



CHAPTER I

INTRODUCTION

Eupatorium adenophorum [Tourn.] Linn. is a member of the family Compositae. This genus consists of over 450 species distributed mostly in America, a few in Europe, Asia and Tropical Africa (1).

The genus of Eupatorium is herb or shrub. It has characteristic flowers, which used in identification:-

Heads combined into usually paniculiform corymbs, 5-to-many-flowered, small or rather large, homogamous; bisexual flowered; involucre cylindrical or campanulate; bracts 1-to-many-serrate, imbricate, centrifugally decrease; receptacle flat or convex, glabrous or hairy, naked; corolla tubular, white, pink, or violet, infundibuliform or with a campanulate limb, 5-dentate; anthers with obtuse base and apex; style-arms usually long, finally far exserted, usually concolourous with the corolla obtuse; hairy; achenes narrowly oblong, usually 5-angular, truncate; pappus-hairs mostly 1-seriate, dentate. Its leaves are opposite or rarely partly alternate (2).

In Thailand, there are only four species of Eupatorium as follows (3) :-

1. Eupatorium adenophorum Spreng., Saap maa
(Chiang Mai)
2. E. capillifolium Small, Kot chulaa (Bangkok);
Dog Funnel
3. E. odoratum Linn, Saap suea (Singburi); Chaa
phak khraat, Yeesun thuean (Surat Thani); Baan raang,
Phak khraat (Ratchaburi); Benchamaat (Trat); Farang
rukthee, Farang hoh (Suphanburi); Phaa thang (Chiang
Mai); Monthon (Phetchabun); Mun krataai (Udon Thani);
Ram khoei (Ranong); Se pho kuai, Nong seng preng
(Mae Hong Son); Yaa dong raang (Saraburi); Yaa dong
khaao (General); Yaa farangset (Chanthaburi, Trat);
Yaa pha siri ai ya sawan, Maa long (Chonburi); Yaa
mueang waai, Yaa mueang haang (Northern); Yaa leum
mueang (Khon Kaen); Yaa men (Northeastern).
4. E. stoechadosmum Hance, Kiang phaa yai
(Northern); Sape, Mok phaa, Yaa lang phang (Mae Hong
Son); Sa phang (Loei); San phraa hom (Central); Yaa
suae mop (Suphanburi, Ratchaburi, Kanchanaburi).

The species of Eupatorium adenophorum Spreng. is the only member of this genus which is native to Thailand. It distributes as weed in the northern part of Thailand and in Tropical Africa (4).

The characteristic features of E. adenophorum Spreng. is described as follows:-

Stem, branches, petiole and involucre bracts clothed with glandular hairs; head in dense corymbs, terminal and in the upper leaf-axils; heads peduncled, many-flowered, ca 5 mm long; involucre bracts 3-seriate, elliptic-lanceolate, acute; corolla white, funnel-shaped, ca 3 mm long, achenes black, glabrous, ca 1.5 mm long; pappus hairs, sordidly white, ca 3 mm; stem dark purple; leaves ovate or ovate-rhomboid, with a shortly tapering base and acuminate, rather acute apex, serrate, glabrous except on the nerve beneath, younger ones pubescent on the lower surface, 4-10 cm (1.5-3.5 cm long petiolate disregarded), by 3.5-6.5 cm; widely branched, disagreeably smelling herb, often woody at the base. (2)

The synonyms of this species is Eupatorium glandulosum H.B.K., non Michx (2,5). and Ageratina adenophora (Spreng.) R.H.King & H.Robinson (4,5).

Many species of Eupatorium Linn. have been used in remedies. For instances, Eupatorium capillifolium (Kotchulaa, Dog funnel) has long been used in domestic to treat insect bites (6), E. odoratum (Saap suea) has been used for fever, and gripe, and E. inulifolium has been used for cough, colds; poultice on sore; leaf juice in eye for ophthalmia (7).

