hyphae; the young tubes of *P. hippophaecola* usually are wide open.
5. The spore production of *P. hippophaecola* seems to be longer than in *P. robustus*, judging from sections of many basidiocarps of both species. I have found *P. hippophaecola* fertile with fresh basidia from March to November, perhaps it sporulates throughout the year in favorable regions.

*Phellinus hippophaecola* has a very pronounced vitality and is much more common on its host than *P. robustus* on its main host *Quercus* (in Europe). *Phellinus hippophaecola* is abundant in every thicket of *Hippophae rhamnoides* with old enough bushes. In Europe, its frequency might be compared with that of *P. pomaceus* (Pers.) Maire on old plum trees (*Prunus domestica* L. and allies). *Phellinus robustus*, on *Quercus* and some other hosts (in Europe), is never so frequent and, even in forests with many old oaks, occurs only on single trees.

7. The ecology and distribution of *P. hippophaecola* are very different from *P. robustus*. In Europe, *Hippophae* grows on the coasts of the northern Atlantic Ocean, the North Sea, and the Baltic Sea, on dunes or stony shores, and also on the banks of rivers in mountain valleys (esp. the Alps); it forms very dense, often nearly impenetrable thickets always outside the forest zone. *Hippophae* is even known in the countries near the Danube and the Black Sea, and continues to Asia Minor, the Caucasus, Northern Iran, and the mountains of central Asia. Judging from the distribution hitherto known (England, Norway, Denmark, Sweden, Finland, France, Belgium, Netherlands, Germany (GFR and GDR), Switzerland, Austria, Italy, Bulgaria, etc., and Altai, Uzbek S.S.R., etc. in Asia), *P. hippophaecola* probably follows its host throughout most of its range. Besides, the fungus has been found
on *Eleagnus angustifolia* L. (Russian olive), closely related to *Hippophaë*, which occurs in cultivation or naturally, especially in the Mediterranean countries, but as yet little is known of its distribution on this host.

**LITERATURE CITED**


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