Hygrophila auriculata (Schum.) Heine

Classification: According to Bentham and Hooker’s scheme of classification the plant is classified as follows:

Class - Dicotyledonae  
Order - Lamiales  
Family - Acanthaceae  
Genus - Hygrophila  
Species - auriculata

H. auriculata syn Asteracantha longifolia Nees, belongs to family Acanthaceae. The plant is widely distributed throughout India, Srilanka, Burma, Malaysia and Nepal. Acanthaceae family is a large flowering plant family that comprises 230–350 genera, with between 2500-4300 species (Smith, 1991 & Whistler, 2000). It is a largely pantropical family with many taxa found in Indo-Malaysia, Africa, Madagascar, Brazil and Central America, and extending to the Mediterranean, Australia and the United States (Mabberley, 2008) of the species are shrubs, vines or herbaceous plants, with a few tree species centered in the tropics. Acanths are widely used in horticulture for their numerous flowers or bracts with showy colours and for their variegated or bicolorous foliage (Meyer & Lavergne, 2004).

H. auriculata is commonly known as kulikhara, kokilaksah, long leaves barleria, ikshura, ikshugandha and kokilasha, srngali, vajrakantaka, picchila, vajra, kokila. Their roots, seeds and ashes of the plant are extensively used in traditional system of medicine for various ailments like jaundice, hepatic obstruction, rheumatism, inflammation, pain, urinary infections, edema and gout. It is classified in Ayurvedic system as seethaveeryam, mathuravipaka and used for the treatment of premeham (diabetes), athisaram (dysentery), etc. (Nadkarni, 1978; Chopra et al, 1986).

The plant is a sub shrub, usually growing in marshy places along water courses. The stem is reddish brown and the shoot has 8 leaves and six thorns at each node. The
leaves occur in whorls, the outer pair of leaves is larger, lanceolate, scalarous, margins are minutely dentate, subsessile, and the thorns are strong, straight or curved. Flowers occur in axillary whorls, bract and bracteoles are leafy.

The calyx is four-lobed, and the lobes are unequal, Corolla, -5 petals gamopetalous, unequally 2-lipped, middle lobe of the lower lip with a yellow palate; corolla purple coloured. Stamens - four, in two pairs, filaments unequal; anthers divergent; ovary two celled; four ovules in each cell. The fruit is in the form of dehiscent capsules (Nadkarni, 1978).

Aerial parts of the plant are used ethnobotanically for the treatment of body pain, jaundice, malaria, skin diseases and possess antitumor activity (Mazumdar et al, 1997) while the seeds are used for treatment of impotence and thus as aphrodisiac (Jain, 1991), increase spermatogenesis (Chauhan et al, 2009) . This plant has been used to treat blood diseases (Kritikar & Basu, 1987). Aerial parts of plant had been reported to contain lupeol, stigmasterol and butelin while the seeds of the plant contain mainly fatty acids (Quasim & Dutta, 1967).

Hygrophila quadrivalvis (Buch.-Ham.) Nees

Classification: According to Bentham and Hooker’s scheme of classification the plant is classified as follows:

Class    - Dicotyledonae
Order    - Lamiales
Family   - Acanthaceae
Genus    - Hygrophila
Species  - quadrivalvis

H. quadrivalvis (Buch.-Ham.) Nees syn H. obovata Wight, H. ringens (L.) R.Br. ex Steud., H. erecta (Burm. F.) Hochr., belongs to family Acanthaceae. H. quadrivalvis is known by a different name in different country viz. Keremak, Chukal, Maman babi (Malaysia), Binakag, Kangon-Kangon, Mamitik (Philippin) Toiting, Sam Sam (Thiland) Erect hygrophila, unarmed hygrophila (India). Hygrophila commonly known as the temple plants or Hygros is a genus of flowering plants in the family Acanthaceae. There are about 125 species, of which about 40 are aquatic.

Hygrophila is a typical hydrophyte genus of the Acanthaceae in India it is represented by seven species which grow in marshy areas. H. quadrivalvis (Buch.–Ham.) Nees is a rare species of this genus. It is restricted to a very small area near the source of the Nag River in Nagpur. It is an erect, stout, hairy annual herb which grows to a height of about two and half feet. The stem of this species is quadrangular in outline and often red in color. It is profusely hairy, especially in the younger parts. It is erector slightly decumbent near the base where it roots at the nodes.

Acanthaceae has found to be the source of various secondary metabolites like sterols, alkaloids, flavanoids, lupeol in plant (Jayapaul et al, 2005; Nezbedova et al, 1999; Shailajan & Singh, 2008). Antioxidant (Adesegun et al, 2007; Swadago et al, 2006), anti-inflammatory, antimicrobial (Grimes et al, 1996), diuretic, purgative, antiabortifacient properties of plant of Acanthaceae (Burkill, 1985). Acanthaceae family plants also have been used to treat cough, skin disease, eye infection, pneumonia, chronic asthma and ulcers (Jeruto et al, 2008), anti-inflammatory (Azimvand, 2012), antibacterial (Raj et al, 2013).