Up to now, several species of Eupatorium have been studied for their phytochemical and physiological

properties. They have been found to contain various groups of chemical constituents such as sesquiterpenoids, alkaloids, flavonoids, glycosides etc.

Preliminary studies on the chemical constituents of E. adenophorum Spreng. have been found particularly interesting result which prompted to undergo the further phytochemical studies. Therefore this investigation deals with isolation, purification and characterization of component(s) occurring in this species. The result from this studies are expected to contribute to our knowledge of chemotaxonomy and phytochemistry.

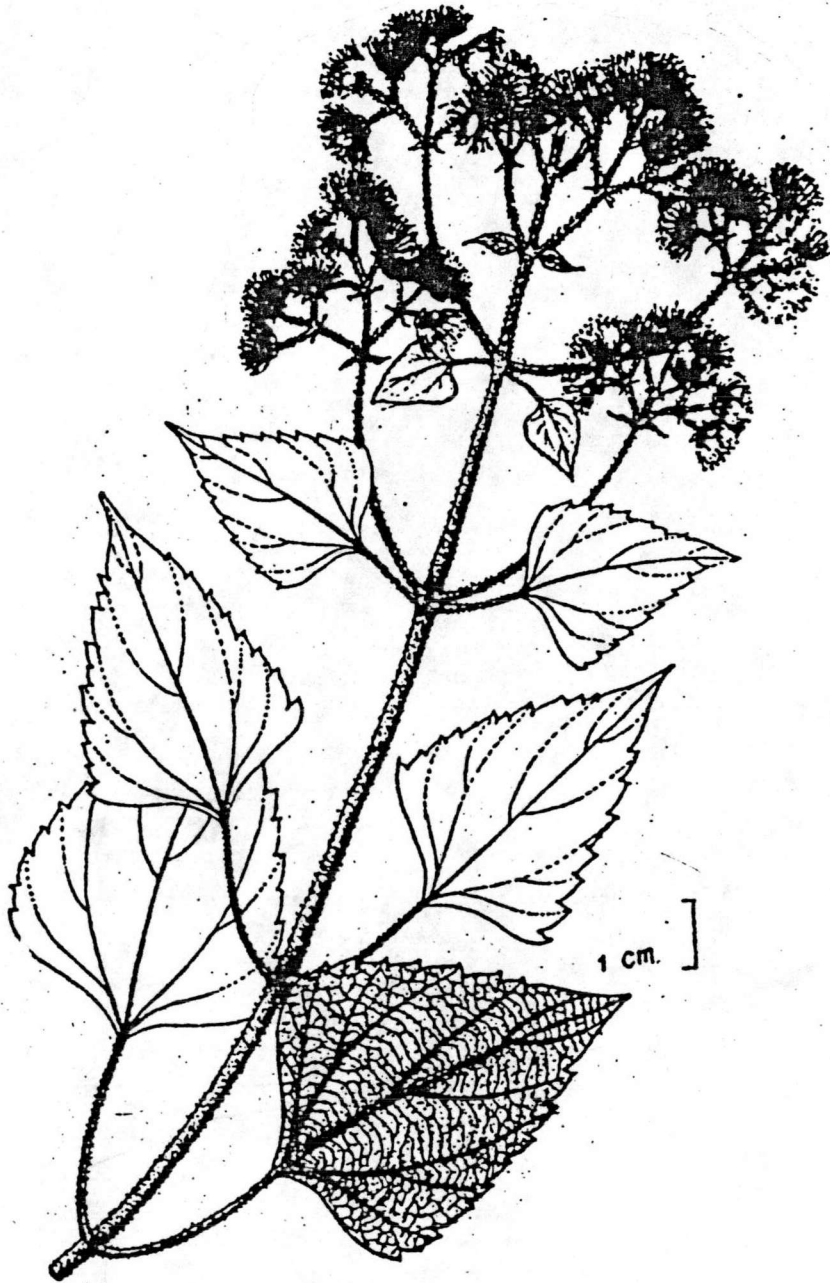


Figure 1.1 *Eupatorium adenophorum* Spreng.