Phlebiopsis Jül., Persoonia 10 p. 137, 1978.

Fruitbodies resupinate, adnate or loosening and rolling off in the margins; hymenium smooth, tuberculate or with peg-like projections; subiculum variable, well-developed or very scarce; hyphal system monomitic, hyphae thin-walled in the hymenial part, otherwise with thickened walls, without clamps in the hymenial layer but clamps occurring in the subiculum; hyphae densely united into a firm context esp. in the subhymenium which is ceraceous in the living state, when dried crustaceous – corneous; cystidia numerous, conical, richly encrusted, in the basal part naked, with thickened walls; basidia ab. 20 µm long, apically dilatated, normally with 4 sterigmata, without basal clamp; spores narrowly ellipsoid – oblong, thin-walled, smooth, not amyloid, not cyanophilous.

Type species: *Thelephora gigantea* Fr., Syst. mycol. I p. 448, 1821.

Remarks. The genus was described without remarks as to its taxonomical consequences. The only species mentioned was earlier referred to *Peniophora* s.l. and later to *Phlebia.* It is with certainly not close to the generic types of these two genera. Its relations seems to be closer to *Phanerochaete,* with which it agrees i.e. in the lack of clamps but for some subicular ones, occurring singly or in whirls. It differs from *Phanerochaete* in the consistency of the subhymenium, which is very firm or hard in the dry fruitbody, a result of the thickness of the hyphal walls and of the close junctions of the hyphae.

In this respects *Phlebiopsis* reminds of many species of *Phlebia.* The shape of the basidia is fairly characteristic being rather short and apically abrubtly dilatated. In *Phanerochaete* the basidium bundles are easily separated in squash preparations, but in *Phlebiopsis* the basidia stick together as if glued laterally to each other and are therefore not easily studied. In this respect it agrees with *Scopuloides* (Cooke & Massee) Hjortst. & Ryv. The generic type of *Phlebiopsis* agrees with *Phanerochaete* in the presence of a well developed subiculum, but there are still differences. In *Phanerochaete* the subicular hyphae are more or less parallel to each other as well as to the substrate, while in *Phlebiopsis* the subiculum is composed – at least partly – of hyphal strands, woven together and sometimes continuing through the hymenium, resulting in peg-like pro-

