

MEDICINAL PROPERTIES OF FRAGRANCE FLOWERS IN SUAN SUNANDHA ROYAL GARDEN

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ABSTRACT

Suan Sunandha Royal Garden was established more than 100 years in Thailand. It was found 72 species have been planted in the Royal Garden, which consist of fragrance flowering plants, and non-fragrance flowering plants. The fragrance from flowers were important to add in many types of cosmetics, and medicine products. The objectives of this research were 1) to collect data and classify the fragrant flowering plants, 2) to classify medicinal properties of fragrant flowers, and 3) to classify medicinal properties according to Thai Pharmacopeia. This research was a survey and document research which employed the qualitative method. The results of this research indicated that 17 species of fragrance flowering plants were found in the Royal Garden. The fragrance flowering plants were classified and, it was obtained information for Thai medicine recipe development in the future.

Keyword: - fragrance flowers, medicinal properties, Suan Sunandha

INTRODUCTION

Suan Sunandha Royal Garden was established by the initiation of King Chulalongkorn (King Rama V of Siam) who would like to set up his private garden for beloved monument for Queen Consorts Sunandha Kumariratana whom was his beloved queen. It was found 72 species [1] have been planted in the Garden, which was consisted of fragrance flowering plants, and non-fragrance flowering plants. With regard to the found species, the Royal Garden was established as a summer garden for the royal family. The garden was also simulated as similar as a forest tropical garden.

Thai traditional medicine (TTM) is defined by law as “the medical processes dealing with the examination, diagnosis, therapy, treatment, or prevention of diseases, or promotion and rehabilitation of the health of humans or animals, midwifery, Thai massage, as well as the preparation, production of Thai traditional medicines and the making of devices and instruments for medical purposes. According to TTM which is based on Buddhism, the human body is composed of four elements (‘taht’ in the Thai language), i.e., earth, water, wind, and fire. When the four elements of the body are in equilibrium, it will be healthy. In contrast, if an imbalance in these elements occurs, i.e., if there is a deficit, an excess, or disability in any of the four elements, a person will become ill [2]. In many parts of the world traditional knowledge and biodiversity still play an import role in health care, culture, religion, food security, environment, and sustainable development. Moreover, many widely used plant-based medicines are derived from traditional knowledge. Preserving, protecting, and promoting (if scientifically supported) traditional knowledge is of key importance. Promdao has proved that scent from herbal plants can be extracted and used for Sukhon-Therapy (aromatherapy), the good smell of the Thai classical perfume (also called “*Nam Prung*”, similar as Eau de Toilette) are come from the collection of flowers and herbal plants. When patients inhale the good smell of Nam Prung, their physical and mental health will be better [3].

The fragrance from flowers was important to add in many types of cosmetics, and medicine products. Therefore, this research emphasizes on medicinal properties data of fragrant flowers.

Objective

There were 3 main objectives in this research.

1. To collect data, and classify the fragrant flowering plants.
2. To classify medicinal properties of fragrant flowers.
3. To classify medicinal properties according to Thai Pharmacopeia.

Scope of research

Area of this study was emphasized at Suan Sunandha Royal Garden, where is now located in Suan Sunandha Rajabhat University, 1 U-Thong Nok Road, Vachira District, Dusit, Bangkok, Thailand.

METHODOLOGY

This research was survey and document research which referred to the qualitative approach. Data collection, and analysis from the review of the related documents by focus on medicinal properties data of fragrant flowers.

RESULTS

The results of this research indicated that 17 species of fragrance flowering plants, which consist of night-flowering jasmine, Alexandrian laurel, caper tree, orange jasmine, roughbark lignum vitae, jankapoh (Thai), rain tree, magnolia, purple orchid tree, divi-divi, Burmese rosewood, Chinese rice flower, cork tree, bullet wood, white cheesewood, plumeria, and green ebony were found in the Royal Garden [1] as shown in Table 1.

Table 1
Fragrance flowering plants

| Common name | Scientific name | Thai name |
|-------------------------|--|-----------------|
| Night-flowering jasmine | <i>Nyctanthes arbor-tristis</i> L. | kannikar |
| Alexandrian laurel | <i>Calophyllum inophyllum</i> L. | kakating |
| Caper tree | <i>Crateva adansonii</i> subsp. <i>trifoliata</i> (Roxb.) Jacobs | koumbok |
| Orange jasmine | <i>Murranya paniculata</i> | keo |
| Roughbark Lignum vitae | <i>Guaiacum officinale</i> | keochaochom |
| Jankapoh (Thai) | <i>Vatica diospyroides</i> Symington | jankapoh |
| Rain tree | <i>Samanea saman</i> (Jacq.) Merr. | jamjuree |
| White champaca | <i>Michelia alba</i> DC | jampee |
| Purple orchid tree | <i>Bauhinia purpurea</i> L. | chongko |
| Divi-divi | <i>Caesalpinia coriaria</i> (Jacq) wild | tanyong |
| Burmese rosewood | <i>Pterocarpus indicus</i> Wild | pradoo |
| Chinese rice flower | <i>Aglaia odorata</i> Lour. | prayong |
| Cork tree | <i>Millingtonia hortensis</i> L. | peep (gasalong) |
| Bullet wood | <i>Mimusops elengi</i> L. | phikun |
| White cheesewood | <i>Melodorum fruticosum</i> Lour. | lamduan |
| Plumeria | <i>Plumeria</i> spp. | leelawadee |
| Green ebony | <i>Jacaranda obtusifolia</i> | sritrang |

