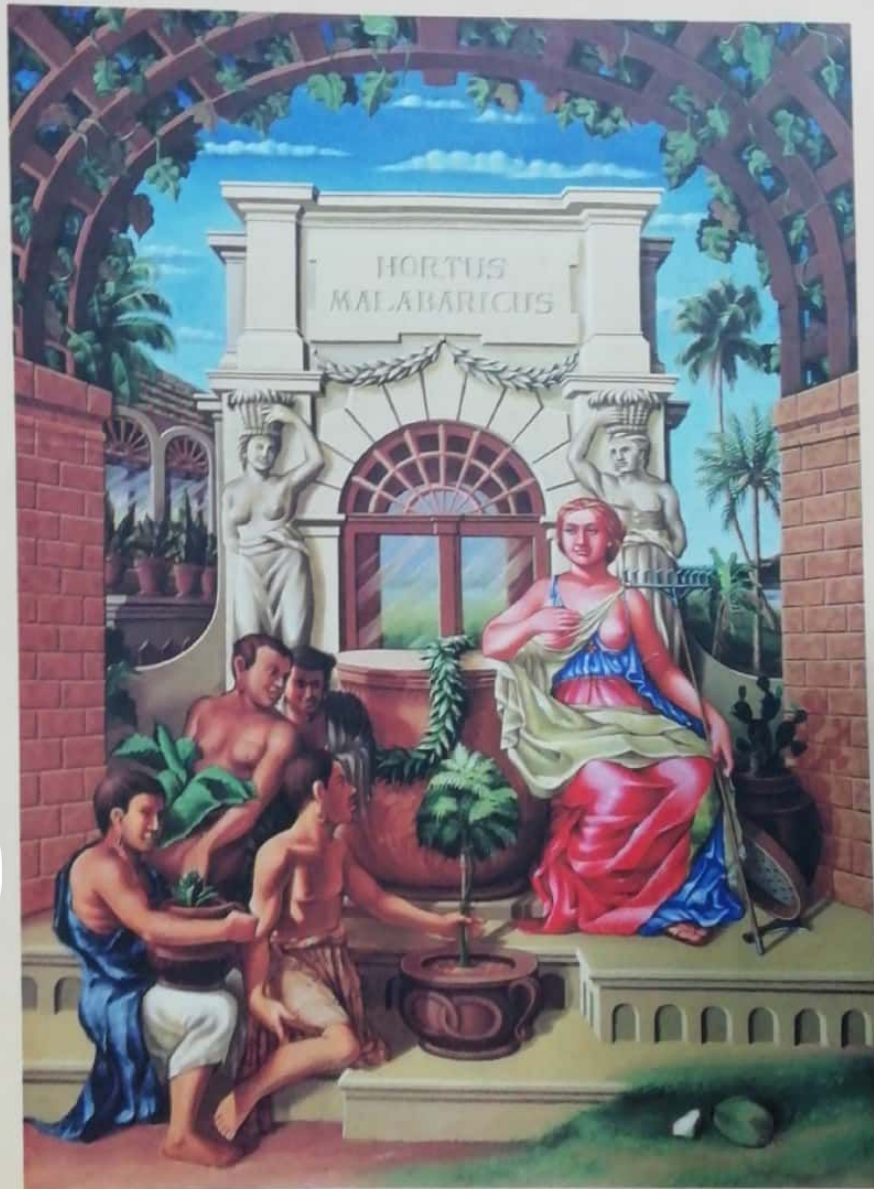


VAN RHEEDE'S HORTUS MALABARICUS ENGLISH EDITION

With Annotations and Modern Botanical Nomenclature

By
K.S. MANILAL

VOLUME - 11



UNIVERSITY OF KERALA



Hendrik Adriaan Van Rhee de (1636 – 1691) was the compiler and promoter of *Hortus Malabaricus*, written in Latin and published from Amsterdam in 12 volumes during 1678-1693. He was born in a noble family in Utrecht, Netherlands and came to India as a soldier in the army of the Dutch East India Company. Rhee de was in Malabar (the present federal state of Kerala) during 1667-1677, first as the Captain, then as the Commodore and finally as the Dutch Governor of Cochin. His fame as an eminent soldier and a shrewd administrator is overshadowed by his contribution to the botanical science through the compilation of the monumental work *Hortus Malabaricus*. This work was the result of about 30 years of compiling and editing by a team of specialists working under the guidance of Rhee de.



VAN RHEEDE'S
HORTUS MALABARICUS
(MALABAR GARDEN)

ENGLISH EDITION
VOLUME 11

WITH ANNOTATIONS AND
MODERN BOTANICAL NOMENCLATURE

by
K. S. MANILAL
Emeritus Professor

Research Supported by the Department of Science & Technology
Government of India, New Delhi



Published by
UNIVERSITY OF KERALA
Thiruvananthapuram
2003

Van Rheeде's
HORTUS MALABARICUS
(Malabar Garden)
ENGLISH EDITION
Volume - 11

With Annotations and Modern Botanical Nomenclature
by K. S. Manilal
Emeritus Professor

© University of Kerala, 2003

Published by
UNIVERSITY OF KERALA
Thiruvananthapuram-695 034
Kerala, India
E-mail : keralauniversity@vsnl.com
Website : www.keralauniversity.edu

June 2003

Price : Rs. 20,000 (in India)
US \$ 950 (outside India)
(for 12 volumes)

Printed at
St. Joseph's Press, Thiruvananthapuram

ISBN: 81-86397-57-4

PART ELEVEN
HORTI
MALABARICI
concerning
HERBS
AND THEIR
DIVERSE SPECIES

Expressed in Latin, Malabaric, Arabic, Brahmanic characters and names

Along with accurate description of Flowers, Fruits, Seeds sketched in their natural size,
mentioning colours and inner powers

Adorned by

The Most Noble and Generous D.D.

HENRY VAN RHEDE TOT DRAKESTEIN

Chief Ruler of Meydrecht, at one time Governor of Malabar Kingdom, Extraordinary Senator of the
Supreme Council among the Indian Belgians Known by the name of the illustrious nominee of the
Equestrian Order of the most powerful Ultrajectine Province assigned,

Put in order and Latin style touched up by

ABRAHAM A POOT M.D.

With explanatory notes, & illustrated with commentaries by

JOANNES COMMELINUS

Senator Amsterdam Republic, Prefect, Medicinal Garden



Printed at Amsterdam

With the expenses met by the Widow of John van Someren,
Heir of John van Dyck & Henry & Widow of Theodore Boom.
In the year 1692.

HERB AND TREE DIVERSE SPECIES

THE HERB AND TREE DIVERSE SPECIES

For the purpose of this study, the following species were collected and identified. The results are presented in the following table.



PART ELEVEN
OF
THE MALABAR GARDENS
ON
HERBS AND THEIR DIFFERENT SPECIES

Kapa-tsja kka

FIG. 1, 2.



THE Brahmins and the Portuguese call *Ananas*, is a plant of two or three feet, liking sandy and rocky places. Root rather thick, spreads everywhere long, hairy, somewhat nodulated (with swellings) white fibres; the middle part gets the shape of a twisted root. The root-like beginnings (sprouts) are inserted to the exterior scales (plates) of the trunk, and they pierce through the lower leaves and indeed there, where the dead leaves have somewhat putrefied, are chiefly conspicuous; when the leaves are spread out with strong (lively) greenness, they disappear. The lateral rootlets show us a three fold phase, the first is slight dark and filamentous, the second woody, white, muscuous, the third, namely the inner most, is with nerves, very hard and somewhat strong.

From the root rises up one single, round, straight stalk without stolons; from this arises a three feet tall stem, namely the fruit if you reckon, (which) is rather thick, almost of the width of a thumb, covered with a green, shining, glabrous bark, which is covered with semicircular nodes; in the inner part

spongy, fistular, furnished with a white, succulent, fibrous pith; its liquid (juice?) is aqueous and slightly sweet.

Kapá-trjalla



Fig. 1

Leaves arise from semicircular nodes, in an alternate fashion (order) pairs of them embrace the whole periphery of the trunk closing in the lower part and loosely in the upper part; are oblong, growing out into a crown above the fruits, tortuous (full of bendings and windings) gradually narrowed into a sharp tip, with the interior part concave, covered over on both surfaces with loose and spongy fibres which proceed in a regular coil (fold) the interior parts of which are bigger than others, more thick and very hard; where rootlets

are sent out obliquely, otherwise proceeding in a straight trail, white: the inner fold (bossom) turns light green, its sides to almost the thickness of one digit, shines with dark greenness; in the flaps (lobes), prickles (spines) to be



Fig. 2

described soon, are infixed, in a harmonious and as if artificial order; each leaf is divided into two blades, the convex part of which is of loose, and the concave however of compact structure, the leaf, the sixth in order, through the whole trunk can be said to be hexagonal because of the circular and spoon shaped joining together of leaves, the semicircular claws of the leaves

firmly adhere to the trunk by the fitting insertion, they are glued to the upper part by a thin membrane, the remaining matter of the leaves by means of small green fibres.

These leaves are armed in the margins with spines or thick, rigid, sharp (acute), piercing spines, a bit bend towards the tip, however not hook shaped; the lower part, up to two or three thumbs around the stalk is without spines; their structure is rigid, thick, dense, compact, straight by parallel veins, from the claw to the tip, which (tip) is more hard and rigid; those which arise from the lower part of the stalk are more oblong, in an older plant from green turning yellow, at the margins from yellow turning red, as also in the sharp spines, on the upper part, except the margins they turn reddish, with deep rosaceous colour, namely in the lower and inner part, on the outside they turn blood-red, in the upper part yellow, about the sides sprinkled with a white and flour-like powder or snowy flakes, the upper parts along with the lower are of the same shape, around the tip of the stalk, on the inside, in one part tinged with deep blood-redness and clear shining redness, interspersed with white spots, you might say a marble rose or tulip, with deep and shining greenness towards the tip, or also blood colour; if they are younger, on the outer side with clear flesh colour on the upper part greenish or of the same flesh colour, and also sprinkled flour like snow, by which the flesh colour or greenness is darkened, that having been removed, the very colour of the leaves become more fully visible; the apex of each leaf is pointed with very hard spines; each leaf contain a bud, which though very small, includes in itself most perfectly the whole plant, inserted to the circle of the trunk by means of a peduncle, namely to the outer plate.

Fruits, in which the flowers arise, grow singly on the stalk, sitting on the tip, like a knob, surrounded from below by upper leaves, imitating the fruit of strobilus forming *Italian Pine*, on the whole like artichoke, with the lid like leaves of future flowers, made in a beautiful shape, and enclosing (fencing in) the fruit in the manner of a spoon, (if namely you follow the order of leaves from left to right, otherwise they come up more straightly), in such a way that the sixth in order, has the other diametrically opposite, where pairs surround towards the sides. These leaves are rhomboidal, cuspidate, erect, rigid towards the tip (of the stalk) gradually smaller, also in the margins armed with tips or small and rigid spines, striated in length to the tip with veins anteriorly with blood-red-shining colour, where are observed with a whitish flour, in green claws.

From the top it gives out a strobilus like, oblong head, rather a beautiful foliaceous rose; in the beginning of germination, similarly as the other leaves of the fruit, red, and in its growth turning green, but where is covered with a downy coat, purple; in its beginning, tightly but in a harmonious order compact and gradually expanded, in the apex brightly greenish. The whole fruit consists of pyramidal capsules, traversing from the inner stalk to the outermost bark. The foliaceous apex, at time simple, otherwise multifid, which sits on the fruit, contain in themselves the rudiments of roots, here very easily separable, and of lateral shoots, so much so that the tip (top) may enclose the same parts, which are in the whole plant, the same also can be seen in the lateral shoots.

