

CHAPTER I

INTRODUCTION

Uncaria quadrangularis Geddes is a woody climber found in the Southern part of Thailand. The genus belongs to the family Rubiaceae (subfamily Naucleae). There are 95 species of Uncaria recognised as follows : (1-10)

Uncaria acida Roxb.

U. africana G. Don

U. angolensis (Haviland) Welw. ex Hutchinson et Dalziel

U. appendiculata Benth.

U. attenuata Korth. (U. sclerophylla DC.)

U. avenia Valetton

U. barbata Merrill

U. bernaysii F. Muell.

U. bernaysiodes Merrill et Perry

U. borneensis Havil.

U. brevicarpa Elmer

U. bulusanensis Elmer

U. callophylla Korth.

U. canescens Korth.

U. celebica Koord.

U. cirrhiflora Roxb.

- Uncaria clavisepala Elmer
- U. cordata Merrill
- U. dasycarpa Pierre ex Pitard
- U. dasyoneura Korth.
- U. eurhyncha Miq.
- U. elliptica R. Br.
- U. ferrea DC.
- U. ferrea DC. var. tomentosa King
- U. ferruginea King
- U. firma Valetton
- U. florida Vidal
- U. forbesii Wernham
- U. formosana Matsamura et Hayata (Ourouparia formosana
Matsamura et Hayata)
- U. gambier Roxb. (Ourouparia gambier Baillon)
- U. glabata DC.
- U. glabrescens Merrill et Perry
- U. glaucescens Craib
- U. grandilolia Baker
- U. guianensis J.F. Gmel.
- U. havilandiana S. Moore
- U. hirsuta Havil.
- U. homomalla Miq.
- U. hookeri Vidal
- U. inermis Valetton

Uncaria inférmedia ValetónU. jasminiflora Wall.U. kawakamii Hayata (Ourouparia kawakamii Hayata)U. korrensis KanchiraU. kunstleri KingU. laevifolia ElmerU. laevigata Wall.U. lancifolia HutchinsonU. lanosa Wall.U. lobbii Hook. f.U. longiflora MerrillU. luzoniensis MerrillU. macrophylla Wall.U. membranifolia HowU. nemorosa Korth.U. nervosa ElmerU. oligoneura Korth.U. orientalis GuillauminU. ovalifolia Roxb.U. ovata R. Br.U. pachyphylla MerrillU. parviflora RidleyU. paucinervis Teysm. et Binn.U. pedicellata Roxb.U. perrottetii Merrill

Uncaria philippinensis Elmer

U. pilosa Roxb.

U. pteropoda Miq.

U. quadrangularis Geddes

U. rhynchophylla Miq.

U. rhynchophylloides How

U. rostrata Pierre ex Pitard

U. roxburghiana Korth.

U. salomonensis Merrill et Perry

U. scandens Hutchinson

U. schlenckerae S. Moore

U. sclerophylla Roxb.

U. sclerophylloides Valetton

U. sessilifructus Roxb.

U. setiloba Benth.

U. sinensis Havil.

U. speciosa Wall.

U. sterrophylla Merrill et Perry

U. surinamensis Miq.

U. talbotii Wernham

U. thwaitesii Alston

U. tomentosa DC. (Ourouparia guianensis Aubl.)

U. tonkinensis Havil.

U. toppingii Merrill

U. trinervis Havil.



Uncaria uraiensis Hayata

U. valetonia Merrill et Perry

U. velutina Havil.

U. wallichii Korth.

U. wangii How

U. wrayi King

The plants of Uncaria are widely distributed in tropical and subtropical regions, particularly in the Far East, ⁽¹¹⁾ the greatest concentration of species being in Malay Peninsula. The most important of them is Uncaria gambir Roxb. as the source of the astringent substance gambir or gambier. ⁽¹²⁾

All species are alike in appearance, and are very easily recognizable. They climb by grapples. When the stem of the larger species of Uncaria is cut potable water may be drawn from it. ⁽¹²⁾

Most of Uncaria species are concentrated in the southern part of Thailand. There are about fourteen species of Uncaria growing in Thailand as follows : ⁽¹³⁾

Uncaria attenuata Korth.

from Surat, Chumpawn, Pattani.

U. ferrea DC.

from Ranawng, Nakawn Sritamarat, Patalung, Trang.

Distribution : Burma, Malaya.

Local Name : "Ngop (ໂງຸ)" Siamese, Ranawng

U. ferrea DC. var. tomentosa King.

from Surat, Chumpawn, Puket, Trang, Pattani.

Distribution : Andamans, Malaya.

Local Name : "Ngop (โงบ)" Siamese, Chumpawn and Surat;

"Nam-chao-chu (หนามเจ้าชู)" Siamese, Ranawng.

U. homomalla Miq.

from Lampang, Ubon, Chantaburi, Prachinburi, Rachaburi,
Pattani.

Distribution : Jyntea Hills, Sumatra, Laos, Cambodia.

Local Name : "I-ngop (อีโงบ)" Siamese, Prachuap

"Kao-kwai-me-lup (เขาควายแม่หลุบ)" Laos, Lampang.

U. laevigata Wall. ex G. Don

from Chiangmai.

Distribution : Burma, Laos.

U. lanosa Wall.

from Surat, Puket.

Distribution : Malaya.

U. longiflora Merrill

from Pattani.

Distribution : Malaya, Philippines.

Local Name : "Kio-cho (เกี้ยวโช้)" Siamese, Pattani.

U. macrophylla Wall.

from Chiangmai.

Distribution : Indo-china, Yunnan.

Local Name : "Kwai-me-lup (ควายแม่หลุบ)" Laos, Chiangmai.

U. pedicellata King et Gamble

from Surat.

Distribution : Malaya.

Local Name : "Ai-mo (อ้ายโหม)" Siamese, Surat.

U. pilosa Roxb.

from Udown, Nawngkai.

Distribution : Burma, Yunnan, Laos.

U. quadrangularis Geddes

U. sclerophylla King et Gamble.

from Chantaburi, Surat, Puket, Ranawng, Pattani, Naratiwat.

Distribution : Burma, Malaya.

U. trinervis Hav.

from Surat.

Distribution : Penang.

Some species of Uncaria are said to be used as vermifuge but it is uncertain. The grapples of Uncaria sinensis Havil (Nauclea sinensis Oliv) are used by the Chinese for treating fever in children and nervous disorders. (12)

Alvins states that the leaves of Uncaria acida Roxb. were used for relieving pain when rubbed on body. Rumpf states that planks of Uncaria cordata Merrill are very tough and can bent as the hoops of sieves. The same author also adds that the young stem gives a black dye. (12)

The Malays use a decoction of the leaves of Uncaria ferrea DC. (in Siam, "Ngop") for cleaning wounds and ulcers, and an infusion of the uninjured roots as a drink for inflammation of the intestine. The young leaves and flowers are medicinal in West Java; but the way

in which they are used is not fully recorded.⁽¹²⁾

In Thailand, leaves of some species of Uncaria are chewed and used as a substitute for *Mitragyna speciosa* Korth known as "Kratom".⁽¹⁴⁾

There are no reports of the alkaloids present in Uncaria quadrangularis Geddes. This thesis deals with the alkaloidal content of the leaves and stem bark of Uncaria quadrangularis Geddes and is therefore a further contribution to our knowledge of the alkaloids present in the genus of Uncaria.