

THREE SPECIES OF STRYCHNOS WITH 1- SEEDED FRUITS.

by

I. C. Verdoorn.

When naming specimens of *Strychnos* with 1-seeded fruits (rarely 2-seeded) sent in by Mr. W. E. Marriott of Durban, a few interesting points came to light. As a consequence it is now possible to define the three species concerned more completely. The specimens were from trees marked Nos. I, II and IV. At first only fruiting material was sent and flowers of Nos. I and II were received later when they developed in November. Unfortunately the flowers of No. IV were not obtained.

In specimen No. I (Fig. 1) the leaves are up to 6 cm. long and 2.5–3 cm. wide, more or less elliptic; buds short, ovate; perianth-tube short, sparsely hairy in the throat; lobes quite glabrous; fruit dark green, oblong, equal-sided at the base; seed shaped like a coffee-bean being deeply channelled down one side and rounded on the other.

Specimen No. II (Fig. 2) has leaves up to 4.2 cm. long and 2.5 cm. broad, more or less obovate; buds oblong; perianth-tube as long as the lobes; lobes distinctly bearded; fruit light green to yellow and reddish, oblong or globose oblique at the base; seed oblong globose, slightly compressed, not channelled down one side.

Specimen No. IV (Fig. 3) has leaves 4–6 cm. long and 2–3.5 cm. broad, ovate, long acuminate, folding along the midrib; upper surface shiny; fruit globose, distinctly stipitate; seed globose, slightly compressed (flowers not seen).

This plant with the stipitate fruit and the long-acuminate, folded leaves did not agree with the description of any known South African species.

With regard to No. I, as far as the leaves and flowers were concerned it appeared to be *S. Henningsii* as described in Fl. Cap. Vol. 4 pt. 1, 1051 (1909). The seed, however, is here described as "globose or ovoid" whereas the coffee-bean-like seed of No. I is very distinctive. To elucidate this point the specimens in all South African herbaria were examined. This showed that leaves, flowers and fruits characteristic of No. I are always correlated with the coffee-bean shaped seed. Such specimens were usually identified as *S. Henningsii*. This species was originally described on leaf characters only and the type specimen is housed in the Berlin Herbarium, Dahlem. Searching other botanical literature for mention of the species it was found in Wood's *Natal Plants* and Sim's *Forests and Forest Flora of the Cape Colony*. In the former the description and drawing of leaves, flowers