Flowers arise at the top of the fruit from the foliaceous tubercles springing forth from the top of the eyes or buds, which wholly except the bark (rind) up to the top of the fruit, where they are covered with thicker leaves, up to the very claws of leaves become swollen; and are receptacles of the flowers, the peduncles of which become calyces, round at the bottom, first closed, later allowing passage to the flowers, and when the flowers are faded, compressing themselves and growing together; moreover the buds are bellows-like, and somewhat compressed towards the sides, formed of three round, thick, rigid and tightly rolled round leaflets, which are drawn towards each other mutually, on the outside of blood and shining colour, sprinkled with a white flower, which observes the redness, inside green and aqueous.

Flowers coming out from these bellows-like buds are three petalled, oblong, towards the top roundly cuspidate, narrow on the upper part, on the lower twisted, where they are secured by the tight mouth from the bellow-like bud, to the bottom of which they are inserted, as if by their calyx, of deep blue colour to the top, lower down of white colour, when the petals wither (decay) they turn from red to dark. In them are six stamens, provided with yellow, erect and oblong heads (apices), three of which are in the interspaces of leaves, the rest are infixed to the leaves, cut from the sides, and are inserted to the bottom of the bellowed bud. In them there arises a single, white style, bifid above, with a trifid apex, of which, whatever interspace there is bisected and curled, like Lily. Flowers stand out from the buds with a purple, acute point, those of which that are formed in the lower buds spring forth more quickly, those in upper buds, more late, also in the very liveliness, gaping with little mouths.

The ripe (mature) fruit is oblong-round, large, with a yellow-reddish rind, either covered with yellowish and narrow leaves or naked (stripped of them), bulging out in the rind with eyes or more broad, hollow, empty and more even buds.

The flesh from white turns yellow, is succulent, of very pleasing taste in comparison with other fruits, acid sweet and wine-like; in the middle the style or the pith is oblong, round, rather hard, from white to yellow, with slightly hard flesh, which is inside covered over with fibres, when transversely cut, exuding a liquid from fistular eyes. In the fruit, also transversely cut, pith or the middle style, as if from the middle of the fruit, and running to the bark (rind), the flesh of which is more succulent and yellow. If unripe (fruit) is tasted, it cuts and pinches the tongue with its flesh.

From the region of stamens, which are inserted not to the flowers themselves but to the interspaces of flowers, lie buried the seeds, in whatever knotted tubercle (small swelling), in the filament of the flower, in threes, in single enclosures, triangle formed, which three-cornered ones are also stuffed and separated by a thin membrane, separately shut up, where they are bound by ingeniously made, nervous (made of nerves) round chain-lets to small crowns, the fringes of which are clothed with an elegant girdle, and are lying in twos among small hillocks, like the acorn of pine among the rumps of the pith.

As to the seeds themselves, they are small, plain, pear shaped, when premature, are white, while mature are furnished with dark apices, more than mature they become chest nuts in darkness, and are in valves or small cavities; which are seen within the flesh, and are placed very near to the rind or to the flower bearing buds, rarely two in a capsule; the valves themselves are oblong arranged in length, towards the middle style of the fruit or the pith, and in that part which approaches more to the style, more narrow, and as if covered with a white shining membrane, and many, projecting to each bellow like buds.

Further it is to be observed that in the new parts of this plant, deep in the orifice, a white eye is seen to emerge, formed of leaves rolled over each other, like a trunk, as they appear in bulbs, and are those leaves which cover

the stalk in the nodes, the rudiment of which is situated inside in the bottom part of the eye.

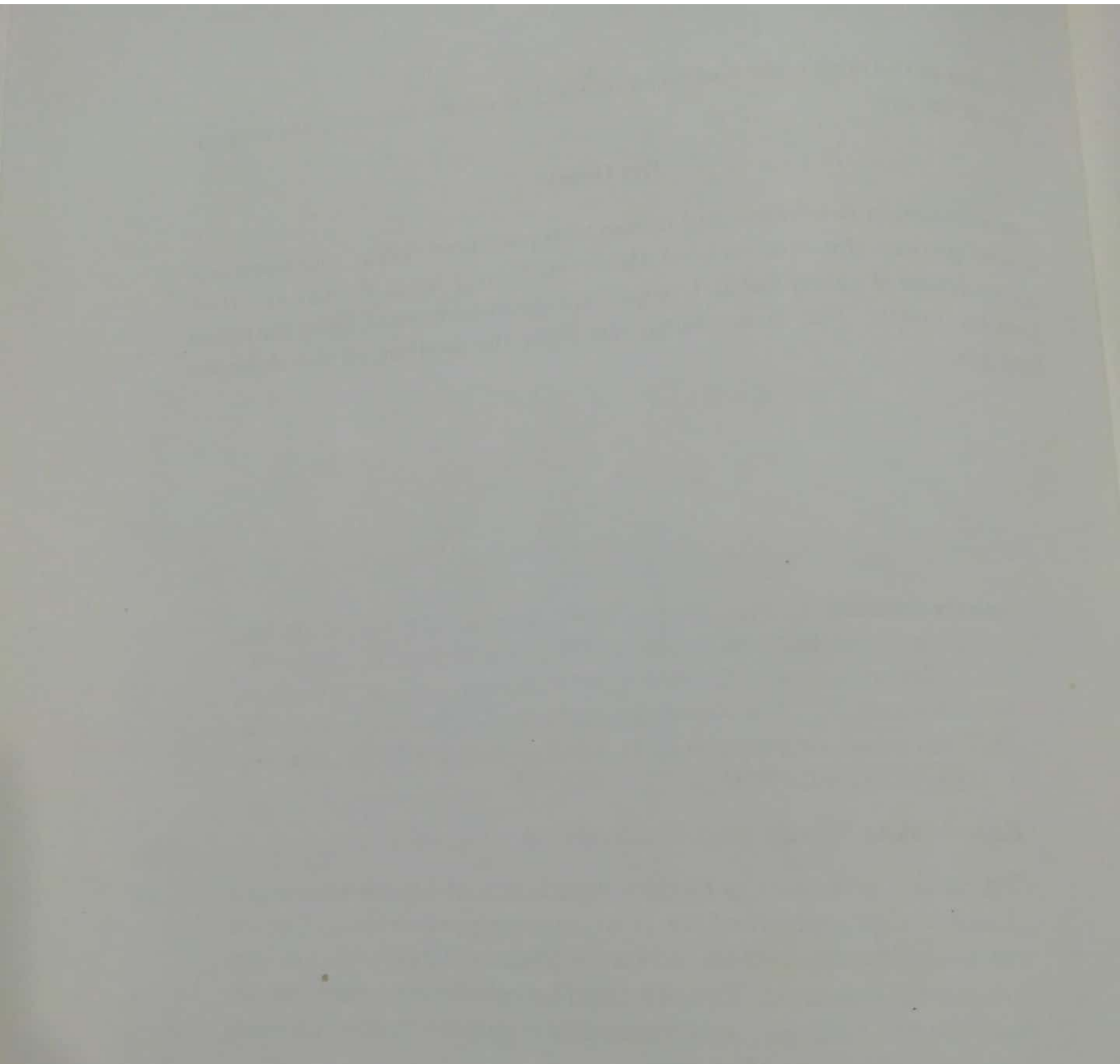
(Its Uses)

Leaves boiled in rice-water and mixed with powdered *Baliari*, and taken as a drink, purges the stomach of those suffering from dropsy (morbid accumulation of watery fluid). Unripe fruits given in vinegar, ejects the foetus from the uterus. The same eaten, sets right the swelling of the abdomen from gas.

Ananas comosus (L.) Merr., Interpr. Herb. Amboin. 133. 1917; L. B. Sm. & Downs, Fl. Neotrop. 14(3): 206 l. 1979; Manilal & Sivar., Fl. Calicut 289. 1982. - *Bromelia ananas* L., Sp. Pl. 285. 1753. *Bromelia comosa* L. in Stickman, Herb. Amboin. 21. 1754. *Ananassa sativa* Lindl., Bot. Reg. 13: sub. t. 1068. 1827, nom. nud. *Ananas sativus* J. H. Schult. in Roem. & Schult., Syst. Veg. 7: 1284. 1830 [BROMELIACEAE].

Kapa-tsjakka Rheede, Hort. Malab. 11: 1-6, t. 1-2. 1692.

The name Kappachakka, a modern transcription of Rheede's name [no Malayalam script appears on t. 1 or 2] is not used; kappa (from kappel) means ship, alluding that this is introduced from overseas; and chakka refers to large fruits, such as *Artocarpus*. Today it is called Kaidachakka in northern Malabar (kaida refers to *Pandanus*); and Annarachakka in southern Malabar. It is widely cultivated in Malabar as a fruit crop.



—•—

K a d a n a k u

o r

C a t e v a l a

FIG. 3



LS a plant liking sandy and rocky soil. The root is feather-like, covered with fibres turning red from white, is fleshy, aqueous, covered over with woody and loose filaments, of aqueous taste, somewhat punching the tongue. From it comes out one single, short, round, erect, aqueous stem, fleshy inside.

Leaves emerge from the stalk in twos in a decussate order, the rudiments of which embrace the stalk, when spread out in width, growing up to the length of a cubit and more, gradually narrowed to a tip, very thick, with the upper side plain, the lower, by which they are turned to the root convex, glabrous, in the margins equipped with green, rigid spines, for the rest furnished with an aqueous, clear and viscid pulp in which are seen loose, green fibres, spread in length, of aqueous and slightly sweet taste.

Flowers arise many clustered together on round stalks, which originate from the root and covered with foliaceous wrappers here and there and inside fistular and humid, are oblong, monopetalous, divided into six parts above, drawing into a tip, somewhat bent towards the outside, split, in the neck

yellow, saffron, sprinkled over with furrows of orange colour. In them are six, green-white stamens furnished with oblong erect, red apices, the style in the middle is white.

Outside the use among the physicians.