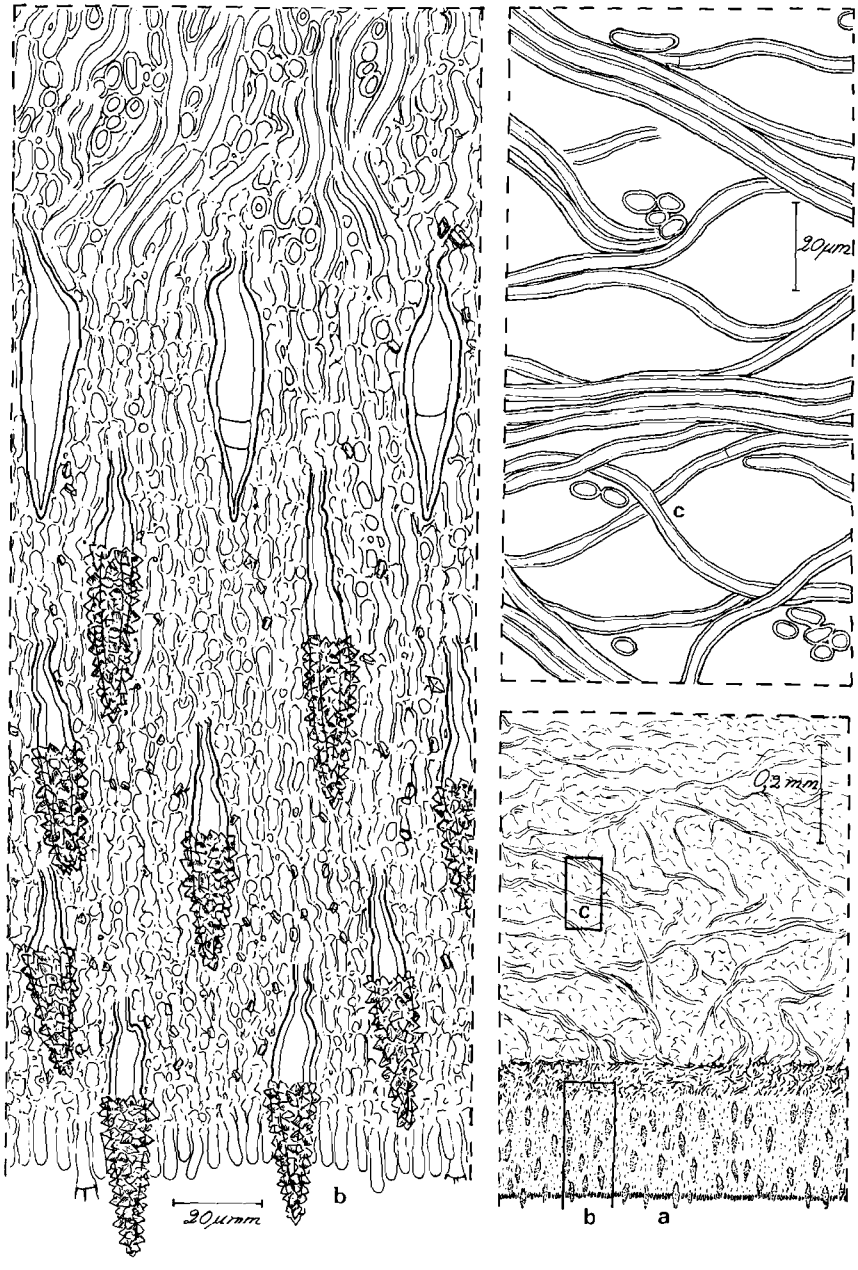

Fig. 604. *Phlebiopsis gigantea.* a) schematical section through mature fruitbody with positions of b and c b) section through hymenium and subhymenium c) section through subiculum. – Hjortstam 13222.

jections. Whether or not these characteristics are sufficient grounds for a separate genus cannot with the present state of affairs be definitely decided. The problem will perhaps be solved when its tropical relatives become better known.

No other species than the generic type matches the genus fully, but at least one species seems to be close enough to be included, viz. *Corticium roumeguerii* Bres. It fits the genus in several important characteristics. It agrees perfectly in the size and shape of cystidia, basidia and spores, lack clamps at least in the hymenial hyphae, its hymenium elements are difficult to separate, and the texture is firm. The main difference is the lack of a subicular layer. The subhymenium of dry fruitbodies is not corneous, rather crustaceous. Notwithstanding these differences, we are of the opinion that the species should be placed together with *Phl. gigantea.* There are besides similarities in the culture characteristics, e.g. the presence of arthroconidia, number of nuclei in spores, basidia, subicular hyphae (Boidin 1954 p. 142–43).

Another species that should be discussed in this case is *Peniophora hydnoides* Cke & Massee. It agrees in some respects with *Phl. gigantea* (shape of basidia and cystidia, density of hymenium, and is, besides the encrusted cystidia, provided with encrusted and therefore cystidium-like terminal hyphae.

Even if the generic arrangement is yet far from clear and definite, we choose not to include it in *Phlebiopsis,* at least till further knowledge is obtained, but follow the arrangement suggested by Hjortstam and Ryvarden (Mycotaxon 9 p. 509, 1979) and place it in a genus of its own, *Scopuloides.*

Two species, but only one in N. Europe:

1. Subiculum well-developed ..... 1. **Phl. gigantea**
1. Subiculum scanty or lacking ..... 2. **Phl. roumeguerii**

1. **Phlebiopsis gigantea** (Fr.) Jül., Persoonia 10 p. 137, 1978. - *Thelephora gigantea* Fr., Syst. mycol. I p. 448, 1821. - *Corticium giganteum* (Fr.) Fr., Epicrisis p. 559, 1838. - *Peniophora gigantea* (Fr.) Massee, Journ. Linn. Soc. Bot. 25 p. 142, 1889. - *Phlebia gigantea* (Fr.) Donk, Fungus 27 p. 12, 1957. Fig. 604-05, 607 A

