Chapter 5

Ethnic Use, Phytochemistry, and Pharmacology of *Cyperus rotundus*: A Medicinal Plant

Mohammed Rahmatullah  
*University of Development Alternative, Bangladesh*

Khoshnur Jannat  
*University of Development Alternative, Bangladesh*

Gerald R. Reeck  
*Kansas State University, USA*

Rownak Jahan  
*University of Development Alternative, Bangladesh*

Taufiq Rahman  
*University of Cambridge, UK*

Nasrin A. Shova  
*University of Development Alternative, Bangladesh*

Maidul Islam  
*University of Development Alternative, Bangladesh*

**ABSTRACT**

*Cyperus rotundus* (nut grass in English) is a perennial erect sedge plant and is distributed in over 90 countries of the world, where it has been mostly classified as a highly invasive weed. Despite this classification, the plant has been considered from traditional times to be medicinally important. The traditional uses of the plant in various countries include uses against various gastrointestinal tract disorders, skin...
INTRODUCTION

Cyperus rotundus L. is a perennial herbaceous plant belonging to the Cyperaceae family. It has an extensive network of rhizomes, tubers, bulbs and roots through which it can propagate easily, which has made it a very invasive plant and as such been classified as an invasive weed in the more than 90 countries that the plant is now found. The plant is believed to have originated from India, where its Sanskrit name as in Ayurveda is ‘nagarmotha’ (Bajpay, Nainwal, Singh & Tewari, 2018). The plant is found at present in various countries of Asia, Africa, Europe, North America, South America, and the Pacific Islands. Being present in so many countries, the plant has numerous names in the local vernacular. Some of the vernacular names given in The Global Invasive Species Database (GISD) [http://www.iucngisd.org/gisd/species.php?sc=1448] are tiririca-vermelha (Portuguese, Brazil), oniani lau (Maori, Cook Islands), vuthesa (Fijian), souchet à tubercules (French), zigolo infestante (Italian), soro ni kabani (Fijian), pakopako (Tongan, Tonga), coco grass (English), mauku’oni (Maori, Cook Islands), mothe (English, Nepal), chufa (Spanish), mumuta (Samoan), oniani tita (Maori, Cook Islands), ya khon mu (Thai), vucesa (Fijian), juncia (Spanish), tiririca (Portuguese, Brazil), sur-sür (Pampangan), capim-alho (Portuguese, Brazil), tutoneon (Marshallese), mala-apulid (Pampangan), alho-bravo (Portuguese, Brazil), castanuela (Spanish), brown nut sedge (English), almendra de tierra (Spanish), Rundes Zypergras (German), xiang fu zi (Chinese), mutha (Tagalog), coquito (Spanish), coquillo purpura (Spanish), ya haeo mu (Thai, Central Thailand), coquillo (Spanish), tamanengi (Palauan), coco (Spanish), purple nut sedge (English), pakopako (Tagalog), herbe à oignons (French), and juncia real (Spanish). In Bangladesh, the plant is known as ‘mutha’ or ‘mutha ghas’.

The plant also has a number of synonyms. Some of the synonyms according to the Plant List [http://www.thepartlist.org/tp1.1/rec/238342] are Chlorocyperus rotundus (L.) Palla, Chlorocyperus salaamensis Palla, Cyperus agrestis Willd. ex Spreng. & Link, Cyperus arabicus Ehrenb. ex Boeckeler, Cyperus bicolor Vahl, Cyperus biflorus C.B.Clarke, Cyperus bulbosostoloniferus Miq., and Cyperus comosus Sm. The taxonomic hierarchy of the plant is given below.

Kingdom: Plantae
SubKingdom: Viridiplantae
Division: Tracheophyta
Subdivision: Spermatophytina
Class: Magnoliopsida