

POPLARS AND WILLOWS

Trees for Society and the Environment

Edited by
J.G. Isebrands and J. Richardson



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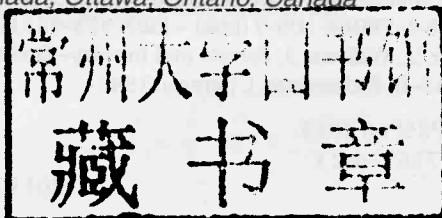
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Poplars and Willows

Trees for Society and the Environment

J. Richardson





This volume is respectfully dedicated to the memory of Victor Steenackers. Vic, as he was known to his friends, was born in Weelde, Belgium, in 1928. His life was devoted to his family – his wife, Joanna, his 9 children and his 23 grandchildren. His career was devoted to the study and improvement of poplars, particularly through poplar breeding. As Director of the Poplar Research Institute at Geraardsbergen, Belgium, he pursued a lifelong scientific interest in poplars and encouraged others to share his passion. As a member of the Executive Committee of the International Poplar Commission for many years, and as its Chair from 1988 to 2000, he was a much-loved mentor and powerful advocate, spreading scientific knowledge of poplars and willows worldwide throughout the many member countries of the IPC. This book is in many ways part of the legacy of Vic Steenackers, many of its contributing authors having learned from his guidance and dedication. Vic Steenackers passed away at Aalst, Belgium, in August 2010, but his work is carried on by others, including members of his family.



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J. Richardson and J.G. Isebrands
16 July 2012

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1 Introduction

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Poplars and willows, the members of the *Salicaceae* family, are trees and shrubs with many valuable characteristics which have led to multiple beneficial uses for society and the environment since the dawn of history. The accumulated global knowledge and information on poplars and willows could fill many volumes. The characteristics which have made them so attractive and useful include fast growth, ease of propagation, propensity to hybridize, pleasing appearance and many uses. As well as providing wood, fibre, fuelwood and other forest products, poplars and willows benefit society in the rehabilitation of degraded land, restoration of forest landscapes and mitigation of climate change. All of these benefits support rural livelihoods and contribute to sustainable development, particularly in developing countries.

Recent evidence suggests that people living along the Euphrates River in the Middle East more than 10,000 years ago used poplars and willows for cooking and heating, and for the construction of their dwellings (Stettler, 2009). Greek gods are said to have woven wreaths of aspen leaves (*Populus tremula*), and Hercules lit a sacrificial fire of aspen wood when he returned from Hades. In 8000 BC, Native American Ojibwe also used poplars and willows for cooking, heating, shelter and medicines (a precursor of the

modern-day drug, aspirin) (Hageneder, 2005). Moreover, Gordon (2001) reported that the Third Dynasty of Ur in Mesopotamia between the Tigris and the Euphrates (modern-day Iraq) used poplars and willows for baskets, boats, construction, hoes, ploughs, tool handles, cooking, wattles and animal fodder in 2100–2000 BC (Fig. 1.1). Archaeological studies have shown that poplar was used for cooking, heating and construction during the period between 700 and 200 BC in Youmulakekum, China, just prior to the Han Dynasty (J. Zhang, 2008, personal communication). In 600 AD, the Chinese used poplars for amenity plantings along Xian roadsides and streets, as well as for fuel. In addition, the Hohokam natives used cottonwood and willows for soil stabilization and along irrigation canals in 800 AD in Mexico (now Arizona, USA) (Logan, 2002).

Likewise, willows provided ancient civilizations with many necessities such as furniture, snowshoes, arrow shafts, fish traps, nets and rope, as well as shelter, fences and medicinal remedies (Fig. 1.2). It has been suggested that willow baskets and containers were probably among the first articles manufactured by humans. These articles were used for gathering and carrying food, and for storage (Kuzovkina *et al.*, 2008) (see Fig. 10.13c; Chapter 10, this volume).

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