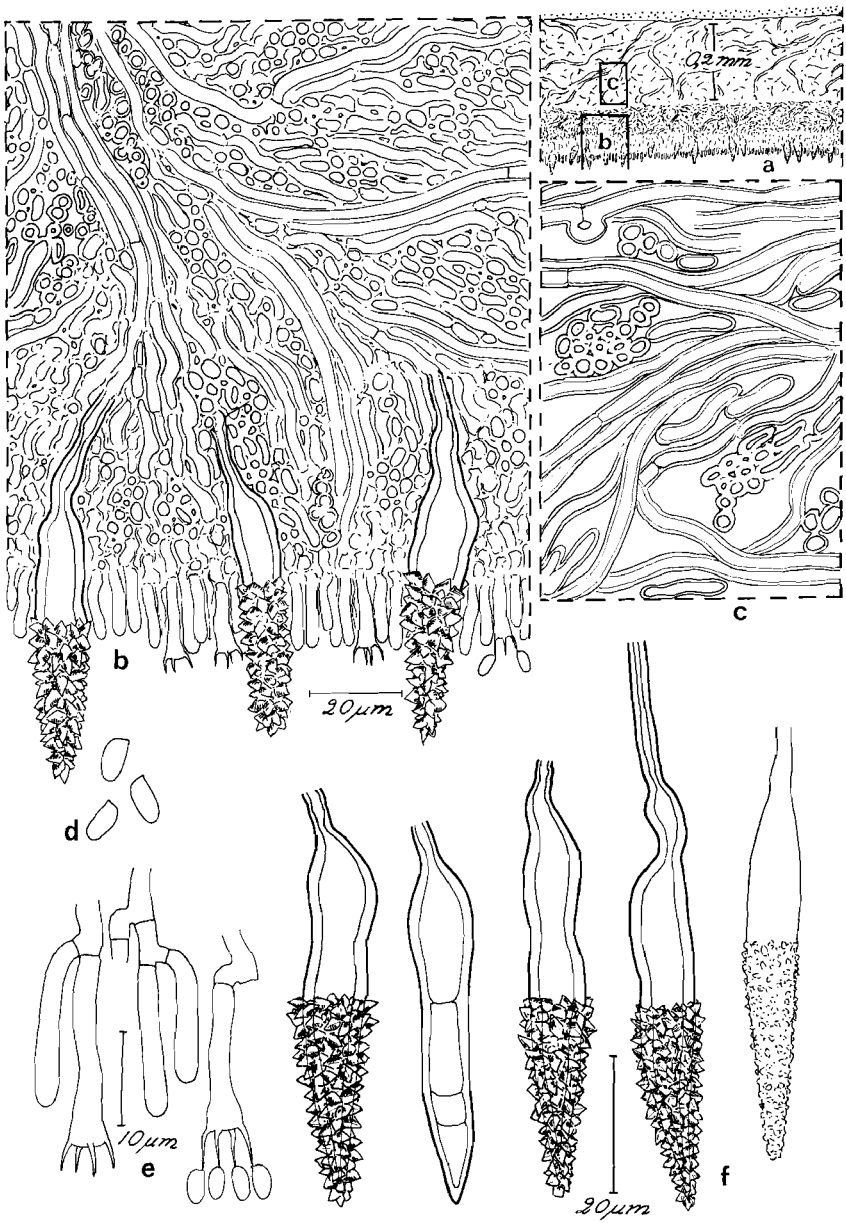

Fig. 605. *Phlebiopsis gigantea.* a) schematical section through young fruitbody with positions of b and c b) section through hymenium c) part of subiculum d) spores e) basidia f) cystidia. – Hjortstam 13222.

Fruitbody resupinate, effused and often large, in section reaching 0.5 mm in thickness, white-greyish – pale buff, closely adnate but with age, on drying, loosening from the substrate in the margins and more or less rolled off and in that state parchment-like; hymenium in the living, wet state swollen, watery ceraceous-subhyaline, more or less tuberculate, when dry usually smooth, under the lens velutinous because of projecting cystidia; margin white, fimbriate – fibrillose determinate, sometimes fertile throughout.

Hyphal system monomitic; hyphae 2–5 µm wide, thin-walled and narrow in the hymenium, other hyphae with more or less thickened walls, clamps lacking except at some septa in the subiculum; subhymenium thickening, with densely united hyphae, therefore ceraceous when wet, corneous when dried; subiculum mostly very thick, interwoven with strands of parallel hyphae, in younger fruitbodies such strands may penetrate the hymenium and cause peg-like projections; a layer of the subiculum situated next to the subhymenium often ceraceous – corneous, dark coloured in dry section, while the main part of the subiculum is white.

Cystidia numerous, 60–90 x 10–20 µm, projecting 30–50 µm conical and richly encrusted in the apical part, basally with thickened walls, often with adventitious septa, in young state thin-walled, in the beginning naked but soon covered with crystals; in old enclosed cystidia encrustation often dissolved.

Basidia 16–22 x 4–5 µm in mature fruitbodies, in young hymenia longer (to 42 µm), apically dilatated, with 4 sterigmata and without basal clamp.

