

CHAPTER 3

STUDY SITES

The fieldwork was carried out mostly at Sakaerat Environmental Research Station (SERS), Udomsap Subdistrict, Wang Nam Khieo District, Nakhon Ratchasima Province. A fieldwork was also carried out at Phanom Rung Historical Park, Ta Pek Subdistrict, Chaloem Phra Khait District, Buri Ram Province. Some plant specimens were sampled from the population along highway 24 in Nong Bun Nak District, Nakhon Ratchasima Province. Data and plant specimens were also collected from plants grow at the Department of Botany, Faculty of Science, Chulalongkorn University; the Thai Commemorative Garden, Kasetsart University, Bangkok; Siri Ruckhachati Garden, Mahidol University, Salaya campus Nakhon Pathom Province and Pharpayom District, Phatthalung Province (Figure 3.1, 3.3).

Location

1. Sakaerat Environmental Research Station (SERS), situated at Phu Luang Subdistrict in Pak Thong Chai District and Wang Nam Khieo Subdistrict and Udomsap Subdistrict in Wang Nam Khieo District, Nakhon Ratchasima Province, the study site is located in the coordination of $14^{\circ} 30' N$ and $101^{\circ} 57' E$. The elevation of the study area is 271 meters above mean sea level. The studies were conducted on the low attitudes of the area in the Dipterocarp Forests in Udomsap Subdistrict (Figure 3.1).

2. Phanom Rung Historical Park, located on Phanom Rung Hill in Ta Pek Subdistrict, Chaloem Phra Khait District in Buri Ram Province, the study site is located in the coordination of $14^{\circ} 31' N$ and $102^{\circ} 57' E$. The elevation of the study area is 234 meters above mean sea level. The studies were conducted on the area along roadside in Phanom Rung Historical Park (Figure 3.1).

3. Study Site along Highway 24, located in Nong Bun Nak District, Nakhon Ratchasima Province, the study site is located in the coordination of $14^{\circ} 44' N$ and $102^{\circ} 22' E$. The elevation of the study area is 251 meters above mean sea level.

4. Department of Botany, Faculty of Science, Chulalongkorn University, Pathumwan District, Bangkok, located in the coordination of $13^{\circ} 43' N$ and $100^{\circ} 32' E$. The elevation of the study area is 12 meters above mean sea level.

5. Thai Commemorative Garden, Kasetsart University, Bangkhen District, Bangkok, is located in the coordination of $13^{\circ} 50' N$ and $100^{\circ} 34' E$. The elevation of the study area is 15 meters above mean sea level.

6. Siri Ruckhachati Garden, Mahidol University, Salaya campus, Salaya District, Nakhon Pathom Province, located in the coordination of $13^{\circ} 47' N$ and $100^{\circ} 19' E$. The elevation of the study area is 11 meters above mean sea level.

7. Study Site in Pharphayom District, Phatthalung Province, located in the coordination of $7^{\circ} 46' N$ and $99^{\circ} 50' E$. The elevation of the study area is 99 meters above mean sea level.

Climate

The climate of all of the study areas is Tropical Climate, with high temperature all the year round. Two sources of rainfalls in the study area are the South-West Monsoon rainstorms and the occasional typhoons from the China Sea.

Climatic data from 1997-2002 were obtained from Sakaerat Environmental Research Station (SERS); Nang Rong Weather Station, Buri Ram Province, 20 km outside of the Phanom Rung Historical Park; Bangkok Metropolis Weather Station, Bangkok; and Phatthalung Agroclimatological Weather Station, Phuttalung Province.

The climatological data indicated that the relative humidity slightly varied in these regions all year (Figure 3.2). Three seasons were observed, i.e. the rainy season, the winter season and the summer season. Study Site in Pharphayom District, Phatthalung Province has a highest average annual rainfall, and only two seasons were observed, i.e. the rainy season, and the summer season.