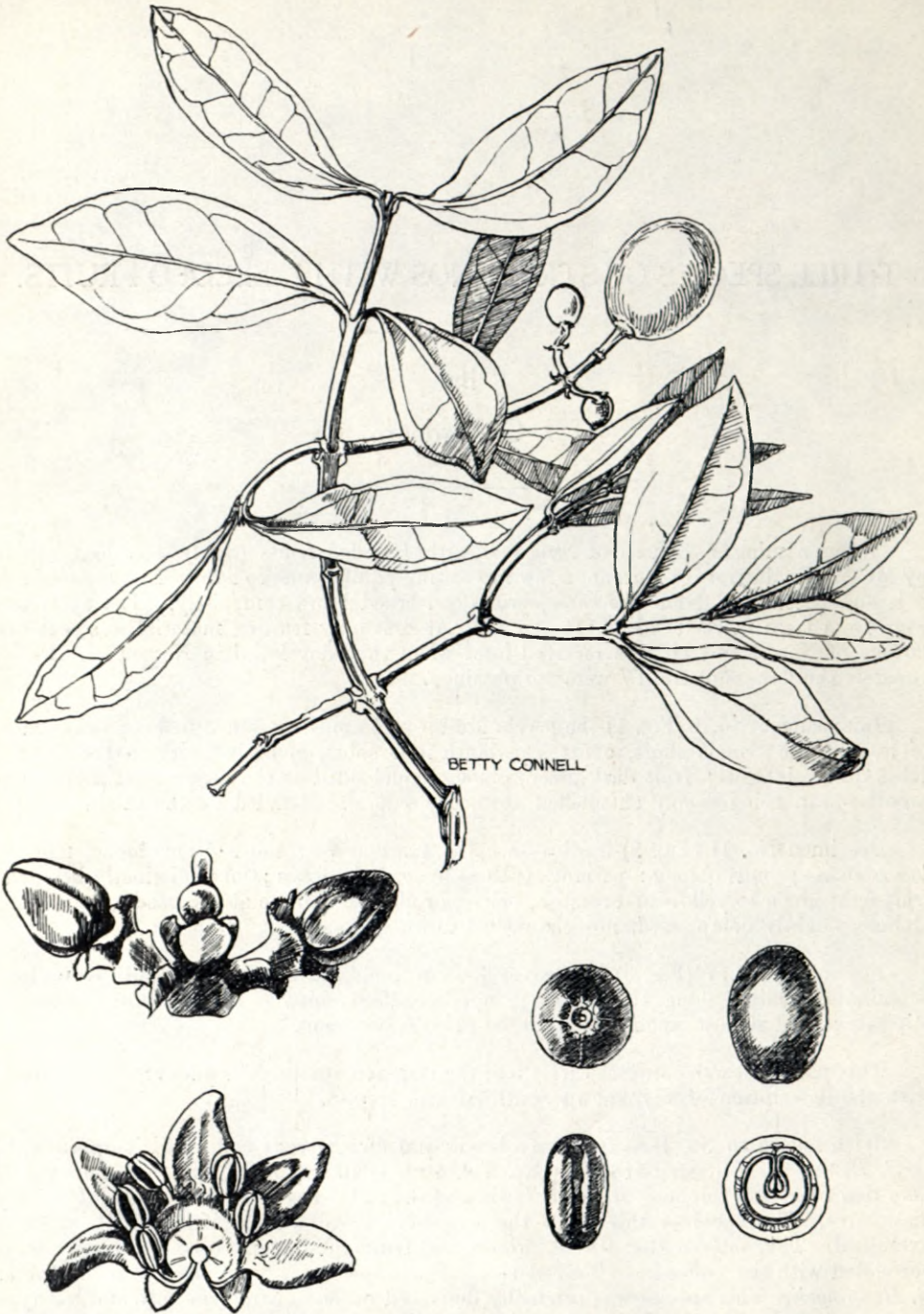


Fig. 1.—*Strychnos Henningsii* Gilg (Marriott I).



Fig. 2.—*Strychnos decussata* (Pappe) Gilg (= *S. Atherstonei* Harv.) (Marriott II).



BETTY CONNELL.

Fig. 3.—*Strychnos micans* Sp. Moore (Marriott IV).

and fruits are those associated with the coffee-bean seed. The seed itself is not figured but is described as "globose" and a note added that only 1 fruit had been seen. In the latter publication for the first time the characteristic seed was clearly figured and described. The figure agrees also in the other characters associated above with such seeds. From this it was concluded that the description of the seed of *S. Henningsii* in the *Flora Capensis* was inaccurate and that the error was repeated by J. Medley-Wood.

The material of No. I was later taken to the Royal Botanic Gardens, Kew and there, through the courtesy of the Director and the Director of the Botanisches Museum, Berlin-Dahlem, the type material of *S. Henningsii* Gilg (2 leafy specimens collected at Durban) was borrowed. Dr. H. G. Schweickerdt, Botanist for South Africa at Kew, examined these types and reported that the leaves had the general characteristics of those usually placed in *S. Henningsii* (and which had been proved to be correlated with the coffee-bean shaped seed) but were on the whole larger. He matched one or two leaves on the Marriott specimens with those of *Beyrich* I (i.e. one of Gilg's syntypes) and on Wood 6672, which is a duplicate of the specimen Medley-Wood described and figured in *Natal Plants*, Dr. Schweickerdt wrote "Leaves marked *a*, *b* and *c* are an excellent match of those on *Beyrich* I". He noted too that on *Bachmann* 1745 (the other syntype) the collector gives a native name "Umnonono" for the tree and it is the same as mentioned by Medley-Wood. The leaves being on the whole larger can probably be explained by their having been collected when the trees were not in flower or fruit; such leaves often being larger than those found on flowering or fruiting branches. Thus Marriott I can now be named *Strychnos Henningsii* Gilg with some degree of certainty.

