Tabebuia donnell-smithii

Rose

Bignoniaceae

LOCAL NAMES
English (primavera,gold tree)

BOTANIC DESCRIPTION
Tabebuia donnell-smithii is a large tree, main trunk almost always of good form, growing straight for 7-13 m, even when open grown; buttresses and fluting often occur in large trees; branchlets terete to subtetragonal.

Leaves simple, 1-foliolate or digitately 3-7-foliolate; leaflets mostly with simple trichomes.

Flowers bright yellow, 2-2.5 cm wide, in clusters at branch ends. Calyx thin, membranous, of the same texture as the corolla; inflorescence with the central rachis well developed. Anthers glabrous, the thecae straight, divaricate, included or sub-exserted. Ovary linear-oblong, often more or less lepidote; ovules 2-multiseriate in each locule; disk annular-pulvinate to short-cupular.

Pods 25-50 cm long, straight, pendulous, brown, dehiscent.

Seeds thin, flat, surrounded by a papery wing.

BIOLOGY
T. donnell-smithii flowers during the dry season when the tree is leafless and can last for almost 2 months. Pods mature 4 months after flowering. Seeds are wind dispersed.

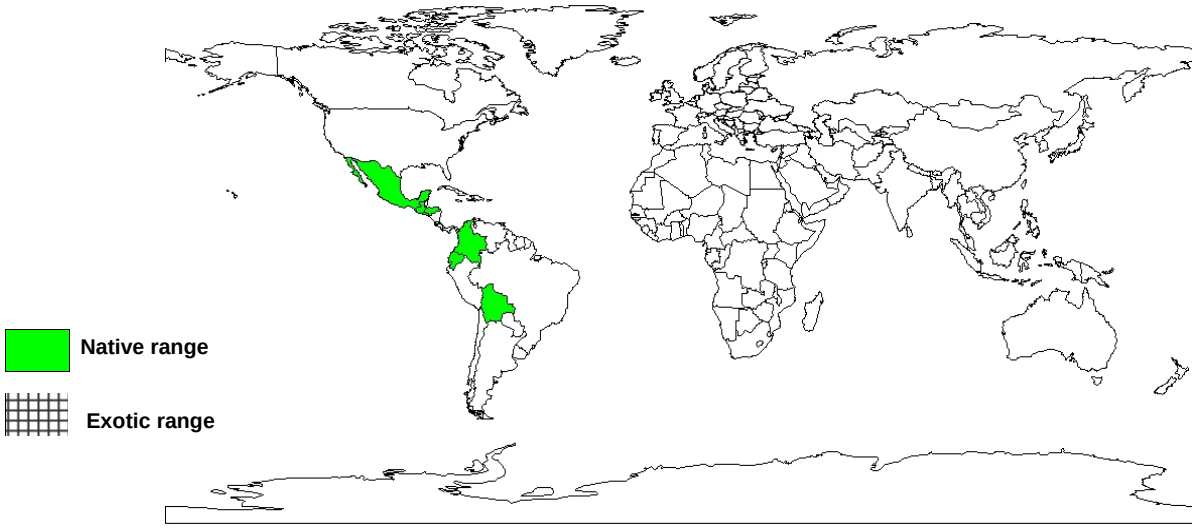
Habit at Kaunakakai, Molokai, Hawaii. (Forest & Kim Starr (USGS))

ECOLOGY
T. donnell-smithii grows on alluvial terraces and lower colluvial slopes in forests dominated by Terminalia oblonga or Virola guatemalensis and in the Pacific semi deciduous forests. The species is a pioneer and habitually seeds in abandoned farmland, disturbed areas and roadsides in its native range. Also found in rather seasonally moist, non-flooded lowland forests.

BIOPHYSICAL LIMITS
Altitude: 0-1 000 m
Mean annual temperature: 23-28 deg C
Mean annual rainfall: 1 000-3 000 mm
Soil type: The tree is found on alluvial soils and soils derived from volcanic ash, metamorphic rock and limestone with pH from 5.5 to 7.5.

DOCUMENTED SPECIES DISTRIBUTION

Native: Bolivia, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico
Exotic: Costa Rica, Puerto Rico



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Fuel: T. donnell-smithi is used as fuelwood.

Timber: Heartwood pale blonde to pale brown sometimes with highly attractive greyish-black banding; sapwood not distinct; low to medium lustre; texture fine to medium; grain often interlocked and ribbon-striped; seasons and machines well, with occasional tearing when planing ribbon-striped quarter-sawn faces, specific gravity 0.52. Used for furniture, cabinetwork, veneer, flooring. Resistant to white- and brown-rot fungi and weathers well.

SERVICES
Erosion control: T. donnell-smithi develops large lateral roots that hold soils.

Shade or shelter: It provides shade.

Reclamation: The seeding characteristic can be exploited for reclamation of disturbed sites.

Ornamental: T. donnell-smithi is grown as an ornamental on account of its impressive yellow floral display.

TREE MANAGEMENT
Fairly wide spacing (9 x 4.5 m) is required due to a full-light requirement and rapid growth. Young trees coppice until they reach pole size. A saw log rotation of 30 years has been suggested. Pruning is recommended to attain straight form. Weeding is recommended for the first 2 years.

GERMPLASM MANAGEMENT
There are about 170 000 seeds/kg. Seeds can be stored in airtight containers at ambient temperature for up to 1 year when dried to 5-6% moisture content.

FURTHER READNG

Francis JK. 1989. Tabebuia donnell-smithii Rose. SO-ITF-SM-25. Rio Piedras, Institute of Tropical Forestry.

http://mano.icsd.hawaii.gov/hfciforest/non-native/gold.html

http://www.mobot.org/MOBOT/Research/ven-guayana/bignoniaceae/tabebuia.html

SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. Agroforestree Database:a tree reference and selection guide version 4.0 (http://www.worldagroforestry.org/af/treedb/)