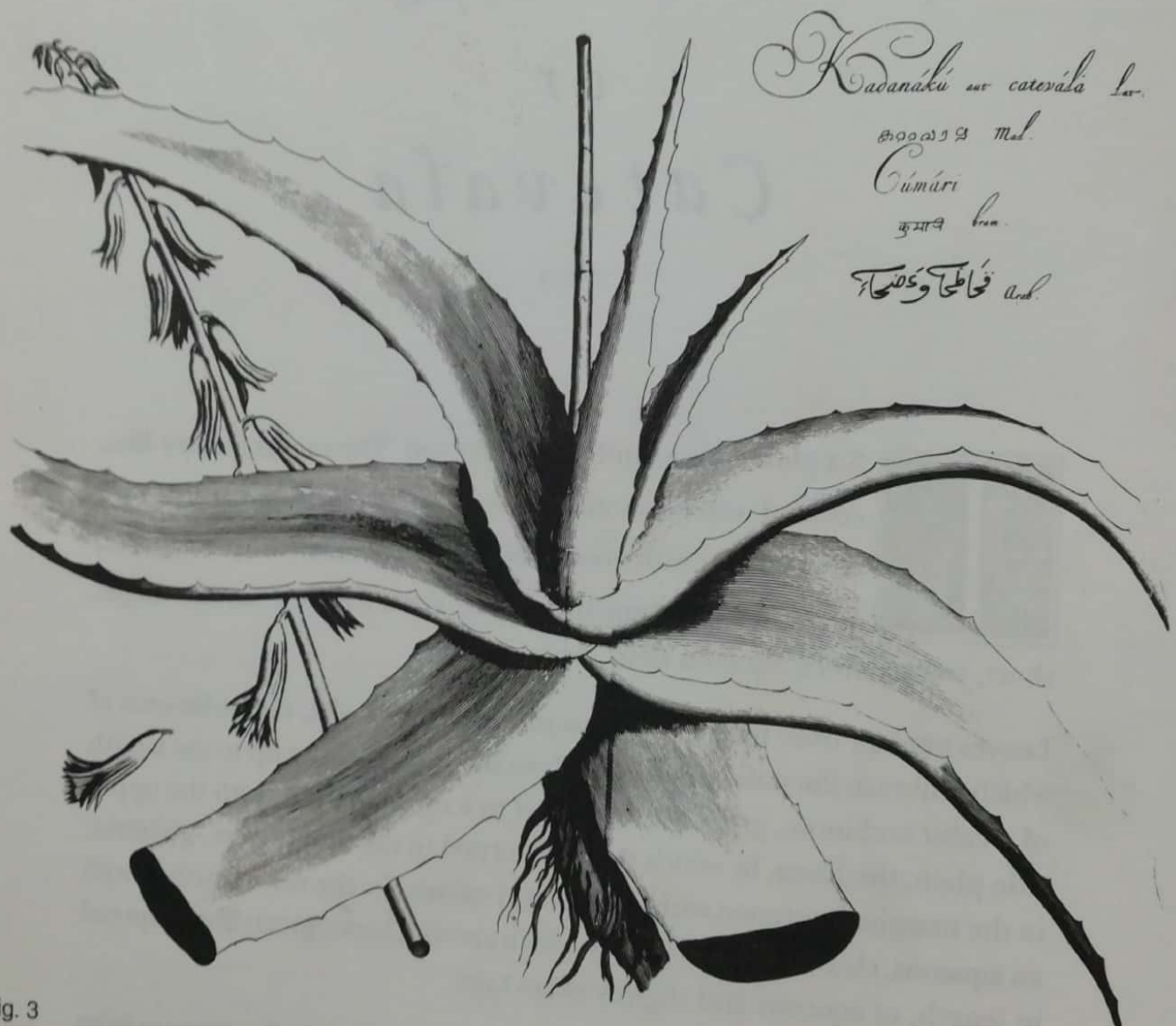


Fig. 3

Aloe vera (L.) N. Burm., Fl. Ind. 83. (before 6 Apr) 1768; Stearn in Hara et al., Enum. Fl. Pl. Nepal 1: 70. 1978; Manilal & Sivar., Fl. Calicut 292. 1982. - *Aloe perfoliata* var. *vera* L., Sp. Pl. 320. 1753. *Aloe barbadensis* Mill., Gard. Dict. ed. 8; no.2. (16 Apr) 1768. *Aloe vulgaris* Bauhin ex Lam., Encycl. 1: 86. 1783 [LILIACEAE].

Kadanaku, Catevala Rheede, Hort. Malab. 11: 7, t. 3. 1692.

The name Kattavazha [Malayalam script on t. 3] is still used. Kadanakku (modern transcription, not in Malayalam script on t. 3) is not used; kada (from kadal) means ocean and naakku means tongue, referring to the resemblance of its leaves to the cuttlefish bone found on beaches. Rheede also used "Cadanako" as an alternative name for *Sansevieria* (1: t. 42). It occurs in dry areas (naturalized) and is sometimes cultivated.



Elettari

FIG. 4, 5, 6.



LT likes mountain slopes, valleys, shady and muddy places, avoiding the sun; about twelve feet tall, to which end see the attached image of man (in) *Tab. 1. Strip A.* The root is oblong, thick, knotted, white, tortuous, green above, gives out innumerable fibrous root - lets from the sides, by means of which, like feet, just as the root of *Ginger*, it creeps.

The stalks which come out from the root are round, glabrous, green, a broad thumb in diameter, with a simple stem, like reed, the texture of which it imitates, standing up, furnished with a vapid pith, are raised up by means of woody filaments, the ends of which are transversely dissected; from the pith of which, very fine, watery white threads, like cob web, can be drawn out; they press upon the base of the leaves, which (base) rests upon the upper nodes of the root (*Tab. 2. Litt.B*); by means of theca-shaped wrappers (as can be seen in the tree *Pisang*). Torn into pieces or crushed in hands, they breathe aroma.

The leaves are not dissimilar to those of *Manja-Kua*, almost four spans long, broad (see Tab. 1. litt.B) green striated with parallel and thin veins, with strong, slightly sharp and aromatic smell and taste. The mid-rib, light green on the lower side, on the opposite side, more green.

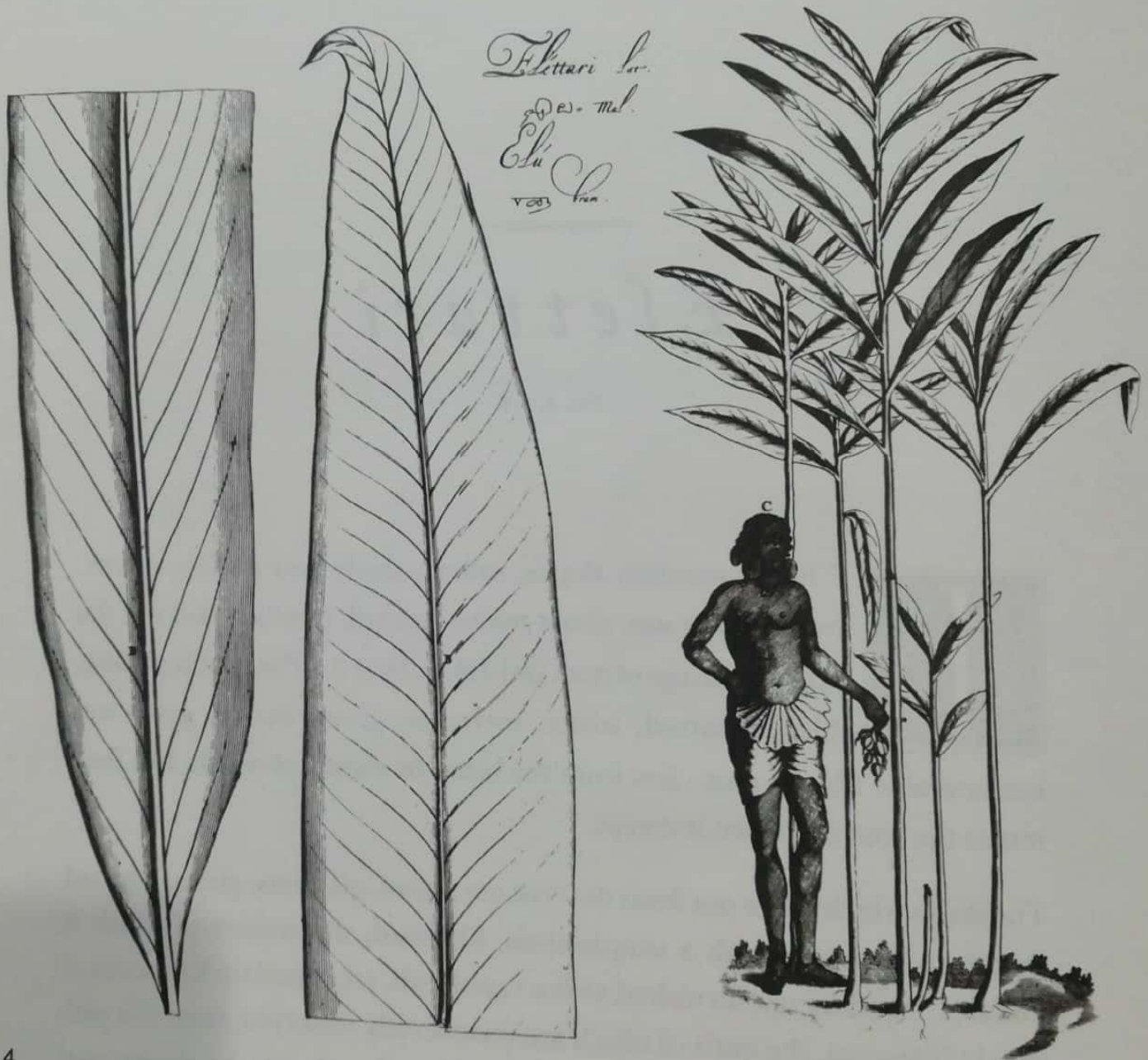


Fig. 4

Flowers (see Tab.2. letter. E) on one fruit-bearing raceme or on a principal shoot, many, generally three or four, are enclosed by its own leaflets, (see Tab. 2. letter.F) as if in capsules; for no mouth (opening) is seen in this

foliaceous wrapping. When this covering is open a four petalled flower is seen (see Tab. 2. lett. EE) three of them (see ibid. letter G) agree in size, are oblong narrow, green white, membranous, the fourth one, (see ibid. lett.H.) which lies opposite to the first ones, is provided with a slender style (ibid.

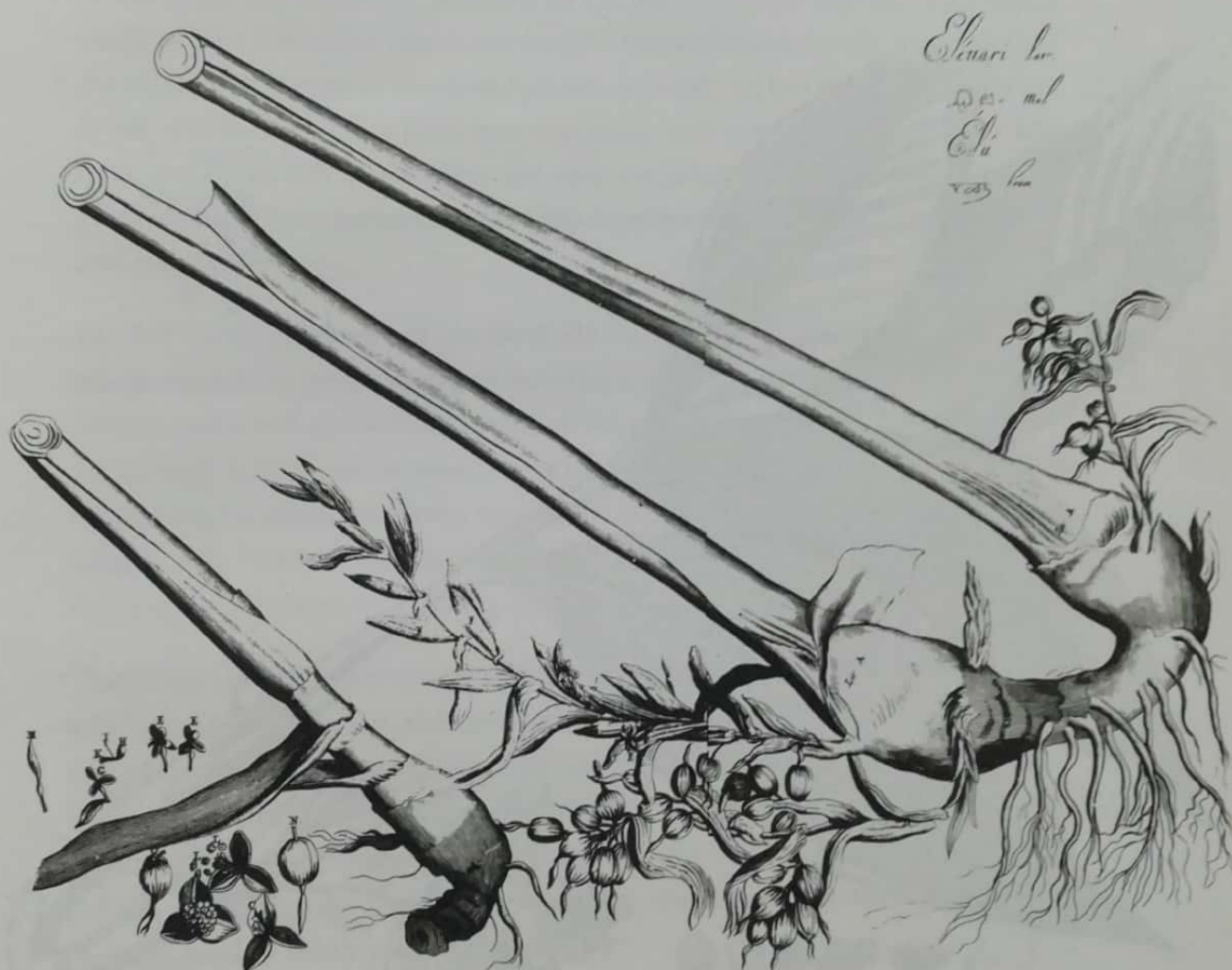


Fig. 5

letter I) and a ligule (ibid. lettere K), is a bit more broad and less oblong, placed inside and green. The ligule, denoted under letter K. is oblong-narrow, a bit thick on the inner face, which is opposed to the innermost leaflet in a lying manner, stridled with a furrow, bifid, at the topmost apex, slightly reddish, receives in its own furrow a white, slender style (letter I) which

terminates into a slender plain head. When the vigour of the flower ceases, the petals are folded, perpetually sitting on the apices of the fruits and the calyx gets swollen into the fruit (see letter M) which when old, gets enlarged in all directions, till now hairy with the rolled up leaves of the flower (see letter N) which when set free bears such a shape, as the letter O.



