7. *ACOKANTHERA SCHIMPERI* Schweinf. (APOCYNACEAE) — Arrow Poison Tree

Although the fruits are edible at the right time of the year, the rest of the plant is quite toxic. Fruits are made into jams.[17] The wood, once used in African arrow poisons, is now a major commercial source of ouabain, which has digitalis-like activity. Sometimes grown as an ornamental shade tree in East Africa.[17]

Several compounds found in this and/or related species of Acokanthera are acobioside A, acolongifloroside A, actospectoside A, acovenoside A, and B, and opposide, all active in the KB tumor system.[10]

Seed contains 0.3 to 0.74% acovenoside A, 0.3 to 0.5% ouabain, acoschimperoside N and O, and acolongifloroside G, H, and K. The wood contains 0.2% ouabain, acoschimperoxide N, P, S, T, and U, and acolongifloroside but no acovenoside A.[33] The seeds contain 1.7% acovenoside A, 0.1% ouabain, .0037% acolongifloroside G, 0.98% acolongifloroside H, and .024% acolongifloroside K acetate.[17]

Toxicity — Ingestion of dried leaves in excess of 15 g may be seriously toxic to humans. Inhalation of powdered plant material may cause fatalities. The poison is also absorbed through the skin. A small quantity of extract placed in a sheep's ear will bring death in two hours. The tree is a well-known hazard to grazing animals. Signs of cattle poisoning include rapid, shallow respiration, diarrhea, muscular spasms, grinding of teeth and salivation; death usually occurs quickly from heart failure.[17] The lethal dose of ouabain for an adult human is ca 2 mg, while African arrows may have borne overwhelming doses of 1000 to 5000 mg.[3] Africans once used the plants for homicide by smearing the poison onto prickly fruits along a path likely to be used by the intended victim. Symptoms of Acokanthera and Strophanthus poisonings come on rapidly: collapse with slow pulse and slow respiration, convulsions and death with stoppage of the heart in systole.[3] African medicine men smear their skin with ashes or juice of *Coleus* spp. to protect the skin from dermal absorption.[3]