## **CHAPTER 2**

## LITERATURE REVIEW

In the history of plant taxonomy in Thailand, even a number of plant taxonomists have paid attention to the flora of the northeastern part of Thailand, however, some of them collected plant specimens along the way where they traveled, not in a particular area, and occasionally never reported in publication. Thus, the literatures and data about the Floras of the areas in the northeastern part are quite limited.

In 1867, Clovis Thorel traveled and collected approximately 2000 plant specimens along the Mae Khong River and the Mun River in Ubon Ratchathani Province. Ten years later, Jules Harmand, another French taxonomist, collected about 100 plant specimens during his visit at Sangka District, Surin Province. The specimens of both collectors are deposited in the National Museum, Paris, France (Kerr, 1939, Larsen, 1979).

From 1891-1895, Frederick Henry Smiles surveyed and collected plants from Laos and some parts of Thailand nearby Laos. A few of Thai specimens are kept at the Royal Botanic Garden Kew, England. (Kerr, 1939)

The vast exploration of Thai plant may conducted by A.F.G. Kerr during 1902-1932. He studied and collected more than 25,000 plants all over the country. Most of his specimens are deposited in the herbarium in Aberdeen (ABD), Bangkok (BK), Kew (K) and the British Museum (BM). According to the available literatures, it seems that he visited the northeastern part of Thailand for many times, but his expedition was focused only near Pha Taem National Park (Jacobs, 1962):

From December 1923 to April 1924, He had made a trip from Bangkok to Saraburi, Lop Buri, Nakhon Ratchasima, Surin, Si Sa Ket, Ubon Ratchathani, Nakhon Phanom, Udon Thani, Loei and Phitsanulok. He collected 965 plant specimens and reported in "Tour Report No. 4: Report on a Tour of the Botanical Section through Eastern Circle of Siam". From January to March 1931, he again took another exploration in Nakhon Ratchasima, Chaiyaphum, Khon Kaen, Loei and Phetchabun and collected more than 500 specimens. In his report "Tour Report No.18: Report on a Tour in Northeastern Siam and French Laos" and "Tour Report No.19: A Trip to Pu Bia in French Laos", he gathered about 800 specimens between March and May 1932.

From January to March 1964, there was the 4<sup>th</sup> Thai-Danish Botanical Study in Flora of Thailand by the cooperation between Thai and Danish taxonomists.

Four thousand specimens were collected from Chiang Mai, Tak, Phitsanulok, Phetchabun, Loei, Udon Thani, Sakon Nakhon, Nakhon Phanom, Ubon Ratchathani, Yasothon, Roi Et, Khon Kaen, Nakhon Ratchsima (เต็ม สมิตินันทน์, 2507).

Sam-ang Homcheun studied and collected flowering plants at Khon Kaen University. She reported 157 species from 58 families. All specimens were kept at the Kasin Suvatabhandhu Herbarium (สำอาง หอมชื่น, 2519).

Pongsatorn Yutatat studied and reported 7 genera and 16 Zingiberaceous species found in Phu Phan National Park, Sakon Nakhon Province. (พงศธร ยุกตะทัศ, 2533)

Somran Suddee studied flowering plants in Pa Hin Ngam Forest Park, Chaiyaphum Province. He described 141 species of dicotyledons in 107 genera, 58 families and gave a checklist of 67 monocotyledons found in this Forest Park. (สมราน สุคดี, 2538)

From September to October 1990, and February to April 1993, there was a cooperation between staff from Khon Kaen University, the Royal Botanic Garden Kew, and Trinity College in Dublin to survey and collect plants in Thailand. According to these two expeditions, 799 and 760 plant numbers were collected and distributed to many herbaria, i.e. Kew, Trinity college, Dublin (TDC), Khon Kaen University, The Forest Herbarium (BKF), Aarhus (AAU), Prince of Songkhla University (PSU) and Leiden (L). (Simpson et al., 1995)

Thaweesak Thitimetharoch studied a vegetation and flora of Phuwiang National Park, Khon Kaen province. He described three types of vegetation and reported 65 tree species in 53 genera, 31 families which were dominant in this area. All of specimens are stored at Herbarium of Department of Botany, Faculty of Science, Kasetsart University; Herbarium of Queen Sirikiti Botanic Garden and Herbarium of Faculty of Pharmaceutical Science Khon Kaen University. (ทวิศักดิ์ กิติ เมธาโรจน์, 2541)

From July 1996 to May 1999, Wongsatit Chuakul et al collected medicinal plants from Ubon Ratchathani province. More than 600 medicinal plants were found. In addition, he reported many new recorded species and also described a few new species from his surveys. (วงศ์สถิตย์ 2542; วงศ์สถิตย์ และ นพมาศ, 2540; วงศ์สถิตย์ และ พร้อมจิต ศรลัมพ์, 2541; วงศ์สถิตย์ และ ฉวิวรรณ, 2541; Chualkul, 1998 and 1999)