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**Étude des huiles essentielles
tirées des feuilles de quelques conifères
du Québec**

par

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Also contribution from the Laboratories of Cryptogamic Botany
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STUDIES ON POLYSTICTUS CIRCINATUS
AND ITS RELATION TO BUTT-ROT OF SPRUCE

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STUDIES ON *POLYSTICTUS CIRCINATUS* AND ITS RELATION TO BUTT-ROT OF SPRUCE

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During the writer's study of the butt-rots of spruces in the Province of Quebec, it was found that the most important fungi causing butt-rots are *Poria subacida*, *Polyporus balsameus*, *Polyporus Schweinitzii*, and *Polyporus circinatus*. This last was chosen for study because of the irregular occurrence of the species and of its importance locally in causing excessive windfall.

It soon became evident that what had been determined as *P. circinatus* actually included two distinct fungi. One was characterized by its brighter color and by the fact that it occurred chiefly on the ground; the other was characterized by the darker color of the sporophores and by the fact that it occurred mostly on the trunks of the trees. These differences between the two forms which were so obvious in the field, led to the investigations of the taxonomy. It was found that the two organisms could be separated microscopically by the character of the setae present in the hymenium and this led to their determination as *Polyporus tomentosus* Fr. and *Polyporus circinatus* Fr.

From a review of the literature it appears that there has been considerable confusion as to the identity of these two forms. This confusion has arisen since Fries described the two species, *P. tomentosus* in 1821 and *P. circinatus* in 1848, and it came from the fact that he described *P. tomentosus* as having a homogeneous context, yet according to specimens identified by Fries, both *P. tomentosus* and *P. circinatus* have a duplex context. The only difference, excepting the color and the shape, are the straight setae for the former and the predominantly curved setae for the latter.

Peck (1878) described a new species from New York, which he called *Polyporus dualis*. His species was sessile or short, lateral-stemmed and of rather dark color. Later, Ellis and Everhart (1889) examined specimens from Peck and found the curved setae characteristic of *P. circinatus* Fr. Cooke (1886) and Saccardo (1888) have given *P. dualis* Pk. as a synonym of *Polystictus circinatus* (Fr.) Cke. So it is fairly safe to say that Peck's type specimen is *P. circinatus* Fr.

In 1882, Karsten transferred *Polyporus tomentosus* to *Polystictus*. Later (1889) he segregated the new genus *Onnia* from *Polystictus*, placing emphasis upon the setal character of the hymenium. He distinguished *O. tomentosus* from *O. circinatus* by the homogeneous context of the former. Ellis and Everhart (1889) examined Karsten's specimen later and found straight setae for the plant he designated as *Onnia tomentosus*. Although Ellis and Everhart's illustration (1889) did not make this point

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