Fig. 6

Fruits hang from fruit-giving, radical (arising from roots) racemes, which shape and taste not roughly considered similar, to grapes for they are rounded, and pleasingly acidic, green covered with a thick, fleshy and watery bark

(rind), covered all over with thin furrow along the length, are divided into three separate locules with trellis, so that whichever partition wall, in its middle, even now a membranous filaments, (see tab.2. letter B), still is cut for a light passage (inlet) and thus they make receptacles of seeds; so much so that united, triangular, aromatic grains with compressed and plain sides of the fruit, are copiously attached to six lines (orders) (see letter L) which seeds adhere with their tips to the middle three-cornered style, to which they are affixed by means of the membranaceous wall. In hot sun these fruits are dried, when the rind, which first was thick and green, becomes thin, and from red turns white; and they are very cardamom; they are not sown nor planted, but after a forest fire, germinate under the ashes of all kinds of trees and plants.

Further it is to be observed that from the nodes of roots under the earth, very many, cuspidate, green sprouts arise, which grow into shoots (see Tab. 2 letter D) one and a half spans long, and they are girded from below, knotted, in the joints with foliaceous or membranaceous coverings, which when dry, from white turn reddish, and from the lateral bands, give out simple peduncles, which hide (enclose) the germs (rudiments) of flowers and fruits, under foliaceous and capsule- forming wrappers.

There are three known species of *Elettari* or cardamom, of which the first, which is here described and delineated, gives quite round and white fruits, whose native soil is above *Cochin* and *Calicut* in the mountainous places, about thirty thousand feet from the sea and prevails others in price because of outstanding power. The second species is more oblong, but of lower quality, the third is the lowest and quite acuminate, the latter ones are found around *Cananoi*, and in other places of India.

(Its Uses)

Nothing is to be added about its powers, enough and more are known.

Elettaria cardamomum (L.) Maton, Trans. Linn. Soc. London 10: 254. 1811; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 182. 1972; Burt in Manilal, Bot. Hist. Hort. Malab. 147. 1980; Burt in Dassan., Rev. Handb. Fl. Ceylon 4: 529. 1983; Manilal, Fl. Silent Valley 312. 1988; Sivar. & Philip, Fl. Nilambur 708. 1997. -*Amomum cardamomum* L., Sp. Pl. 1. 1753 ("cardamom", but spelled out under Nomina Trivialia on unnumbered page at end). *Amomum repens* Sonn., Voy. Ind. t. 136. 1782. *Amomum racemosum* Lam., Encycl. 1: 134. 1783, nom. illeg. (incl. *A. cardamomum* L. 1753). *Alpinia cardamomum* (L.) Roxb., Asiat. Res. 11: 355. 1810 [ZINGIBERACEAE].

Elettari Rheede, Hort. Malab. 11: 9-11, t. 4-6. 1692.

The name Elam [Malayalam script on tt. 4-6] is still used. Elathari (modern transcription of Rheede's name) is still used for the seeds (thari means granules) of Elam. The fruits are called Elakkaya (kaya means fruit). It occurs wild in deep forests of Malabar and is also cultivated in forest plantations.

The place names mentioned as the native soils of this species are the mountains towards the east of Cochin and Calicut (both places known by the same names now also. Calicut is also called Kozhikode). The height of the mountains (where these plants occur) is mentioned as thirty thousand feet, which is obviously an error. The height of the mountains here varies from four thousand to seven thousand feet. The highest peak in Western Ghat Mountains (Anamudi) is only about eight thousand feet, which happens to be the tallest peak south of the Himalayas in peninsular India.

The place of occurrence of a third, related species is mentioned as Cananoi, which is now known as Kannur or also as Cannanore.



K u a

FIG. 7.



UA; to the Brahmins *Acua*, is the proper and the common name of all the plants, which should be referred to the species of ginger and are eight in number, *Kua*, *Tsjana Kua*, *Mallan Kua*, *Manga Kua*, *Mangella Kua*, *Intsyi Kua*, *Katou Intsyi Kua*, *Mala Intsyi Kua*.

The first species likes all soils, especially sandy soil, in which it comes forth and shoots up, of it's on accord. The root from one side runs horizontally, in white, thick, swollen, here and there provided with slender and fibrous rootlets, stout and covered over with many whitish hairs, with a glabrous bark; spreads itself in length through tubers, grows up to the thickness of about two digits and has the length of one span, is divided into branches and filled with limpid water. The taste is sharp, punching the tongue, bitter, aromatic. The smell is strong and pleasing, just as if many aromatics are mixed among themselves.

Leaves arise from the tips of the roots, up to the length of one cubit, and to the width, in the middle, of two spans; anteriorily acuminate, narrow around

the base, furnished with a pronounced rib; it gives out many lateral ribs, running transversely towards the anterior part, equally distant, vanishing at the end of margins, where they embrace the margin of the leaf with very fine vein-lets; the inner part of the leaf in some manner folded and curved, marked with sutures. The colour in the inner part is dark, in the outer part lighter.



Fig.7

For the rest the leaves are glabrous, shining, aqueous. The stalks are one and a half feet, full of a green pith, but in them no shoots are seen, but from the roots there comes up a peculiar stalk, covered with some long, foliaceous scales, tightly surrounding the stalk; which leaves exceed the length of a

cubit, anteriorly expanded in width, and drawn together mutually by a very small tip, the edges turn back from the stalk, are glabrous provided with slender veins in length, which, by no means can be seen, unless broken; the lower parts are green, the middle yellow; the upper red, purple, light blue, the top-most almost white, delightful to sight, of unpleasant smell, taste as that of the root.

Flowers, two or three together arise from the interspaces of the scales, imitating bells, the lower part and inside enclosed under a white, slender, transparent membrane, are six-petalled, with the upper a white, slender, transparent, like a helmet, erect are yellow and white, folded and are hardly seen unless the whole flower is vent (exposed) asunder and mutually separated, when one of them is seen bent to the fringed margin, in the middle filament furnished with a knob comes out, as if like the head of a dragon, and imitating a small winged bird with its tail up (erect). The smell is pleasing, from the calyx broken and crushed between the fingers emulates the smell of leaves; of slight bitter taste.

The seed-capsules are round, and pressed down and contain ashen grains like those of *Tsjana Kua*, but are rarely seen. The root survives long; the leaves fall down in the months of July and August, they germinate again.

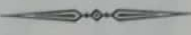
(Its Uses)

The roots scraped a few times, washed, leaves a powder, very much prized by the natives, who make a meal (poultice) from it. The root crushed and the fresh juice drunk, stops the burning of intestines, clenses the kidneys, prevents white flow, heals gonorrhea, purifies blood. The juice of leaves is given to those suffering from dropsy (morbid accumulation of watery fluid in any part of the body), removes the swelling of abdomen, moderately purges, cleanses the viscid phlegm of intestines.

Curcuma zedoaria (Christm.) Rosc., Trans. Linn. Soc. London 8; 354. 1807; Rosc., Monandr. Pl. Scitam. t. 109. 1825; Burt, Gard. Bull. Singapore 30: 61. 1977; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 501. 1983; Sasidh. & Sivar., Fl. Thrissur 460. 1996. - *Amomum zedoaria* Christm. in Christm. & Panzer, Linn. Pflanzensyst. 5: 12. 1779. *Amomum latifolium* Lam., Encycl. 1: 134. 1783. *Curcuma zerumbet* Roxb., Asiat. Res. 11: 332. 1810 [ZINGIBERACEAE].

Kua Rheede, Hort. Malab. 11: 13-14, t. 7. 1692.

The name Kuva [Malayalam script on t. 7] is still used. It occurs in the hills adjoining the coastal plains of Malabar and is not cultivated, although the roots are used for medicinal purposes after drying and grinding. The required quantity of roots are always collected from the wild.



Tsjana - kua

FIG. 8.



THE Brahmins call it *Ponvo*, is the second species, likes all soils, especially shady soil. The root is white, divided into many tubers and creeping, spongy, aqueous. The tender one is still green and is covered with white hairs; the bark cannot be detached; when grown old and broken, many fibres are then drawn out in length like cob-web. The taste is watery and sweet like that of *Cucumber*, slightly breathes (smells like) *Ginger*. Shoots germinate in different places from the root, up to the height of three or four feet, and become a digit thick, are round, blood-red glabrous, shining, reed-like, jointed, simple, without branches, green and aqueous inside. The taste with smell, like that of the root.

Leaves are oblong narrow, two spans long, anteriorly acuminate, broad in the middle, connected near around the shoot, where the bases wrap around and cover the shoot, on the lower side the rib stands out, on the opposite side they striate, the lateral ribs transversely run to the margin, where they disappear; very often they are rolled up inwardly, are soft, shining, green, somewhat aqueous. From the tip of the shoots a head or a tubercle arises,

like red apple (?), is pear shaped, made of many coral-red buds, each one of which is connected to middle style by means of a broad base.

From the buds arise flowers divided in three places, are four petalled, ephemeral, white, bell-shaped, at the top somewhat open; the fourth petal is



Fig. 8

the largest, and bent, in the hollow of which the fifth is found, somewhat curved and reclining on the fourth, directly a ligule is seen rooted in the base of the flower, with a yellow apex, the rest white; the flowers themselves are somewhat watery and fade in the sun, emitting from the calyx a sweet

smell, not however from the very substance, which is devoid of taste and smell. The calyx is formed of three rigid, woody, rosaceously red leaves, blue inside, which when dry become dark, stand upon a three cornered and round seed globule, divided into three parts by a partition wall, where seeds arranged serially, one after another, are connected by means of an intermediary membrane, are triangular, like those of cardamom, first blue, dark, when the seed capsules open in three places; when crushed smells ginger, of very little taste, inside white. This plant survives long, for the root creeps and gives out new shoots here and there, especially in the months of April and May.

(Its Uses)

Mixed with *Ginger* is used for colic affections. The juice removes pains, ulcers and tingling of ears, helps hearing, takes away the flow of cerebrum and giddiness.

Costus speciosus (Koenig) Sm., Trans. Linn. Soc. London 1: 249. 1791; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 185. 1972; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Manilal & Sivar., Fl. Calicut 288. 1982; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 491. 1983; Manilal, Fl. Silent Valley 311. 1988; Sasidh. & Sivar., Fl. Thrissur 459. 1996; Sivar. & Philip, Fl. Nilambur 707. 1997. - *Banksea speciosa* Koenig in Retz., Obs. Bot. 3: 63 ("75"). 1783. *Amomum hirsutum* Lam., Encycl. 1: 135. Dec 1783; Lam., Tabl. Encycl. 1: 5, t. 134. 1791. *Hellenia grandiflora* Retz., Obs. Bot. 6: 18. 1791, nom. illeg. (incl. type of *Banksea speciosa* Koenig 1783). *Tsiana speciosa* (Koenig) F. Gmelin, Syst. Nat. 1: 9. 1791. *Planera speciosa* (Koenig) Giseke, Prael. Ord. Nat. 244. 1792 [ZINGIBERACEAE].

