



CHAPTER 1

INTRODUCTION

Thailand is located in the center of the Indochinese Peninsula which is a part of Southeast Asia. The kingdom shares boundaries with Myanmar (Burma) on the west and northwest, Laos on the east and northeast, Cambodia (Kampuchea) on the southeast, and Malaysia on the south. Thailand covers a land area of 513,115 square kilometers, from North $5^{\circ} 30'$ to 21° and from East $97^{\circ} 30'$ to $105^{\circ} 30'$, and extends about 2,500 kilometers from north to south and 1,250 kilometers from east to west, with a coastline of approximately 1,840 kilometers on the gulf of Thailand and 865 kilometers along the Indian Ocean (ราชบัณฑิตยสถาน, 2545). Because of the special geographical situation, complex topography and landforms, as well as the diverse climate, give rise to one of the tropical country which is rich in biodiversity (ทวีชัย สันติสุข, 2532).

However, Thailand has no unique floristic elements. Primarily, indigenous plant species from each floristic region usually shares species in common with those neighboring countries. As a result, Thailand is considered as a collective center of botanical diversity from three major regional elements, viz. Indo-Burmese, Indo-Chinese and Malesian (biodiversity (ทวีชัย สันติสุข, 2532). According to Smitinand (1958), Thailand can be divided into seven floristic regions, i.e. The Northern (N), Northeastern (NE), Eastern (E), Central (C), Southeastern (SE), Southwestern (SW) and Peninsular (PEN).

Biodiversity is a complex system consisting of plants, animals, microorganisms and human beings. Biological resources feed and clothe us and provide housing, medicines and spiritual nourishment. Due to human population growth and economic pressure, there has been a high rate of biological resource destruction worldwide, especially in developing country like Thailand. The country has carried out many activities in support of the conservation and sustained utilization of biological resources. There have been several laws and regulations established since early 1900s, but there is still a steady decline in forest areas. So far, the country has about 172, 049.99 km² of forest areas (about 33.40% of forest area), fortunately most of them are national parks and wildlife sanctuaries (Royal Forest Department, 2001). It is generally accepted that botanical inventories are important information for conservation of natural resources. There have been intensive studied of plant diversity in upper northern Thailand, especially in Chiang Mai, Chiang Rai and Lampang

Provinces. But however, many protected areas in lower northern Thailand were never been explored, for example, Phu Hin Rong Kla National Park.

Phu Hin Rong Kla National Park is located in Phitsanulok Province, which is the mountainous area of lower northern floristic region. Due to the past activity of the Thai-Communist party in the area there was scanty plant explorations and collections and most collected plants are flowering plants. However, there were some pteridophyte collections in the other protected areas of Phitsanulok and neighboring provinces which included 118 species from Phitsanulok, 218 species from Loei, and 46 species from Phetchabun. It was more than 50% of the previous record in Flora of Thailand (Tagawa and Iwatsuki, 1979, 1985, 1988, 1989). It seems likely that these mountainous provinces are rich in pteridophyte diversity despite lacking information from Phu Hin Rong Kla National Park.

It can be seen that botanical enumeration of ferns and fern allies at Phu Hin Rong Kla National Park is scarce and it is necessary to fulfil biodiversity knowledge, especially pteridophytes diversity of lower northern Thailand. The data of pteridophytes obtain from this study can be useful in biodiversity conservation in the near future.

Aim of this thesis

To conduct a botanical inventory of ferns and fern allies at Phu Hin Rong Kla National Park, Phitsanulok Province.