From Table 1, it was found various Family of the flowering plants. Night-flowering jasmine is in the Family Oleaceae, which is the same Family of jasmine [4]. Alexandrian laurel is widely cultivated in all tropical regions of the world. Because of its decorative leaves, fragrant flowers, and spreading crown, it is best known as an ornamental plant in the Family Calophyllaceae [5]. Caper tree is widely distributed in Africa and Asia in the Family Capparaceae [6,7]. Orange jasmine is a tropical, evergreen plant native to Southeast Asia and China. It is closely related to *Citrus* [8]. Roughbark lignum-vitae or guaiacwood is a species of tree in the caltrop family, Zygophyllaceae [9]. Jankapoh is a species of plant in the Dipterocarpaceae family [10]. This species is endemic to Thailand where its population is currently in decline due to deforestation. Rain tree is a species of flowering tree in the pea family, Fabaceae [11]. White champaca is in the Family Magnoliaceae [12]. Purple orchid tree is in the Family Fabaceae [13]. Divi-divi is in the Family Leguminosae [14]. Burmese rosewood is in the Family Fabaceae [15,16]. Chinese rice flower is in the Family Meliaceae [17]. Cork tree is in the Family Bignoniaceae [18]. Bullet wood is in the Family Sapotaceae [19]. White cheesewood is in the Family Annonaceae [20]. Plumeria is in the Family Apocycaceae [21]. Green ebony is in the Family Bignoniaceae [22]. It was found 3 species, rain tree, purple orchid tree, and Burmese rosewood are in the same Family, Fabaceae.

The medicinal properties of 17 species of fragrance flowers be able to treat various symptoms as shown in Table 2.

Table 2
Medicinal properties of fragrance flowers

| Common name | Medicinal properties |
|-------------------------|--|
| Night-flowering jasmine | Solve the dizziness, antipyretic [4] |
| Alexandrian laurel | Cardio tonic, solve the abnormal heartbeat symptoms, cooked as an aromatic medicine [5] |
| Caper tree | Cure the sore throat [6] |
| Orange jasmine | Anti- arthritis drugs [8] |
| Roughbark Lignum vitae | Body tonic [9] |
| Jankapoh (Thai) | Cardio tonic, cooked as an aromatic medicine [10] |
| Rain tree | Ingredients for perfume production, soap, shampoo, hand wash gel [11] |
| White champaca | Body tonic, cardio tonic, nerve nourish [12] |
| Purple orchid tree | Decoction, reduce the cough [13] |
| Divi-divi | The flowers are fragrant [14] |
| Burmese rosewood | The flowers are fragrant [15], the flower is used as a honey source [16] |
| Chinese rice flower | Solve the dizziness, and hangover [17] |
| Cork tree | Cure the Sinusitis, treatment of rhinitis, and asthma [18] |
| Bullet wood | Heart tonic, cure the sore throat, dissolve phlegm, treatment of aphthous ulcers, cooked as a snuff [19] |
| White cheesewood | Body tonic, cardio tonic, blood tonic, solve the dizziness, reduce the cough [20] |
| Plumeria | The smell of it helps to sleep comfortably [21] used in creating soft perfumes, and aroma therapies [22] |
| Green ebony | The flowers have a delicate fragrance [23] |

From Table 2, it was found various of medicinal properties of the fragrance flowers, which consist of solve the dizziness, and hangover, antipyretic, body tonic, cardio tonic, blood tonic, solve the abnormal heartbeat symptoms, cooked as an aromatic medicine, cure the sore throat, anti- arthritis drugs, ingredients for perfume production, nerve nourish, reduce cough, cure the sinusitis, treatment of rhinitis, and asthma, dissolve phlegm, treatment of aphthous ulcers, cooked as a snuff, creating soft perfumes, and aroma therapies, as well as the flower is used as a honey source.

In Thai Pharmacopeia [24], set of drug is means to mix more than 2 herbal medicines in the same amount, such as set of 5 type of pollens, jasmine + bullet wood flower + iron wood flower + negkassar flower + pollen of lotus flower. This set is used for body tonic, cardio tonic, antipyretic, solve the dizziness, nourish the bile, make appetite, and nourish the pregnancy. It was found that bullet wood flower is one of this set.

CONCLUSIONS AND DISCUSSION

It was found 17 species of fragrance flowering plants from total 72 species in Suan Sunandha Royal Garden. It was found the main of medicinal properties of the fragrance flowers as follows: solve the dizziness, body tonic, cardio tonic, reduce the cough, and cooked as an aromatic medicine. Therefore, the author suggests that these found herbal plants in Suan Sunandha Royal Garden should be conserved for herbal development, education, seed breeding, and herbal therapy.

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