Tsjana-kua Rheede, Hort. Malab. 11: 15-16, t. 8. 1692.

The name Channakuva [Malayalam script on t. 8] is still used; channa here means inferior; and kuva refers to *Curcuma zedoaria*. It occurs in uplands of Malabar.

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...



Maḷan-kuṇa

FIG. 9.



ALANKUA, as if you say *Mountainous Kuva*, is the third species of Ginger; according to the Brahmins *Ben Tsjapo*, likes elevated, fertile and muddy soil. Root is bulbous, ashen on the outside, covered with a leathery membrane, inside white, thick, watery, beset everywhere with many fibres, hairy, one digit thick, to which are attached very many oblong round bulbs, two by two, in a tripple series on themselves, are glabrous, furnished here and there with very small hairs, thick just like *Bulbocastana* which they distinguish by the name *Kourka*, inside fat and mucilaginous, emitting the smell and taste of *Ginger*, less pinching the tongue.

From the tip of the root arises the white and membranous calyx, like that of saffron, to which are enclosed flowers in fours or fives, coming out from the bottom of the calyx on long petioles, are three-petalled or also six petalled, three of which are a digit long and a straw broad, the remaining petals, either cover the flower itself, when the flower is already open, lying on the back; two of the rest are long and narrow, tapering into tip, the third one is opposite to these, divided in two parts so that the flower itself many seem to be four petalled, is of mixed colour, from bluish-white, purple-red, yellow; the

remaining two are white for the most-part so that the said colours even now, though obscure, are seen; from the same bottom of the calyx, a simple, purple filament comes out, which juts out with a horned and yellow ligule; these flowers are of very pleasing smell, far surpassing *Lilies* and *Violets* (flowers)

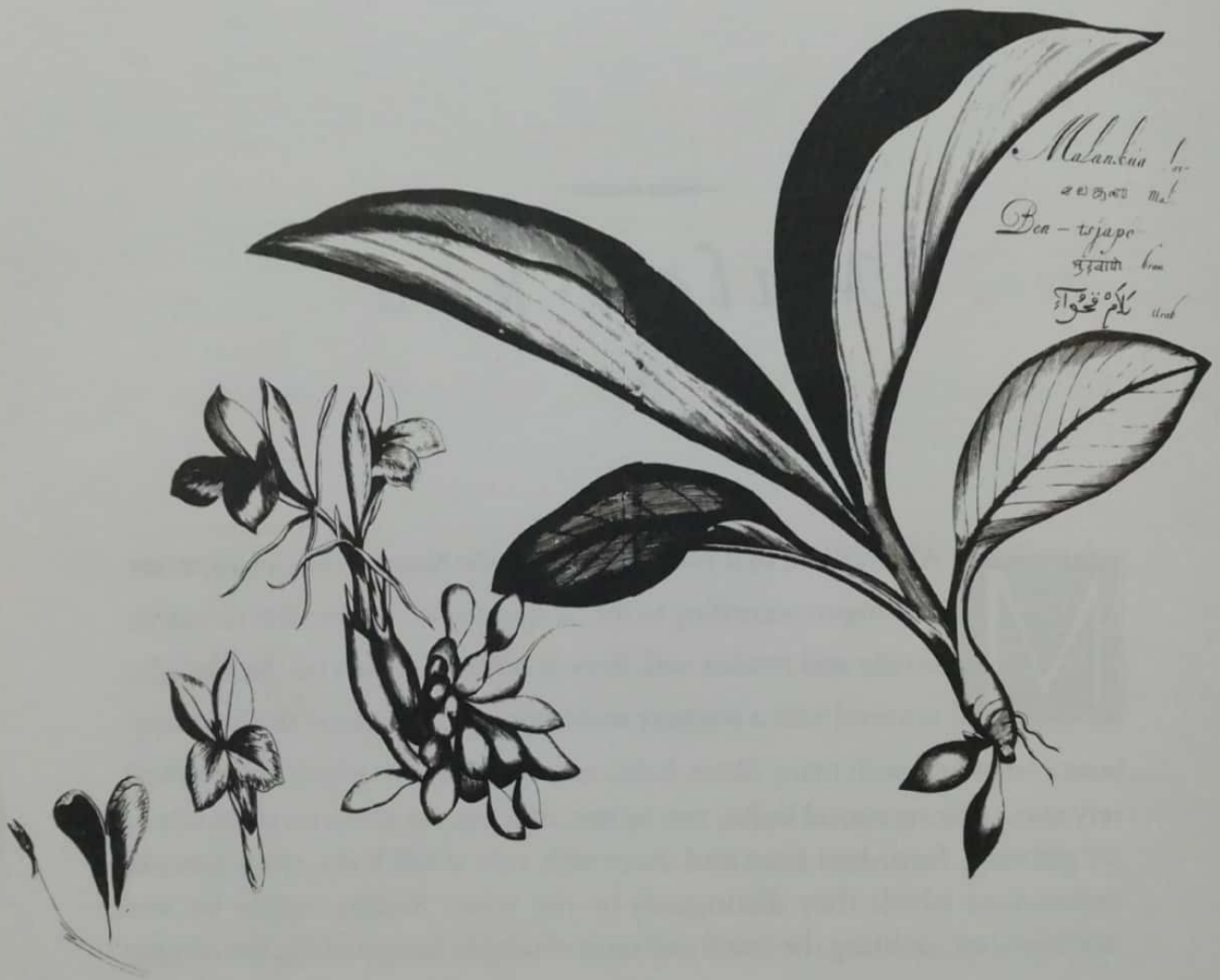


Fig. 9

springing up from the earth before the leaves, which having decayed, the calyx swells up, forming seed capsules.

The leaves agree wholly with those of *Kua*, except that the stalks and shoots do not so rise up (are not so long), do not surpass the height of one cubit; taste as that of *Ginger*, smell the same. This plant flowers once every year in

the rainy season, survives long, namely in its own soil, because the bulbs always germinate again.

In Malabar up to ten degrees of height towards the north of the equinoxial line, was seen with full flower, which in the month of June of the same year in Batavia at six degrees of the equinoxial line towards the south, was drying up, where in the month of December was again flowering, because at that time it rains in that place. When I was going from India to Europe, in the time of seven months, was flowering thrice, and often was changing leaves, till in the month of August the whole was found killed (destroyed). The reason, why during such a short-time so often exposed to sun, the earth could not provide so much of food as may be required for its further conservation; which in the same journey happened to different other plants and was observed, for how much it is that under the equinoxial line, air is covered with clouds, where it rains, which rains make the regions under the tropical zone fruitful, for without them everything would be dried up and burst.

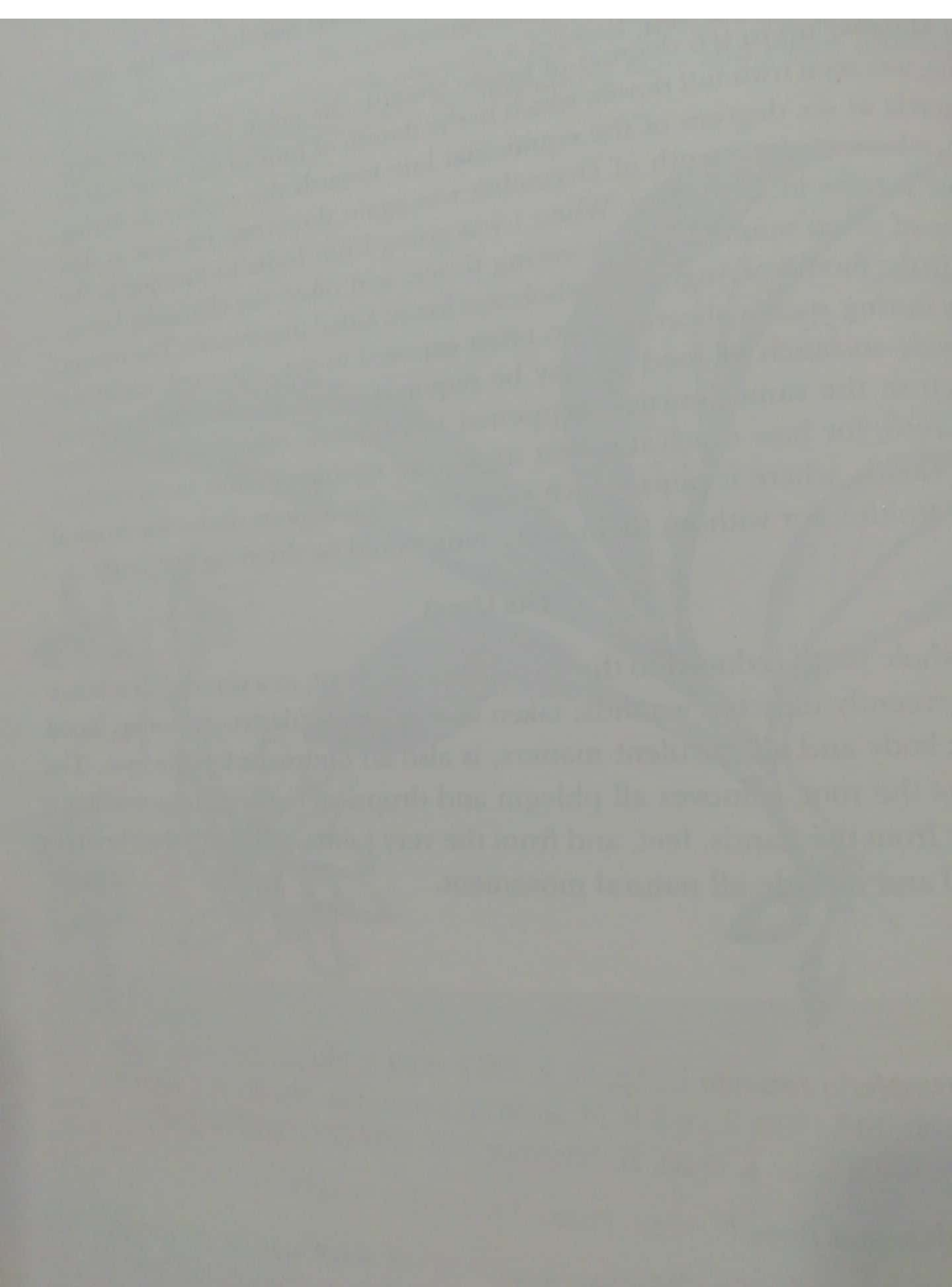
(Its Uses)

The whole plant reduced to the form of an ointment, in a wonderful manner heals recently inflicted wounds; taken in, consumes (destroys) clotted blood in the body and all purulent matters; is also an ointment for the eyes. The juice of the root, removes all phlegm and dropsical (oedematous swellings) matter from the hands, feet, and from the very joints, although they seem as if dead and outside all natural movement.

Kaempferia rotunda L., Sp. Pl. 3. 1753; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 509. 1983; Sivar. & Philip, Fl. Nilambur 712. 1997 [ZINGIBERACEAE].

Malan-kua Rheede, Hort. Malab. 11: 17-18, t. 9. 1692.

The name Malamkuva [Malayalam script on t. 9] is not used for this species now but is for *Zingiber zerumbet* (L.) Rosc. (see Rheede 11: t. 13). Malam (from mala) means mountain (i.e., wild) and kuva refers to *Curcuma zedoaria* (Christm.) Rosc. No Malayalam name is currently known for this. It is now rather rare in Malabar.





Manja - kua

FIG. 10.



