CHAPTER I

INTRODUCTION

Thailand is a tropical country situating with in floristic regions of Southeast Asia. Thailand consists of many types of forests such as tropical rain forest, dry tropical forest, hill evergreen forest, mixed deciduous forest, and dry dipterocarp forest. Nowadays there are serious forest crisis for example lose of forest area due to human activity, leading to threatening plants species to extinction.

Argyreia Lour. is one of the large and showy flowering plants in Thailand. However, the taxonomic data on Thai *Argyreia* is rather scanty and is found scattered in various taxonomic literatures done by oversea taxonomists. In order to complete the taxonomic study of the family Convolvulaceae, this research project should be carried out, which in term the benefit to the Flora of Thailand project and also provide basic data for plant genetic resources for this family.

Morphological character is an important evidence that always use in plant taxonomic study since it is a conventional and less complicate method. Recently, micro structure data such as palynological data is used in plant taxonomy. Pollen morphology can be used to verify, confirm and complete macro morphological study, and can also be used for phylogenetic investigation among plants group.

Palynology, the study of pollen and spore, was developed as a result of SEM. SEM has revolutionize the study of surface of pollen grains in depth. The availability of countless pollen samples from herbarium and rapid techniques for preparation allows a palynological survey in a just period of time.

So, characters provided by pollen grains including pollen wall structure, polarity, symmetry, shape, and grain size are useful in taxonomic study. For example pollen morphology had been used in determining patterns of species relationships in *Vernonia* (Keeley and Jones, 1977 cited in Jones and Luchsinger, 1987). Accordingly, in this research palynology characters will be investigated as well in addition to morphological characters.

Aims of this Thesis

- To collect plant specimens, study morphology and diversity of *Argyreia* Lour. (Convolvulaceae) in Thailand for identify, classify, construct key to species and to study distribution in Thailand.

- To study pollen morphology: to present pollen descriptions.