

apex, the surface wrinkled and fuscous from adhering tissue; on one of the sides is a round umbilicus, to which the terminal cavity or pit will be found to point. *Embryo* basilar, the apex of the cotyledon reaching nearly to the lower part of the terminal cavity.

The Malacca plant will probably be found different from *Z. edulis*, when sufficient attention has been paid to the female inflorescence, the shape and surface of the fruit, and structure of the seed.*

Supposing that there be only one species, three varieties appear to be presented.

Var. *A.* Spadices very long and attenuated almost into a flagellus, lower spathes large, distichously imbricate. Branches of the spadix a good deal divided, their spikes or aments alternate, approximated but not confluent; their spathes about equal in length to their aments.

B. Spikes (male) distant, half enclosed in ventricose spathes, equalling them in length.

Koombar of Penang.

C. Spadices (male) a good deal elongated without being attenuate, much branched, branches sometimes distant, sometimes crowded, occasionally assuming the form of var. *B.*; sometimes proliferous at the apex. The lower spathes of moderate size, spikes or aments twice as short as their spathes.

Z. Wallichiana of the H. C. Botanic Garden.

2. (2) *Z. affinis*, (*n. sp.*) petiolis a medio supra pinniferis, spinis longis gracilibus albis, pinnis interrupte fasciculatis spathulato-lanceolatis acuminatis apicem versus et margine setigeris, spadice masculo inferne ramoso spathis distichis imbricato, ramis abbreviatis quam spathæ brevioribus, spicis

* It is doubtful whether the direction of the pit of the apex does not depend upon the shape of the seed, which depends again on the number developed.

ramorum congestis distichis, fructibus ovatis mammillato-cuspidatis (glabris.)

HAB.—Ching near Malacca, Emanuel Fernandez.* *Salak Batool*,† of the Malays of Malacca.

DESCR. †—The *leaves* are altogether smaller, and the stalk slenderer than in any of the other species: their length is twelve, thirteen feet: the pinnules being confined to the upper half or thereabout of the stalk. *Spines* very long, comparatively slender, and in irregular, incompletely transverse sets, the longest deflexed, the others spreading in various directions; those of the pinniferous portion solitary, and somewhat deflexed. *Pinnæ* interrupted, subascending, otherwise with the ordinary direction, those of each fasciculus rather crowded, often almost opposite, outline decidedly falcate, spathulato-lanceolate, acuminate,§ scarcely cirrhose, acumina with few setæ, upper surface with three stout prominent veins; under with about twelve, all much less prominent.

The male *Spadix* appears to be about one and half feet in length, it is imbricated with the usual scariose, mealy, variously split and lacerated spathes: the general form being subulate. The lower axes of inflorescence are branched, those above the middle simple. *Spikes* generally under an inch in length, (those of the branches crowded together) with about twelve rows of small flowers disposed in pairs, their lower halves immersed in the tomentum of the spikes. *Bractes* roundish-cordate, membranous, distinct, comparatively small. *Flowers* two to each bracte, both male, separated from each other by a membranous vertical septum, (part of the bracteoles) penicillate at the apex. A narrower, conduplicate, equally penicellate one on the outer side of each flower.||

* An intelligent Portuguese of Malacca, now in my employ as collector.

† The meaning of which is true Salak.

‡ Specimens, two entire leaves, a male spadix, part of a female spadix in flower and two fruits.

§ The uppermost are not uncommonly incised at the apex, when both margins bear the setæ. This is also the case with *Z. edulis*.

|| The bracteoles in this also appear to be originally united into a bilocular cupula, in one of which a flower exists, the arrangement described appears to be the result of pressure and distention.

Calyx tripartite nearly to the middle, segments oblong, concave. *Corolla* attenuate at the base, tripartite below the middle, segments oblong-lanceolate, acute. *Stamens* six, united to the corolla (and each other) to the base of the segments: *filaments* (free) very short, subulate. *Anthers* oblong. A rudiment of a *Pistillum*.

Female inflorescence (in the specimen) about three inches long, suffulted by a much longer lacerated spathe, and also to a considerable degree covered by the spathelles, which are much longer than their respective spikes, much imbricated, and lacerated. The lowermost *spikes* appear to be three-four flowered, the uppermost one flowered, at the base of each, within the spathelle, is a broad close-clasping bracte. And round the base of each flower is also a deeper, more concave *bracte* and two *bracteoles*, the margins of which posteriorly are united into a short cup with very villous margins; part of them distinct, forming a septum, and much less villous.*

Flowers large, solitary, in bud ovate, with a hard thorny point. *Calyx* (of the bud) almost ovate, tridentate, afterwards split irregularly. *Corolla* a little longer than the calyx, tripartite to the middle, segments very pointed and pungent.

Sterile stamina six, adnate to the corolla as high as the sinuses of the segments.

Ovarium oblong, with retrorse scales; parietes thick, succulent, 3-celled. *Ovules* solitary, erect, anatropous. *Style* short. *Stigmata* 3, connivent into a cone.

Fruit ovate, two and half inches long, one and three-quarter broad, perhaps somewhat compressed, surrounded at the base by the corolla variously flattened out and split, apex distinctly mamillate-cuspidate; the scales very many, more highly imbricate than ordinarily, more pointed, furrowed along the centre, rich chesnut coloured, browner towards the margin, towards the base or where they become recurved on either side with a convexity more prominent than usual. (Pulp destroyed by insects.) *Seeds* one-three, small in comparison with the size of the fruit, being about nine lines long, seven broad, and five in thickness, oblong, plano-convex, umbilicate at the apex, black on the surface, without any lateral umbilicus, cavity or pit vertical.

* But these parts seem to vary much, as also the length of calyx in *Z. edulis*.