

Wetland medicines

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People have used wetland animals and plants for medicinal purposes for thousands of years. Medicinal leeches, *Hirundo medicinalis*, for example, have been used in treating humans for centuries, and are still used today, for abscesses, painful joints, glaucoma, and myasthenia, and for venous diseases and thrombosis. There are many other animal examples, such as turtles and other reptiles that have long been used for medicine in China.

Records of medicinal plant uses date from around 4,000 B.C. Today, on a global scale, we use between 50,000 and 70,000 species of higher plants medicinally as well as other plant groups such as algae (including seaweeds). The plants, their leaves, flowers, roots, etc., or chemical extracts from them, are used in three main 'forms' of medicine – traditional medicine, alternative medicine (including, for example, homeopathy and ayurveda), and modern western medicine.

The importance of plants for human health is evidenced by the estimated 70-80% of people worldwide who rely chiefly on traditional, largely herbal, medicine to meet their primary healthcare needs, and the millions of people who gain income

from the wild harvest or cultivation of plants or from their trade or processing for medicinal purposes. And while many in the developing world are dependent upon such medicines, there is a large, growing demand for them in the developed world as well. Some examples:

- White willow, *Salix alba*, a riverine plant, is the original source of salicylic acid, the precursor of aspirin, and is also used in skin care products.
- The bark of the red mangrove (*Rhizophora mangle*), found in coastal wetlands throughout the tropics, has a variety of reported uses in local remedies.
- Certain species of sedge (*Cyperus spp.*), widely distributed in tropical and temperate wetlands, are included in some traditional remedies for fever in Europe and Asia.
- Bogbean (*Menyanthes trifoliata*), a wetland species occurring at high latitudes in bogs and shallow water, is used traditionally for digestive ailments and is a commercially approved treatment in Germany for dyspeptic discomfort and loss of appetite.
- Purple loosestrife (*Lythrum salicaria*), a semi-aquatic herbaceous plant, is

a popular European folk remedy for diarrhea and dysentery.

- Sundews (*Drosera spp.*), insectivorous herbs found in acidic bogs, have proved useful in homeopathic and pharmaceutical treatments for bronchial complaints.
- Labrador tea (*Ledum palustre*), a widespread bog bush, is used against many illnesses – and also as a mosquito repellent.
- Several seaweeds are undergoing extensive testing since extracts from various species have shown indications of activity against such diseases as human immunodeficiency virus (HIV), polio, cancer, and herpes simplex.

Sadly, a comprehensive global inventory of wetland medicinal species does not yet exist, but a recent initiative by IUCN's Medicinal Plant Specialist Group may well supply this much-needed information. With an estimated 70-80% of medicinal plant species collected from the wild (in many cases unsustainably), such an inventory would be invaluable in the conservation of these species and the wetlands that support them.

