

CHAPTER I

INTRODUCTION

Bastard cardamom or tavoy cardamom commonly known in Thailand as “Reo” comprises plants and also crude drugs derived from them has been used in many countries as folk medicine and spices, This plant species belongs to the genus *Amomum* and in one material, *Alpinia*, tribus *Alpinieae*, family Zingiberaceae. The *Amomum* comprises about 150 species, distributed in Eastern Asia and Malaysia, Papuasias and tropical Australia (Dahlgren, Clifford and Yeo, 1985). Several species of the genus *Amomum* are known as cardamoms, and are used for culinary and medicinal purposes such as *Amomum krervanh* Pierre (Round siam cardamom) from Thailand (ไชยา อุ้ยสูงเนิน, 2531) and Cambodia (Wilson, 192034), *A. aromaticum* Roxb. and *A. subulatum* Roxb. (Bengal cardamom or Nepal cardamom) cultivated in India, and including *A. xanthioides* Wall. (Bastard cardamom) from India, Laos, Cambodia, Vietnam, southern China and Thailand (Bhatnagar *et al*, 1948; Bown, 1995; Grieve, 1994 and Trease and Evans, 1996), all of which have been substituted for the true cardamom [*Elettaria cardamomum* (L.) Maton], the important spice from India and Sri Lanka (Wilson, 192034 and Bhatnagar *et al*, 1948).

In Chinese traditional medicine, fruits of bastard cardamom are used to treat indigestion (Bown, 1995; Dharmananda, 2002; Padua *et al*, 1999 and Prime herbs corporation, 2002), diarrhoea (Dharmananda, 2002; Padua *et al*, 1999; Prime herbs corporation, 2002 and Tsumura, 1991), flatulence, gastralgia, toothache, febrifuge, antiseptic (Padua *et al*, 1999), nausea and vomiting (Dharmananda, 2002 and Prime herbs corporation, 2002), dysentery with cold symptoms (Prime herbs corporation, 2002) and astringent (Tsumura, 1991). In China the well known cardamom or “Sha ren” are recorded as *Amomum villosum* Lour., and usually found in the market mixed with *A. xanthioides* Wall. or “Suo sha ren” from India, Thailand, Cambodia, and Laos (Perry, 1980).

In Vietnam, there are three important species of cardamom and were classed as high importance at the local or regional level from the export and domestic market values such as *Amomum villosum* Lour. or “Sa nhan do”, *A. xanthioides* Wall. or “Sa nhan xanh” and *A. longiligulare* T. L. Wu or “Sa nhan tim” (Vantomme, Markkula and Leslie, 2002). The seeds

are utilized to treat dyspepsia, colic , oedema (Institute of materia medica, 1989), flatulence, diarrhea, vomiting (Institute of materia medica, 1989 and Padua *et al*, 1999), gastralgia, toochache, febrifuge and antiseptic (Padua *et al*, 1999).

In Thailand, under the name “reo”, the plants as well as their fruits belongs to several species from the family Zingiberaceae. . In Trat province, “reo dang” is recognized as *Amomum ovoideum* Pierre ex Gagnep., “reo dong” is from *A. villosum* Lour. var. *villosum* while in the Central and the East part “reo” may either be *A. villosum* Lour. var. *xanthioides* (Wall. ex Baker) T. L. Wu & S. Chen and *A. uliginosum* K.D.Koenig respectively (เต็ม สมิตินันท์, 2001). In Thai traditional medicine, two kinds of reo either reo noi or reo yai or both are used (ศึกษาธิการ, 2542). There is confusion among the name “reo” concerning the true identity representing both the plants and also crude drugs derived from them. Many publications indicated the different botanical origins of two kind of reo such as reo noi is an *A. villosum* Lour. (วิทย์ เทียงบูรณธรรม, 2531 และ คณะอนุกรรมการจัดทำตำรามาตรฐานยาสมุนไพรไทย, 2545) and reo yai is an *A. xanthioides* Wall. (คณะอนุกรรมการจัดทำตำรามาตรฐานยาสมุนไพรไทย, 2545). Many information resources indicated that the popular and long-believing botanical origin of reo used officially and commercially is *A. xanthioides* Wall. (รวิชัย วงศ์ประเสริฐ, 2546; วิทย์ เทียงบูรณธรรม, 2531; การแพทย์แผนไทย, 2547; วิจัยและพัฒนา, 2547 and Fransworth and Bunyapraphatsara, 1992). The commercial statistic information of reo as reported by Ministry of Agriculture and Cooperative showing that the quantity of import were not constant (3 metric tons in 1999, 28 metric tons in 2001 and 3 metric tons in 2002) while the export decrease gradually from 281 metric tons in 1993 to 2 metric tons in 2003 (เกษตรและสหกรณ์, 2547). However, reo still be consumed in Thai and Chinese traditional preparations and purchased among drug stores in Thailand.

Therefore, the identity of “reo” should be exactly investigated as in this present work to established undisputed origin of reo.