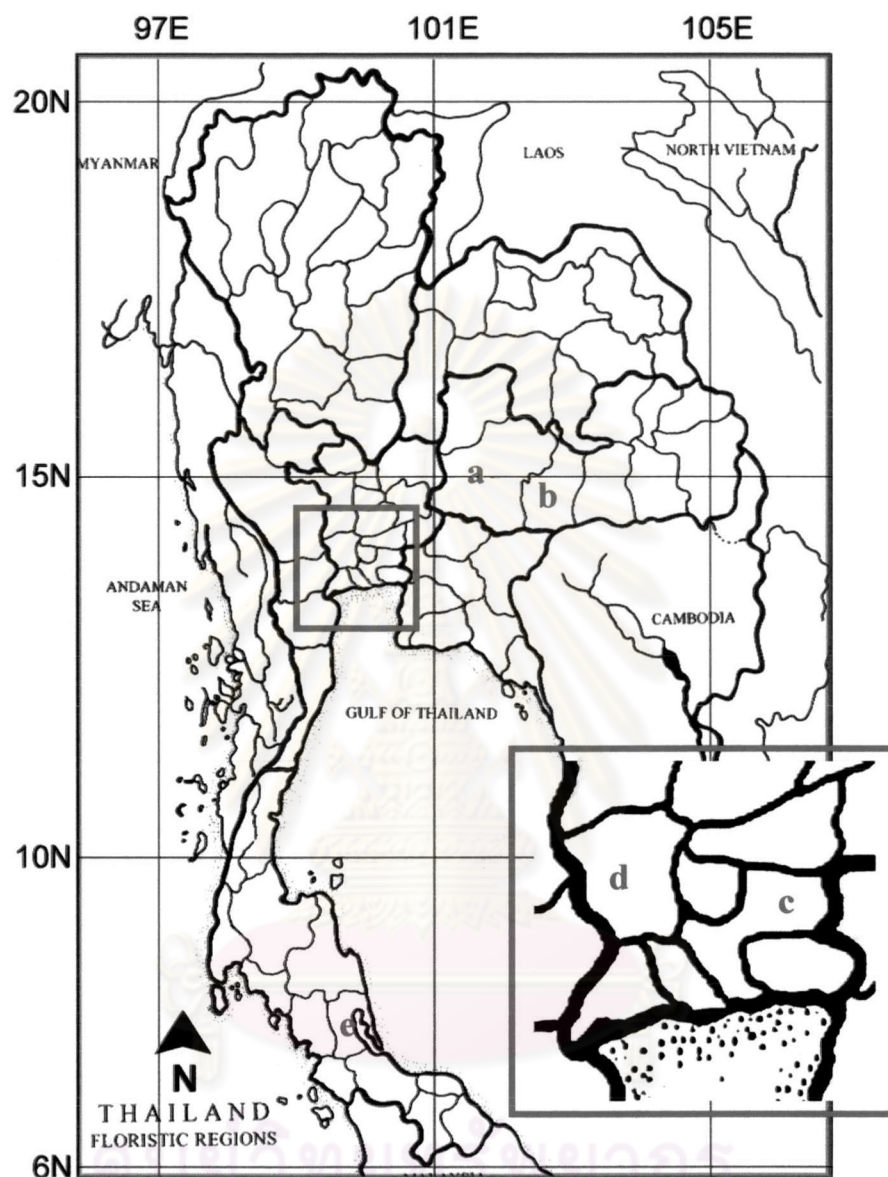


Figure 3.1 Map of Thailand showing the location of 7 study sites: **a**, Sakaerat Environmental Research Station (SERS) and highway 24 in Nong Bun Nak District, Nakhon Ratchasima Province; **b**, Phanom Rung Historical Park; **c**, Department of Botany, Faculty of Science, Chulalongkorn University and Thai Commemorative Garden, Kasetsart University; **d**, Siri Ruckhachati Garden, Mahidol University; **e**, Pharphayom District, Phatthalung Province.