THE fourth species and the smallest *Turmuric*. Malabaris call *Manja*, Brahmins *Davikua*, Portuguese *Raiz do Zafrao*. The root is bulbous and what is above is a thumb thick, on the outside glabrous, shining as if covered with a thin membrane, inside yellow, thick, fleshy, transversely dissected, marked with different orange, red, yellow circles, without any nerves or nerve-lets as far as can be observed, not so long, on the outside provided with many hairy roots, of very strong smell and taste, accumulating saffron and ginger.

The leaves agree very much with those of *Kua*, but with regard to length, a bit broader, of pleasing smell, of slightly bitter taste.

Flowers arise in that place where the leaves open, six or seven together, without long petioles, are monopetalous, irregular, divided in four places, white, towards the base somewhat red, without smell, of bitter taste, and tender ones are watery, perishing within two or three days.

Seeds arise from the base of the calyx like those of *Tsjanakua*, not so large, neither the capsules so three-cornered, but plain, placed near themselves

within the membrane, very rarely reaching maturity. This plant gives leaves and fruits once every year namely in the months of April and May, survives long, for always new shoots germinate from the root.



Fig. 10

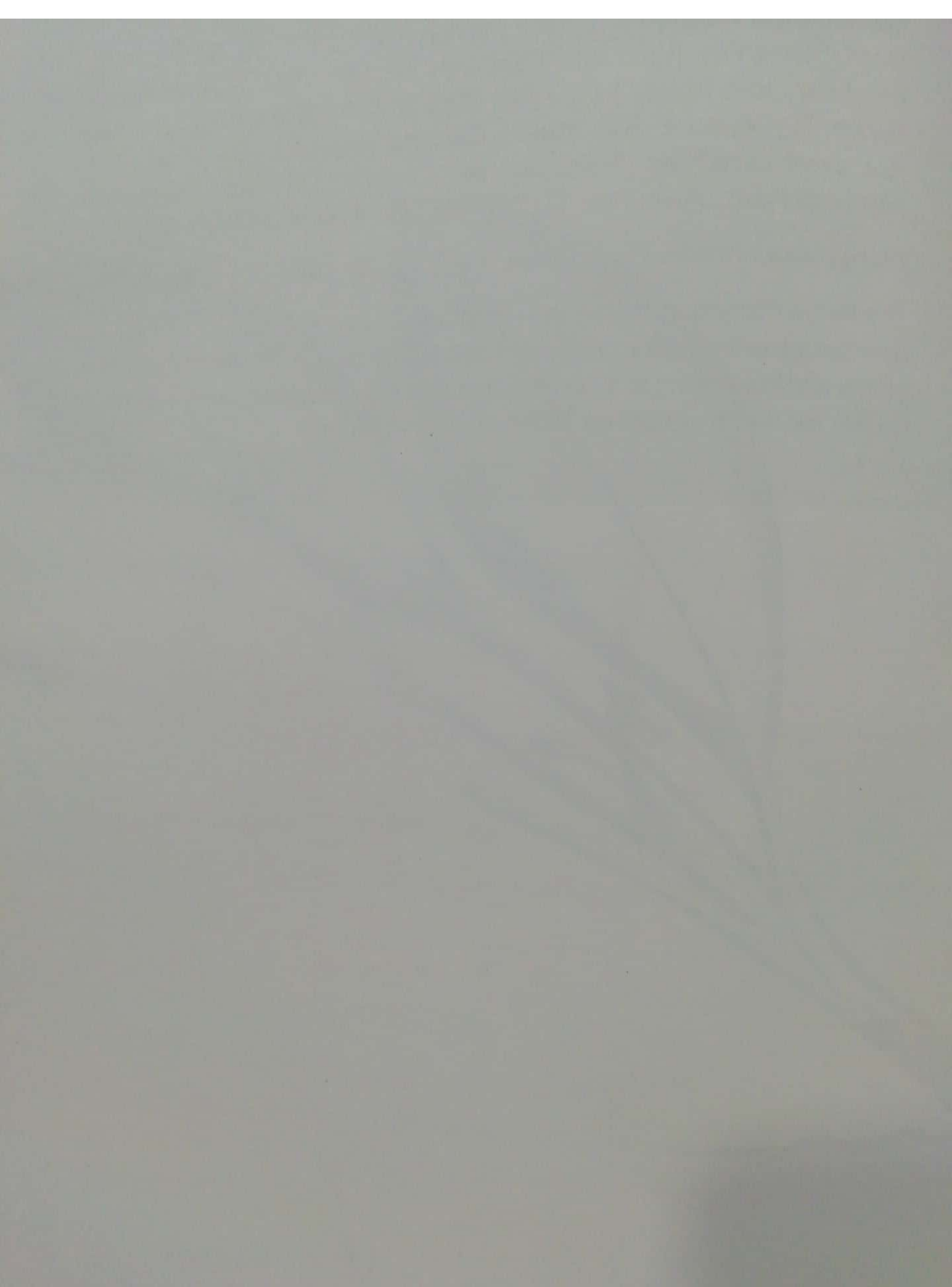
(Its Uses)

The juice of the root stops dysentery and copious flow of menses, strengthens the powers, restores the spirit, purifies blood, mixed with other medicines, heals chronic diseases from cold.

Boesenbergia rotunda (L.) Mansf., Kulturpfl. 6: 239. 1958; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 184. 1972; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 508. 1983. - *Curcuma rotunda* L., Sp. Pl. 2. 1753. *Kaempferia ovata* Rosc., Trans. Linn. Soc. London 8: 351. 1807. *Kaempferia pandurata* Roxb., Asiat. Res. 11: 328, t. 2. 1810 [ZINGIBERACEAE].

Manja-kua Rheede, Hort. Malab. 11: 19, t. 10. 1690.

The name Manjakuva [Malayalam script on t. 10] is not used for this species now but apparently is for yellow-bracted *Curcuma nilgherensis*, manja means yellow and kuva refers to *Curcuma zedoaria*. No Malayalam name is currently known for this. It occurs on forest margins in Malabar.





Manjella Kua

FIG. 11.



ANJELLA KUA is the fifth species, Brahmins call it *Alady*, is the real *Turmeric*, liking all soils. The root, like that of ginger is bulbous, two digits thick, on the outside tinged with elegant yellow colour, inside with watery red colour, which also turns yellow, is thick, fleshy, variegated with no circles, but everywhere of the some colour, furnished with small root-lets which are covered with hairy fibres, just as those of *Manja Kua*, of very pleasing smell and taste, but more strong.

Leaves arise like those of *Kua*, but their stalks or bases after they have withdrawn from the stalk, are longer. The rib-lets, which from the middle of the leaf on both sides run transversely towards the anterior part, are nearly (almost) joined together and more subtle. The leaf itself is large and light green.

Flowers arise at the top of the joined leaves, is shape as those of *Manja Kua*, also the seeds, so that between this plant and *Manja Kua*, there exists very little difference except in size, and in superior powers, smell and taste. It is seen not only in the deserts, but also is cultivated in the fields.



Mangifera indica L.
 30000 mal
 Albi
 30000
 30000

Fig. 11

(Its Uses)

This is cultivated for the sake of profit; for there is no family which does not use this in food. For the Europeans living there, it is in the place of *Saffron*. It is also used for colouring linen. The juice pound with the root or levigated, refreshes the mouth, render the breath pleasing, cheers up, drives away melancholy, purifies blood, excites passion, strengthen the stomach and the cerebrum, removes the obstruction on kidneys and the bladder, stimulates menses, slightly loosens the bowels, heals dropsy (morbid accumulation of watery fluid in any part of the body). In short, with general consent, it is a very excellent plant, endowed with very superior qualities.

Curcuma longa L., Sp. Pl. 2. 1753; Burt, Notes Roy. Bot. Gard. Edinburgh 35: 209. 1977; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 500. 1983; Sasidh. & Sivar., Fl. Thrissur 464. 1996; Sivar. & Philip, Fl. Nilambur 708. 1997 [ZINGIBERACEAE].

Manjella-kua Rheede, Hort. Malab. 11: 21, t. 11. 1692.

The name Manjala [Malayalam script on t. 11] is the colloquial version of Manjal. Today it (turmeric) is called Manjal [Manjalkua is never used]; manja means yellow, a reference to the color of the rhizomes. It is widely cultivated throughout Malabar as a spice.

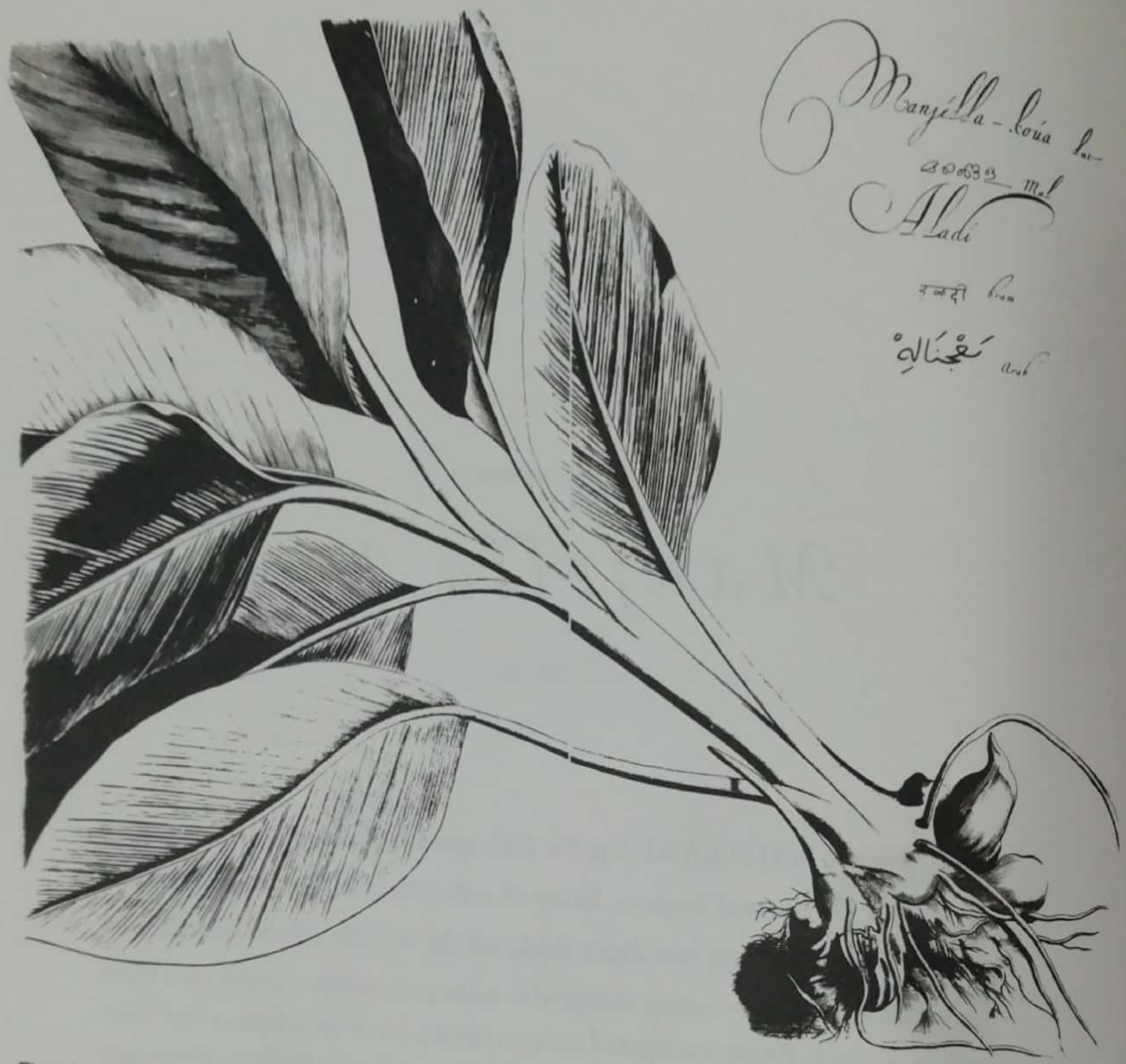


Fig. 11

(Its Uses)

This is cultivated for the sake of profit; for there is no family which does not use this in food. For the Europeans living there, it is in the place of *Saffron*. It is also used for colouring linen. The juice pound with the root or levigated, refreshes the mouth, render the breath pleasing, cheers up, drives away melancholy, purifies blood, excites passion, strengthen the stomach and the cerebrum, removes the obstruction on kidneys and the bladder, stimulates menses, slightly loosens the bowels, heals dropsy (morbid accumulation of watery fluid in any part of the body). In short, with general consent, it is a very excellent plant, endowed with very superior qualities.

