

minator as Solander could have referred any state of this pl. as a var. to *S. fruticosus*.

(c) Shrubby, per.

#### 4. *S. PINNATUS* Ait.

Altogether smooth sparingly branched, branches rather long and slender straggling straight naked even; l. in terminal tufts full or dark gr. above, glaucescent beneath, lanceolate acute or linear-lanceolate acuminate-caudate pectinately pinnate, pinnæ numerous distinct lanceolate or linear remotely pinnatifidly toothed or subentire; cyme terminal large ample many-fl. naked except a small pinnate l. at the axil of the main lower forks compound, branches straight rigid divaricate, fl. umbellate at their ends; ped. slender thickened upwards, naked or with a few minute scarious deciduous bractlets; scales of inv. close-pressed pale gr. darker upwards.—Ait. ! Hort. Kew. ed. 1. iii. 116; Pers. ii. 363; Buch! 194. no. 218; Spr. iii. 647; DC. ! vii. 188; WB. ii. 439 (excl. var.  $\beta$ . *Palmensis* t. 130). *S. hyoserifolius* v. *hyoseridifolius* Hornem. "Hort. Hafn. ii. 752;" Spr. iii. 647 (certissime sec. Schultz, in WB. ii. 441 dicentem, "Nomine *S. pinnati* cl. Hornem. semina plantæ suæ e Britannia habuisse").—Shr. per. Mad. reg. 3,  $\frac{c}{2}$ . Perpendicular rocks and cliffs high up in all the principal ravines; Rib. de S<sup>a</sup> Luzia, da Metade, de S. Jorge, da Boa Ventura, &c.; Caminho Central between the Primeira Vista and Pico Grande, and especially abundant descending thence into the Curral das Freiras. July, Aug.—A fine shr. 2–6 ft. high starting from the clefts of high bare walls of rock, with long naked flauntingly spreading or ascending woody greyish smooth and even branches about the thickness of the little finger, each with a terminal spreading rose or tuft of shining handsome foliage. L. 6–12 in. long or more, extremely variable both in general outline and in the breadth of the pinnæ, dark gr. above with a pale midrib, beneath slightly glaucous with darker reticulating veins; pinnæ 10–15 or more, regularly pectinate and becoming gradually shorter from the middle towards each end; those of the upper l. always narrower and more entire than in the lower; the terminal lobe mostly acuminate-caudate and entire. Cyme rising from the middle of the tufts of l. very large ample and many-fl. with a small pinnate l. at each of its lower main divisions, otherwise naked except a few inconspicuous scarious brown scale-like bractlets, one at each division; it extends from 1 to 3 or 4 ft. beyond the terminal leaf-tuft, and its branches are slender stiff pale gr. elegantly marked with darker gr. lines. Fl. large 1–2 in. in diam. bright golden-y.; upper half of tube of florets copiously glandular-hairy or pubescent; stigmas recurved. Heads erect, in all stages obovate or pear-

shaped, fleshy at the base, of a pale delicate gr.; outer scales of inv. ovato-lanceolate narrower and longer than in *S. ustulatus*, inner lanceolato-ligulate obtuse and obscurely ciliato-puberulous or erosulo-denticulate towards the tips. Ach. pale brown elliptic-oblong flattened truncate  $2-2\frac{3}{4}$  mill. long,  $\frac{3}{4}-1$  mill. broad in the middle, longitudinally ribbed, finely and elegantly reticulato-granulate with transverse striæ. Pappus w. extremely fine, a little longer than the ach., sessile.

Schultz in WB. ii. 441, makes 4 varr. or forms of the Mad. pl. from the shape of the pinnæ, &c. Having for many years observed the pl. on its native rocks, I can distinguish only the 2 following forms:—

*a. angustiloba*; pinnæ narrow linear-lanceolate acuminate sub-pinnatifidly toothed, the terminal lobe subelongato-caudate.—*S. pinnatus* Ait., Pers., Buch, Spr., DC. ! ll. cc.; form i. *Can-dolleana* and ii. *Webbiana* Schultz l. c.

*β. latiloba*; pinnæ broader oblong not acuminate sparingly toothed or subentire, the terminal lobe not produced.—*S. pinnatus* form iii. *Banksiana* and iv. *Hornemanniana* Schultz l. c.

In both these forms, which pass into each other through numberless gradations, the number of pinnæ and all other characters employed by Schultz have no sort of constancy, varying on different branches of the same pl.

The Canarian var. *β. Palmensis* WB. t. 130, with its much smaller fl., &c., requires further investigation. It looks like something very different from any form of the Mad. pl.

##### 5. *S. FRUTICOSUS* Linn. fil. *Serralha da Rocha*.

Smooth remotely branched, branches short thick erect rugged; l. uniform full gr. in terminal tufts oblongo-lanceolate sinuato-pinnatifid with broad few shallow rounded lobes or lyrate with the large terminal lobe elongato-triangular, the upper undivided repand-angulate or quite entire, all ciliato-denticulate; cyme terminal leafy-bracteate, fl. large umbellate in sets of 2 or 3-5 together at the ends of its branches on rather long erect ped. thickened and squarrosely leafy-bracteate at top; br. of ped. and at the forks linear elongate wavy spreading or reflexed and pendulous entire; outer scales of inv. linear-acuminate leafy squarrosely reflexed dark gr.—“Linn. fil. Suppl. 346; Hérit. Stip. Nov. 171, t. 81;” Pers. ii. 363 (not Jacquin). *S. squamosus* (misprint for *squarrosus*) Buch! 194. no. 219. *S. squarrosus* v. *fruticosus* a Sol. ! MSS. and BH. *S. squarrosus* Spr. iii. 647; DC. ! vii. 187.—Shr. per. Mad. reg. 3 and