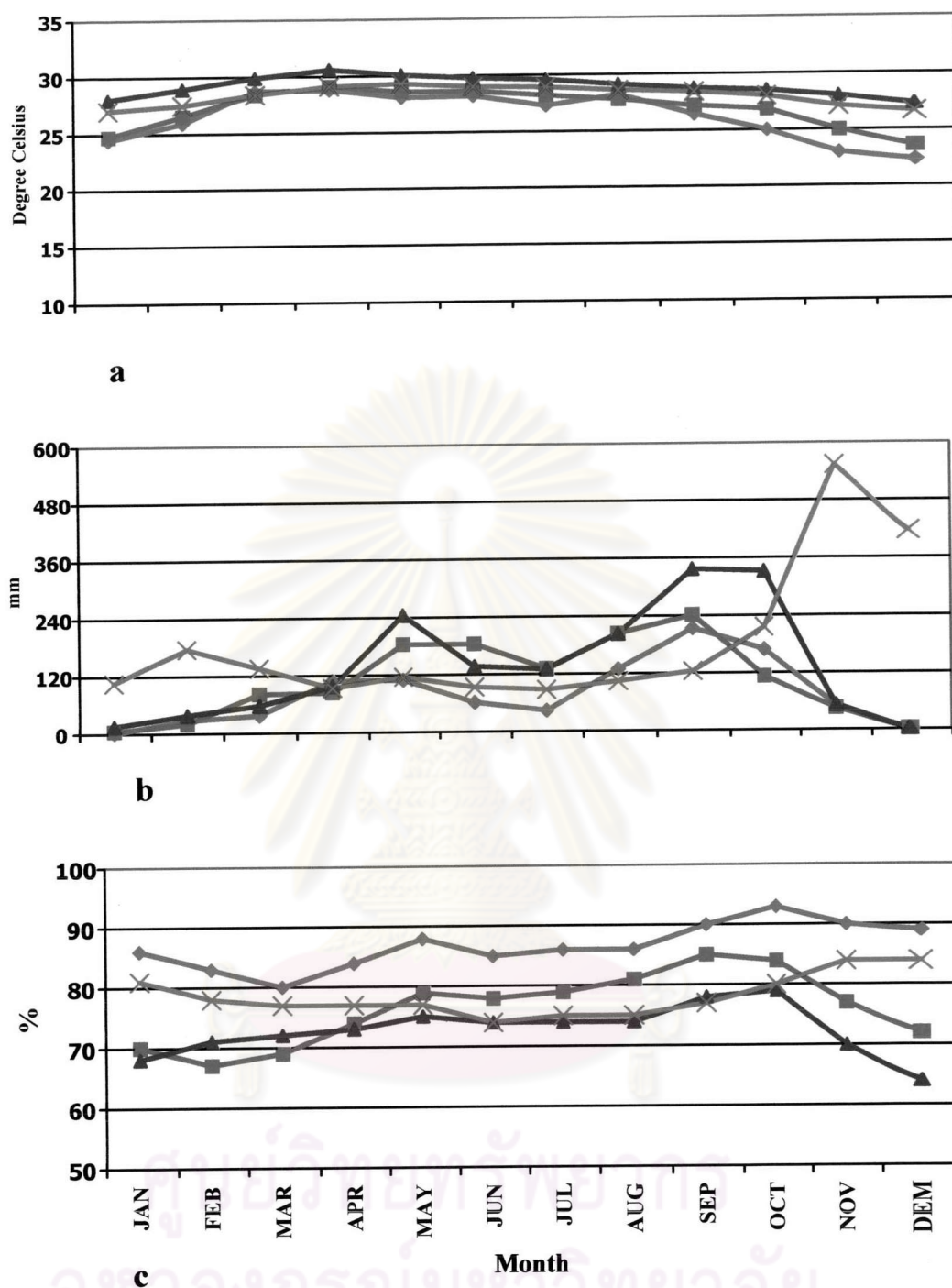


Figure 3.2 Climatic data: **a**, average monthly temperature; **b**, average monthly rainfall; **c**, average monthly relative humidity of seven study sites: Sakaerat Environmental Research Station (SERS) (◆); Phanom Rung Historical Park (■); Department of Botany, Faculty of Science, Chulalongkorn University; Thai Commemorative Garden Kasetsart University and Siri Ruckhachati Garden, Mahidol University (▲); and Pharthayom District, Phatthalung Province (×) (data from 1997-2002).



Figure 3.3 Some of study sites: **a, b, c**, Sakaerat Environmental Research Station (SERS); **d**, Phanom Rung Historical Park; **e**, Pharphayom District, Phatthalung Province.