Curcuma longa L., Sp. Pl. 2. 1753; Burt, Notes Roy. Bot. Gard. Edinburgh 35: 209. 1977; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 500. 1983; Sasidh. & Sivar., Fl. Thrissur 464. 1996; Sivar. & Philip, Fl. Nilambur 708. 1997 [ZINGIBERACEAE].

Manjella-kua Rheede, Hort. Malab. 11: 21, t. 11. 1692.

The name Manjala [Malayalam script on t. 11] is the colloquial version of Manjal. Today it (turmeric) is called Manjal [Manjalkua is never used]; manja means yellow, a reference to the color of the rhizomes. It is widely cultivated throughout Malabar as a spice.

— — — — —

Inschi
or
Inschi Kua

FIG. 12.



S the sixth species, Brahmins call it *Ale*, this is the very plant which we call *Ginger*, which is again divided into three species. *Inschi*, *Katou Inschi* and *Mala Inschi Kua*. *Inschi* says so much as *firey hot*, burning because other species of *Kua* does not so much pinch or prick the tongue. Is a plant growing to the height of two or three feet. Root is bulbous, fixing itself to the earth by means of many slender, curved, woody, hairy fibres; inside from yellow to white, thick, covered over in length with many filaments and nerves, often three thumbs broad, in the middle thick, a span and more long, but as it is easily broken, which is the reason, when dried up, very seldom is seen as so large. The taste is sweet-bitter, firey, known practically to all.

Shoots germinate in many places from the root; are a digit thick, reed-like, knotted, green inside, provided with a green pith, round, glabrous, shining, simple, not divided, every where so rolled round by the calyx shaped base of the leaves that the stalk is wholly covered by them, which leaves are rising up vertically in the soil, remain standing in the progress of the shoot, bearing reed-like circles. Are of watery, strong, pleasing smell and taste.

The leaves are a span long, two digits broad, slowly tapering to a point, on the lower side provided with a pronounced rib, which leaves a mark (furrow) on the upper side are dark green, glabrous, shining, are of very strong and very pleasing smell, of sweet-bitter taste, not so pinching the tongue as the root.



Fig. 12

The flowers like those of *Tsjana Kua*, arise at the top of the shoot, but differ in it that from the flower-bearing tuber, they are formed not from buds but from spoon-shaped leaves. These leaves as soon as they are affected by air, in that place they are first green, then coral-red, but where they cover themselves,

are yellow, which finally turn reddish, arranged like scales in the best series, are glabrous, shining. Flowers arise underneath the spoon-shaped leaves of the tuber, connected to the middle style, to which the leaflets are also connected, are monopetalous, irregular, four-partite, green-yellow in the beginning enclosed by a white membrane.

One of the petals is very long, erect, hollow, bent towards the inside, two remaining over are narrow and smaller, bent towards the outside, the fourth one is shorter and broader, bisected, with a red margin, sprinkled with yellow dots. In the middle, from the base of the calyx, there comes out a slender, white filament, the ligule of which is oblong, yellow. The smell is very little, but when pound up, it agrees with that of the leaves. They do not survive beyond a day or two days, and quickly perish.

Seeds follow the flowers, enclosed in a thin, white, speckled membrane, where they are connected to the style in an orderless series by means of minute fibres, they lift up from the spoon-shaped leaflets of the tuber, are oblong, depressed round, from one side a bit convex, ploughed in length with parallel furrows, black on the outside, shining, white on the inside, oily, with a fat kernel. Taste and smell like that of the leaves.

From the root, by simple distillation, often an oil is collected, agreeing with the root in all aspects regarding taste and smell, but not so firey or burning, for the rest very limpid, transparent, red, floating upon water.

In the month of April, this plant is sown in well tilled soil, is pulled out from the soil (later), is replanted and thus it is cultivated; one-year old plant is pulled out from the soil, is dried in the sun for fourteen days, is sprinkled with ashes or also lime, and thus is conserved, otherwise it is somewhat liable to corruption by moth (worm), also it is sent (carried) to any place either dried up or pickled in sugar.

It rejects sandy and not well ploughed soil and when more than a year old, is filled with woody filaments. It is also found in forests and deserts, and by its nature survives long, often renews leaves twice or many times, which dry up mostly in the months of January and February.

(Its Uses)

The main use is in the root, which besides that is used in food, but also, taken in, does good in asthma, cough, viscid phlegm, nausea, bad stomach; outwardly applied, it removes pains of joints, gout in the hands and feet. Crushed with water and poured into the eyes, heals giddiness, namely that which happens to women after birth, not well cleansed from menses, which unless cured in time, causes epilepsy, paralysis, mania, nay, death itself very often in those regions.

Zingiber officinale Rosc., Trans. Linn. Soc. London 8: 348. 1807; Burt in Manilal, Bot. Hist. Hort. Malab. 144. 1980; Manilal, Fl. Silent Valley 314. 1988; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 498. 1983; Sivar. & Philip, Fl. Nilambur 714. 1997. -*Amomum zingiber* L., Sp. Pl. 1. 1753 [ZINGIBERACEAE].

Inschi Rheede, Hort. Malab. 11: 23-25, t. 12. 1692.

The name Inchi [Malayalam script on t. 12] is still used. [Inchikua is never used]. It is widely cultivated throughout Malabar as a spice and is widely used in medicine also.



Katou Inschi Kua

FIG. 13.



RAHMINS call *Kolinyane*, is the seventh species, as if you call *wild Ginger*. It wholly agrees with the preceding plant, but neither the smell nor the taste so strong and aromatic and all the parts are bigger; the leaves are very similar to those of

Manja Kua.

(Its Uses)

Also the powers are almost the same as those of *Inschi Kua*, but not of such value or excellence. The natives, for the sake of profit, mix this with the preceding. But it is to be noted that this is neither produced from the seed nor cultivated and therefore, rightly it is to be considered wild.

Kānu-jusbi
കാടുമുള
فَقْعَا مُبْنَجِي
കോന്നു
bram.

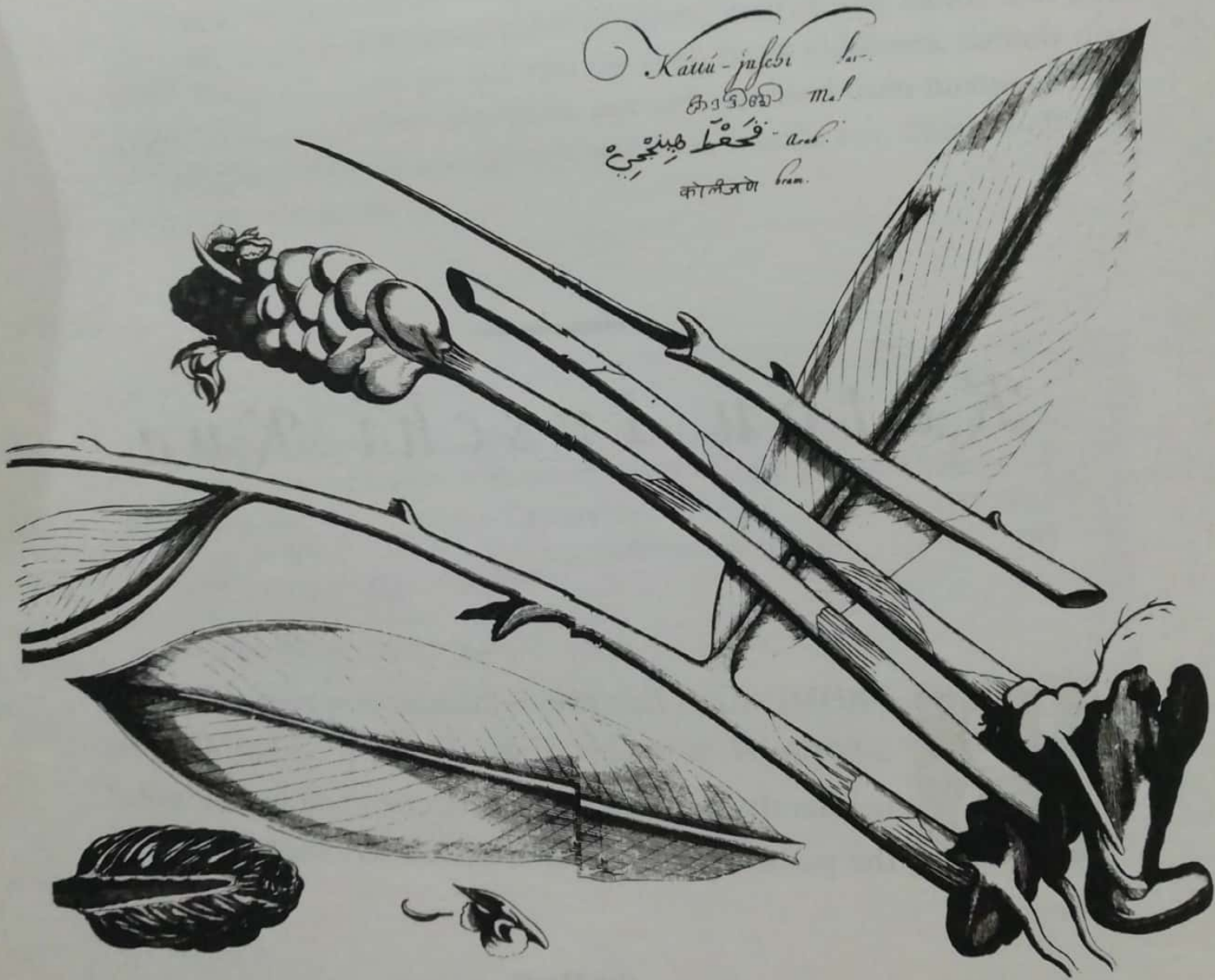
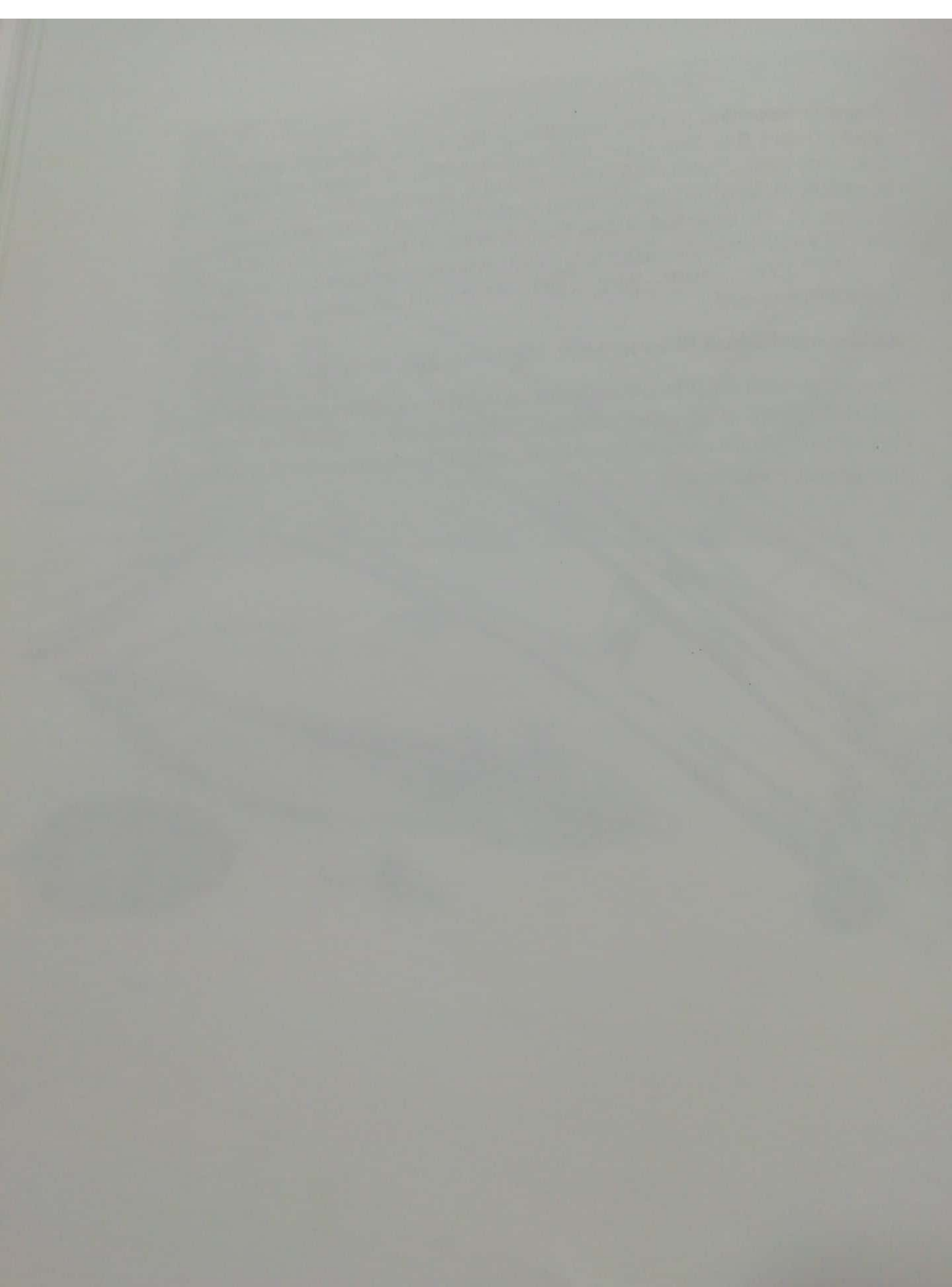


