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SOME DISTINGUISHING FEATURES OF A FEW STROPHANTHUS SPECIES

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ABSTRACT: *Strophanthus (Family apocynaceae) contains glycosides which are comparable with cardiac glycosides of Digitalis but has less harmful physiological actions, S. kombe Oliver is officially used but some other species of this genus also contain glycosides and resemble the official one and thus often used as adulterants, This study shows distinguishing features of some strophanthus species.*

Strophanthus DC, belongs to the family Apocynaceae, is a native of tropical Africa and has about 30 species. Official Strophanthus seeds are obtained from S. kombe Oliver and one of its active constituents strophanthin is used as a cardiac stimulant and so these seeds are comparable to and recommended as a therapeutic substitute of Digitalis. But not only S. kombe but other species of strophanthus also contain strophanthin and some of them are used in other systems of medicine viz S. hispidus DC., S gratus Frenched and S.sarmentosus DC.

Seeds derived from Strophanthus have long been used by the natives of East and West Africa for the preparation of arrow poison. However in 1885 Fraser in England isolated strophanthin and recommended the use of the seeds in medicines (Youngken, 1950; Wallis, 1946).

Therapeutically strophanthus, due to the presence of strophanthin, causes rise of blood pressure, it is an efficient diuretic and powerful cardiac stimulant, It causes less gastro-intestinal irritation than Digitalis and does not have any cumulative effect, therefore in some cases is used as a substitute of Digitalis in cardiac emergencies. A disadvantage of oral therapy with strophanthus is the fact that its glycosides break down readily in the digestive tract than the Digitalis glycosides.
G-strophanthin obtained from S. gratus maybe used as biological standard for the assay of cardiac glycodsides. G-strophanthin obtained from S. gratus maybe used as biological standard for the assay of cardiac glycodsides ± S.sarmen tosus contains a glycoside sarmentocymarine (aglycone sarmentogenin) is a very suitable material for clinical conversion to cortisone (Ramstad, 1959).

In the present communication distinguishing characters of seven strophanthus species have been described in table 1 which provide a quick and instant method of differentiating them.

TABLE 1 DISTINGUISHING FEATURES OF SEVEN STROPHANTHUS SPECIES

Name	Natural habitat in Tropical Africa	Size, shape and Colour of seed	Seed surface	Presence of cal cium oxalate	Colour rea with sulfu
1. S. kombe Oliver (Green Strophanthus)	Eastern tropical Africa, near Nyanza and Tanganyika the shire river	Commercial awnless seeds 12-20 mm long, 3-5 mm broad and 2mm thick; lanceolate or linear lanceolate; grayish green to fawn in colour; 100 seeds weight 3-4g.	Testa is prolonged at the apex into a slender thread like awn which terminates in a plumule of silky hairs, testa bears appreassed trichomes directed towards the apex and arranged in close longitudinal lines, these trichomes impart silky sheen to the seeds	Seed coat rarely contains cluster or single crystals	Given gree colour
2. S hispidus DC. (Brown strophanthus)	Senegambia, sierra leone and lower congo territory	Smaller than S. kombe but similar in shape; brown in colour.	Almost glabrous (Fewer hairs) because trichomes are easily rubbed off by mutual friction of seeds	Neither seed coat nor em colour bryo contains crystal	Gives gree colour
3. S. gratus Franchet	Sierra Leone, Cameroon, Gabbon	Spindle shaped, compressed, edges are acute and almost winged; brown in colour; 100 seeds weight about 3.25g.	Glabrous to naked eye but under microscope short warty hairs visible.	Neither seed coat nor em colour broyo contain crystals	Gives red colour
4. S.sarm entosus DC.	Senegambia, erra leone, the lower Congo	Seeds resemble those of S. kombe; lance ovoid in shape, colour varies from reddish brown to greenish, apex shows a well marked twist	Yellowish hairs easily break off	Seed coat contains, isolated, prisms and cluster crystals, while cotyle-dons contains abundant cluster crystals	Gives pale rose colou
5. S.courm ontii Sacleux	Zangiber Mozambique	Seeds usually grayish green but sometimes have a brownish tinge and often closely resemble S. Kombe from which they may be	Golden silky appear ance, trichomes abundant	Seed coat only contains crystals prisms	Give red t violet colo

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5. S.courm ontii Sacleux	Zangiber Mozambique	Seeds usually grayish green but sometimes have a brownish tinge and often closely resemble S. Kombe from which they may be disting ushed by their rather smaller size	Golden silky appear ance, trichomes abundant	Seed coat only contains crystals prisms	Give red t violet colo

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