

TAXONOMIC STUDY AND MEDICINAL IMPORTANCE OF THREE SPECIES OF THE GENUS *ARTEMISIA* LINN.

Rizwana Aleem Qureshi^{*}, Mushtaq Ahmad^{**}, Zaheer Yousaf
and Muhammad Arshad^{*}

Abstract

Morphological features of three species of *Artemisia* viz. *A. scoparia* Waldst. & Kit., *A. absinthium* Linn. And *A. brevifolia* Wall. Ex DC. For plant size, leaf-shape and size, petiole length, inflorescence type and capitulum, were studied on the herbarium specimens preserved at Herbarium of Quaid-I-Azam University, Islamabad. Medicinal properties and uses of these species were determined by interviewing Hakims and also from the literature. Characters recorded are head and receptacle, number of florets per head were taxonomically important to differentiate these species. It was observed that an important use of *A. absinthium* is as cure against liver diseases.

Introduction

The relationship between man and plants is as old as the history of mankind itself from the time man has started studying plants and animals, as a source of food and remedy for different ailments. Some plants were found useful as food while others showed beneficial effects against various diseases (Said, 1982). The use of plants as a source of medicine was based on the experiences gained through several generations of traditional physicians and herbal practitioners found in different societies. Holy Prophet of Islam (Peace be upon him) also used certain herbs as cure for various diseases.

For centuries, plants with medicinal properties have been utilized successfully in the treatment of ailments of varying degree of severity. The Greek physician, Hippocrates, in 377 BC, said "Let medicine be your food and food your medicine" (Bartram, 1995). Unfortunately many people knowing very little about such useful medicinal plants, that nature has. Therefore, taxonomy of root, stem, bark, leaves, flowers and seed is important to provide convenient method of identification.

* Department of Biological Sciences, Quaid-I-Azam University, Islamabad, Pakistan

** Department of Biological Sciences, University of Arid Agriculture, Rawalpindi, Pakistan

Artemisia Linn. Known as "Worm Wood", is a large genus of herbs with 200 species and belong to family *Asteraceae*. It has strongly scented alternate, entire leaves, and flowers not very distinctly grown in heads. It is reported that 30 species of *Artemisia* are grown naturally in Pakistan. *A. brevifolia* Wall. Ex DC. And *A. scoparia* Waldst. & Kit. Are highly used in herbal medicine. The Margalla hills in Islamabad are rich in medicinal plants but are neglected due to less awareness among locals. Therefore, this area demands extensive ethnobotanical survey regarding medicinal herbs.

Review of Literature

Davis (1975), reported *Artemisia* Linn. as annual or mostly perennial herb with usually erect, much branched stem. Leaves are sessile or petiolate, pinnatisect and the involuere is ovoid or globose with considerable variations in habit, leaf shape and other morphological characters attributable to change of environmental conditions.

Kirtikar and Basu (1975) used *A. brevifolia* Wall. Ex DC. against intermittent fever, jaundice and also as vermifuge. Huang *et al.* (1991) studied a chemical 'scoparone' found in *A. scoparia* Waldst. & Kit, which is useful for the development of better immunosuppressive agent with vasorelaxant actions.

Nin & Magher (1995) reported high variability in *A. absinthium* Linn. in number of branches per plant, growth habit, flowering period, fresh, dry matter field and the plant height due to change of ecological habitat and variations in environmental conditions. Hammond *et al.* (1997) extracted the essential oil from the leaves of *A. absinthium* Linn. which is used in food industry.

Materials and Methods

The taxonomic study on three *Artemisia* spp. was conducted in the Herbarium of Quaid-i-Azam University, Islamabad. The plant specimens were collected in flowering and fruiting stage during field trips. Taxonomic characters including stem, leaf, inflorescence and description of flower were studied with the help of simple microscope. After studying the taxonomic characters, the key to species was prepared for the differentiation of selected species. The specimens were identified and later on deposited as mounted Herbarium sheets at the Quaid-i-Azam University, Islamabad, for further references.

For the medicinal properties and uses, a survey was also conducted in