Regarding Marriott No. II, according to floral characters given in the *Flora Capensis* this is *S. Atherstonei* Harv. It agrees well with the type description and figure in Harvey's *Thesaurus Capensis*. The seed as mentioned above is oblong-globose, slightly compressed and with no sign of the longitudinal channel, only a slight indentation in the centre of one of the slightly flattened surfaces (the mark of the hilum or attachment). The drawing of the seed in the type plate is accurate and the description "peltate" is used in the botanical sense meaning "attached by the surface". Through the courtesy of Prof. H. H. Dixon of Trinity College, Dublin, I was enabled to examine photographs of the material which Harvey had worked on and these supported the above identification. In studying Harvey's notes, however, it is evident that, according to the international rules of nomenclature, the specific epithet must be changed. Prior to Harvey's work Pappé described a plant *Atherstonea decussata*. Harvey, when describing *Strychnos Atherstonei* cites this name in the synonymy of his species saying that he could not find any tangible character on which to separate the plant generically from *Strychnos*. There is no doubt that Pappé's plant is the same species as Harvey's and since the first valid specific epithet must be used it is necessary to employ the combination *Strychnos decussata* (Pappé) Gilg, published in *Engl. Bot. Jahrb.* 28, 121 (1901). Marriott No. II therefore is named as such.

Dealing now with Marriott No. IV which, as mentioned, does not agree with any description of a South African species, it was matched in Pretoria with fruiting specimens collected in the Hlatikulu Forest (*Boocock in National Herbarium* 23199). Later it was matched at Kew with unnamed fruiting specimens from tropical Africa (*Swynnerton* 1071 from Chirinda Forest and *Dave* 531 from the Kibala Forest). These 4 specimens possessing stiped fruits also have similar leaves which are long-acuminate, shiny on the upper surface and have a tendency to fold along the mid-rib. A further search through the material of *Strychnos* at Kew brought to light a young flowering specimen (*Swynnerton* 125) which also has these characteristic leaves. It is the type of *Strychnos micans* Sp. Moore. The characters and the locality seem to point to its being conspecific with the other specimens mentioned. The description disclosed another character which supports this opinion. The flowers of *S. micans* are described as being 4-merous (most other species are 5-merous in this genus) and the remains of the calyx on all the fruits showed 4 distinct lobes. It seems

justified to assume, therefore, that Marriott IV is *Strychnos micans* Sp. Moore, and if this is so the distribution records of the species have been considerably amplified. The following table summarises the distinguishing characters of the three species investigated :—

STRYCHNOS HENNINGSII GILG**S. DECUSSATA (PAPPE) GILG****S. MICANS SP. MOORE**

(*S. Atherstonei* Harv.).

Fruit oblong-ovoid, not oblique at base, not stipitate; seeds oblong-ovoid, deeply grooved down one side; hilum midway in groove.

Fruit globose or ovoid, oblique at the base, not stipitate; seeds ovoid, slightly compressed; hilum in centre of slightly compressed surface.

Fruit globose, not oblique, stipitate; seeds globose, slightly compressed; hilum in centre of slightly compressed surface.

Leaves up to 6 cm. long and 2.5–3 cm. wide, elliptic, widest about the middle and gradually narrowing to the apex or somewhat acuminate; tertiary veins obvious on upper surface.

Leaves up to 4.2 cm. long and 2.5 cm. wide, obovate, widest above the middle, rounded at the apex or widely and bluntly acuminate; tertiary veins not obvious on upper surface.

Leaves up to 6 cm. long and 2–3.5 cm. wide, ovate, long acuminate, widest below the middle, long acuminate folding along the mid-rib; tertiary veins usually obvious.

Flowers 5-merous; corolla-tube glabrous or sparsely bearded in throat; lobes glabrous.

Flowers 5-merous, corolla-tube glabrous; lobes densely bearded within.

Flowers 4-merous, corolla-tube bearded in throat; lobes glabrous.