CHAPTER 1 INTRODUCTION

Tar spot gets its name from the shiny black lesions on infected leaves. They are so called because of the appearance similar to tar droplets on leaf surface (Thaung, 2008). Tar spot is a fungal disease. A large variety of plants, such as maple, willow, holly, tulip tree, oak and goldenrod have been reported tar spot diseases such as (Hisang et. al., 2008). Tar spot fungi are a biological strategy group rather than a taxonomically defined one, and the term is used here in a loose sense to include fungi with significant blackening of at least the surface layers of their fruiting-bodies. The blackening is thought primarily to protect the developing tissues from damage caused by UV radiation (Durrell and Shields, 1960), although in some high-latitude areas the blackening may absorb heat from the sun in early spring, promoting growth (Sherwood, 1981). As with many other fungi, the blackening in the species treated here is caused by melanin deposits both within and between cells in the stromatic tissues, often interspersed with or invading host cells. Other groups such as the Phacidiaceae, Phyllachoraceae and Rhytismataceae are also commonly referred to as tar spot fungi (Hyde and Cannon., 1999). A major taxonomic problem with these fungi is the lack of reliable morphological characters that clearly delimit the entire group (Silva-Hanlin and Hanlin, 1998). There have been many reports of tar spot disease from worldwide on various plants (Doidge, 1942; Orton, 1944; Parberry, 1967; Cannon, 1994). There is, however, limited reports on tar spot disease from Thailand. The major objective of this study is to clarify the taxonomic relationships fungi that cause tar spot disease in Thailand, with emphasis on the phylogenyof the fungi from Chiang Mai province.

Research objectives

- 1. To investigate the diversity of fungi causing Tar spot disease in Chiang Mai province.
- 2. To investigate the host range of Tar spot fungi found in Chiang Mai province to clarify their ecology and host specificity.



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