

# *Anacardium excelsum* (Bertero & Balb. ex Kunth) Skeels

L. A. FOURNIER

Escuela de Biología, Universidad de Costa Rica

## ANACARDIACEAE (CASHEW FAMILY)

*Anacardium rhinocarpus* D.C., *Rhinocarpus excelsa* Bert. & Balb.

Espavé, espavé acanju, espavel, espavel amarillo, espavel rosado, rabito wild cashew

*Anacardium excelsum* is very common in both the Atlantic and Pacific watersheds, from Guatemala to northern South America, including the Guyanas. The tree often dominates on the flood plains and in gallery forests (Zamora 1993).

*Anacardium excelsum* grows at a medium rate (González 1980) to 45 m in height and 3 m d.b.h. This large tree has a straight trunk, a rounded and dense crown, and brown-gray bark that is scaly or smooth and shows leaf scars. *Anacardium excelsum* leaves are simple, alternative, relatively large, without stipules, obovate-oblong in outline, and rounded at the apex. They are 15 to 35 cm long, 5 to 15 cm wide, glabrous, and coriaceous in texture. Secondary veins are prominent in the lower surface, and usually located at the end of the branches. Many of the trees drop their leaves for a short period of time during late November and December and green flushes of new foliage appear in early January (Allen 1956). *Anacardium excelsum* grows in a wide range of soils and climatic conditions. It grows from the lowlands of both coasts up to 900 m, and well-developed trees have been found as high as 1200 m.

The wood of this species is moderately light with a specific gravity of 0.38. Carpio (1992) reported that in air-dry conditions the sapwood is pink and the heartwood varies from dark brown to red-brown. The wood has a fine grain, a rough texture, and a persistent leather-like odor. The wood dries well without major defects, works easily, and is naturally durable. The wood easily accepts preservatives that protect against termites and fungi. The wood is used in general construction and carpentry and for wood tools, furniture, veneer, trays, boxes, and concrete forms. However, sawmills complain that the wood tends to saw woolly and is hard to finish smoothly (Allen 1956). The raw nuts are toxic but are reportedly edible when roasted, and the macerated bark is sometimes used in Panama as bait for catching fish (Allen 1956).

After the flushes of new foliage in January, small white

flowers appear through April in pale green or white, large, terminal panicles (Jiménez and others 1996). As the flowers age, they turn pink and develop a strong, clove-like fragrance, which permeates the forest (Allen 1956). The fruit is a kidney-shaped drupe, 2.5 to 3.5 cm long, 1 to 2 cm wide, which matures from March through May. The fruits are usually fully mature 3 months after flowering (personal observation). Once the fruits drop to the ground the seeds germinate almost immediately, provided the soil remains at a good moisture level. The fleshy part of the fruits of this species is carried by bats to their feeding sites where they drop the entire seed (Janzen 1991). Parrots that feed on mature fruits similarly disperse the seed (personal observation).

The fruits gathered from the ground contain just one seed each which cannot be separated from the pericarp. Although the seeds of this species have a very low viability, some tests reveal that viability can be extended to at least 60 days by storing seeds in plastic bags in a refrigerator at about 6 °C (Trujillo 1996a).

Pretreating seeds in boiling water for 10 minutes or immersing in water at room temperature for 12 hours enhances germination. Germination apparently occurs within 20 days (personal observation). Seedlings, shade tolerant during early stages of development, need more light for survival and further growth in later stages. Due to insect predation, fungal diseases, and poor environmental conditions, seedling survival is very low.

## ADDITIONAL INFORMATION

Little and Wadsworth (1964) indicate that the flowers of *A. occidentale* L. "Cashew," a species closely related to *A. excelsa* (Jack) Jacobs, are attractive to bees; therefore, it is possible the same is true for this species. The small, inconspicuous flowers

of *A. excelsum* are a type common to a great many tropical trees of almost unknown reproductive biology (Janzen 1991). The tree produces a resinous sap that may cause allergic reactions in some people.