Spores 4.5–6(–8) x 2.5–3 µm, oblong – narrowly ellipsoid – subcylindrical, with adaxial side mostly straight in mature spores, smooth, thin-walled, non-amyloid, non-cyanophilous.

Habitat. On stumps, fallen trunks and other remains of coniferous wood, rarely on frondose wood. Often seen on piled wood, left too long in the forest. One of the characteristic fungi in the lumbered forests.

Distribution. In all parts of N. Europe forests with conifers and usually common. In the northern part less frequent in the virgin forests where it is replaced by *Phlebia centrifuga.*

Remarks. Easily recognized species. It could orbicularly be confused with *Phlebia centrifuga,* but is well distinguished under the lens.

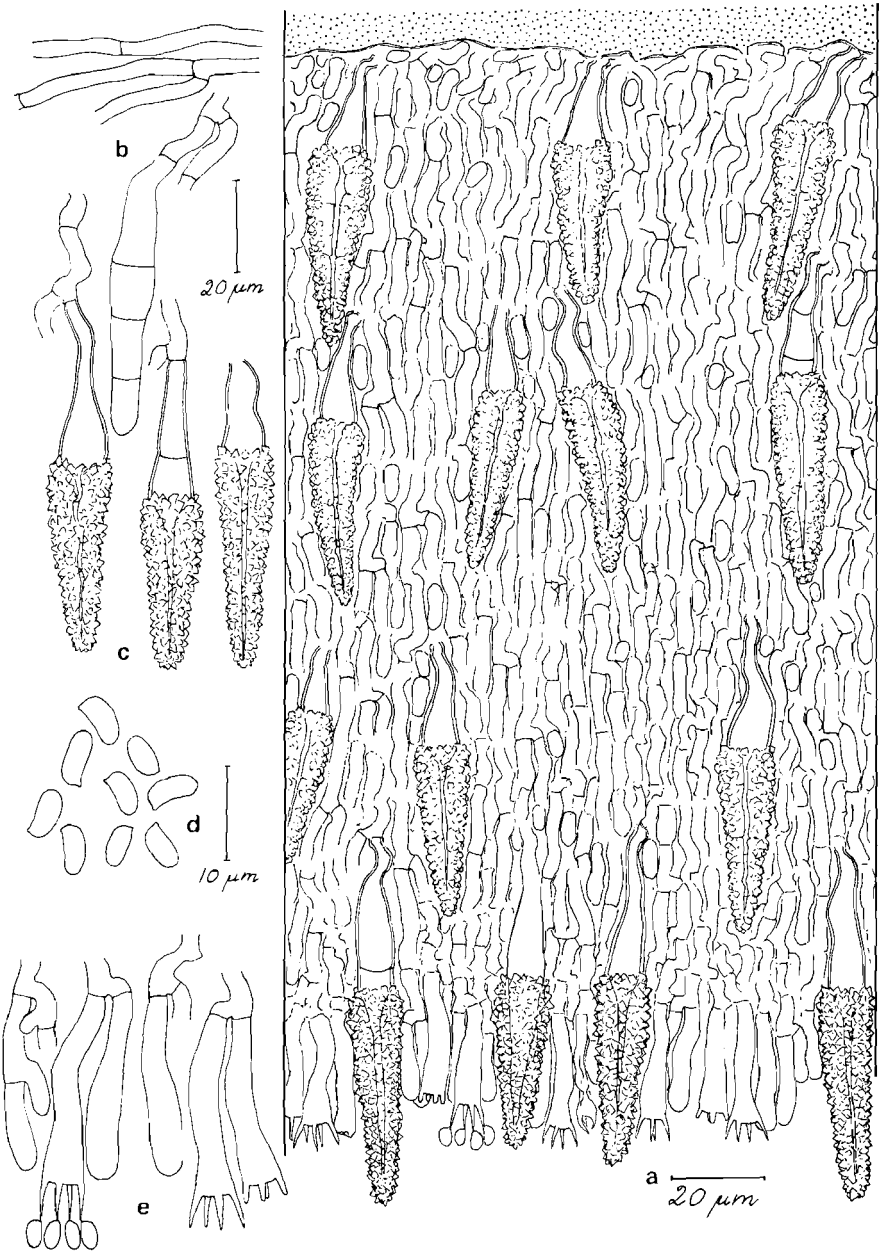

Fig. 606. *Phlebiopsis roumeguerii.* a) section through fruitbody b) basal hyphae c) cystidia d) spores e) basidia. – Ryvarden 12377.