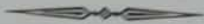
Fig. 13

Zingiber zerumbet (L.) Sm., Exot. Bot. 2: 105, t. 112. 1805; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 182. 1972; Burt in Manilal, Bot. Hist. Hort. Malab. 145. 1980; Manilal & Sivar., Fl. Calicut 287. 1982; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 495. 1983; Sasidh. & Sivar., Fl. Thrissur 464. 1996; Sivar. & Philip, Fl. Nilambur 716. 1997. - *Amomum zerumbet* L., Sp. Pl. 1. 1753. *Amomum sylvestre* Lam., Encycl. 1: 134. 1783, nom. illeg. (incl. *Amomum zerumbet* L. 1753) [ZINGIBERACEAE].

Katou-inschi-kua Rheede, Hort. Malab. 11: 27, t.13.1692.

The name Kattinchi [Malayalam script on t. 13] is not used; kattu means wild and inchi refers to *Zingiber officinalis*. Today it is called Malamkuva; malam (from Mala) means mountain and Kuva refers to *Curcuma zedoaria*. It occurs throughout Malabar.





Mala Inschi Kua

FIG. 14.



THE eighth species of *Kua* and the third of *Ginger*; Brahmins call it *Giri Kolinjane*, as if *mountainous Ginger*, surpassing all the previous ones in height. Root agrees with that of *Inschy* but doubly more thick, watery, vapid, somehow emitting (giving out) the smell and taste of *Ginger*.

The shoots, origin, leaves, like *Katu-Inschi*, but the leaves are much longer and broader, the taste and smell agree with that of the root. The stalk of the flowers, which is the pith of the plant, rises to the height of a cubit from the top of the leaves, is round, and completely covered by a multitude of flowers, which are attached to the stalk by means of short petioles and branch-lets, in fours or fives, which stalk is glabrous, green, shining; of pleasing and delightful smell.

Fruits arise from the foot of flowers, are oblong-round, having the shape of the seeds of the tree *Kavalam*, but a bit longer, first green and glabrous, then red and shining, with a thick, membranous rind, like grapes, inside with thick flesh or kernel, which is red, within which are enclosed the seeds; two

or three in number, white, enclosed with a thin membrane, oblong round, on one side round, hard, black, shining, inside white, oily and sticky, the kernel smacks *amigdalum* (almond); of bitter taste, smell as that of *Ginger*. Arises like *Katu Inschi*, is not cultivated nor is used in food.

Mala-jaychi-kua L.
 മലാജച്ചി കൂടാ *mal.*
 مَلَا جَیْچِی کُودَا *and.*
 കൊളാശ്ശി *ku.*

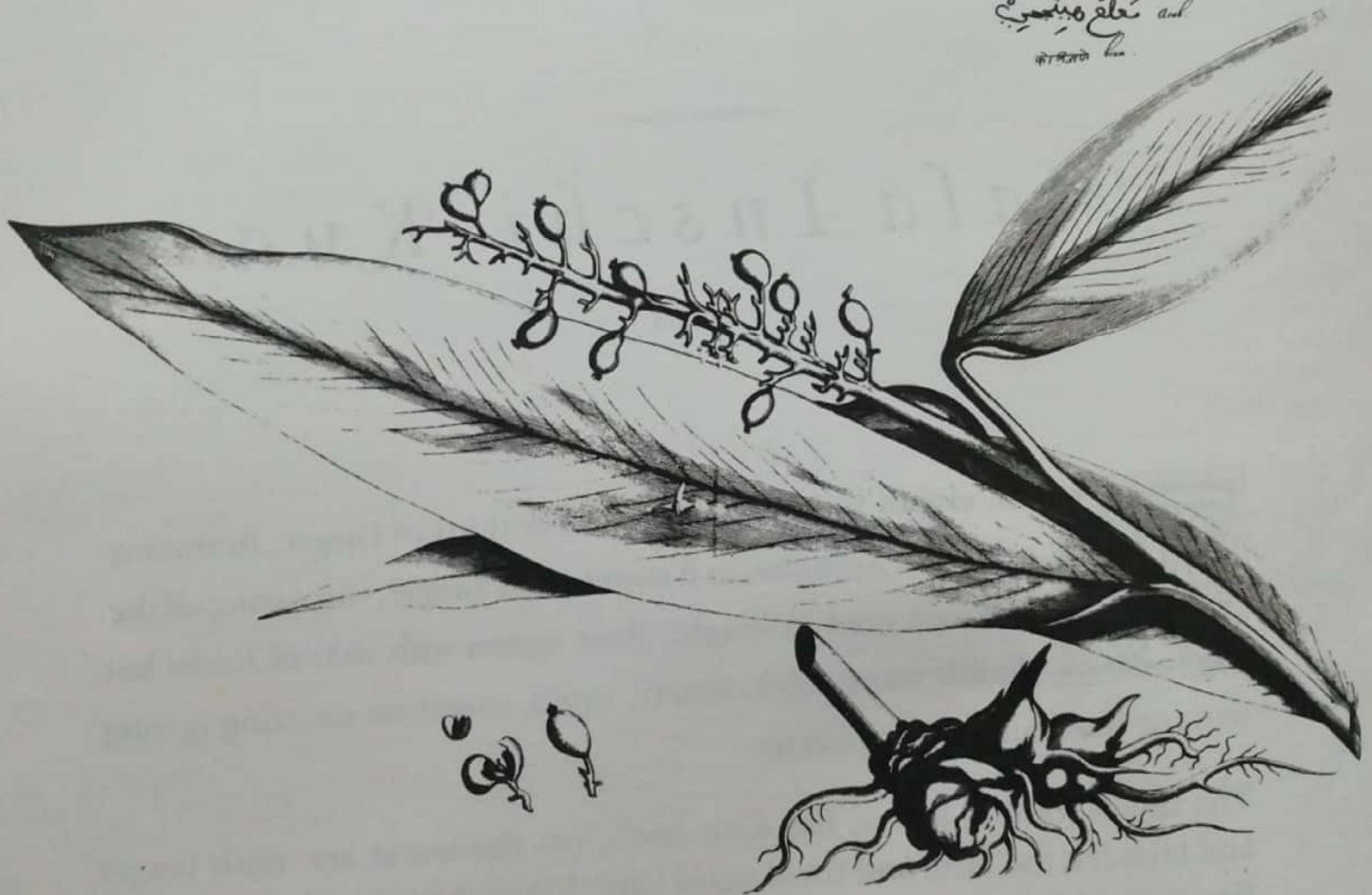


Fig. 14

(Its Uses)

Juice pressed out from fresh root, is given inside and outside for gout; boiled root drives away head-ache; macerated in vine removes all pains of joints originating from cold; reduced to powder, mixed with the juice of *Raphani* and taken in, diminishes stones (in bladder or kidney), wipes off sand from kidneys, stops the colic of women, promotes menses; the juice boiled with wine hastens child-birth, purifies blood; very effectively purges after-birth.

Alpinia nigra (Gaertn.) Burt, Notes Roy. Bot. Gard. Edinburgh 35: 213. 1977; Burt in Manilal, Bot. Hist. Hort. Malab. 145. 1980; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 516. 1983. - *Zingiber nigrum* Gaertn., Fruct. 1: 35, t. 12. 1788. *Heritiera allughas* Retz., Obs. Bot. 6: 17, t. 1. 1791. *Hellenia allughas* (Retz.) Willd., Sp. Pl. 1: 4. 1797. *Alpinia allughas* (Retz.) Rosc., Trans. Linn. Soc. London 8: 346. 1807; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 201. 1972. *Alpinia rheedei* Wight, Icon. 6: 19, t. 2026. 1853 [ZINGIBERACEAE].

Mala-inschi-kua Rheede, Hort. Malab. 11: 29, t. 14. 1692.

The name Malainchi [Malayalam script on t. 14] is still used; mala means mountains (i.e. wild); and Inchi refers to *Zingiber officinale*. It occurs along forest margins in southern Malabar.



Parua-kelanga

FIG. 15.



LS a small plant of two spans in height, growing in shallow waters. The root is glandulous, inside white and watery, giving out very many fibrous roots, which are first white then turn yellow; without any taste. The stalks are slender, simple, fistular, some triangular, some round, green, whitish below.

Leaves arise straight from the tips of triangular stalks, are from each (stalk) imitate a mattock, are oblong-narrow, broader on the inside, with round edges (margins) around the petiole, anteriorly tapering to a point, plain on the surface, smooth in texture, soft, of medium thickness. The rib stands out on the lower side, so also slender vein-lets on both sides two, by which they are striated in length; the stalks are triangular from which arise the leaves, on the inner side of the leaves more plain.

Flowers are seen clustered together and as if in spikes, on the tip of their own round, green, stalk-lets, are white, light-purple; formed of stamens some thick and others slender, which are furnished with purple-red apices, the petals of which are round, small, first placed in a shield-like manner, and

covering the stamens, but the extremity of the stalk-lets, which they surround, getting swollen, are mutually placed apart; in the course of time both the petals and the stamens turn green, which latter ones are changed into round, green buds, armed with a small spine, in which are small, oblong-round seeds, first green, then black.

Parua - Kelangu L.
 പരൂവ കേലാങ്കു
 بچاروع فحالا انغجو
 आयु वन.



Fig. 15

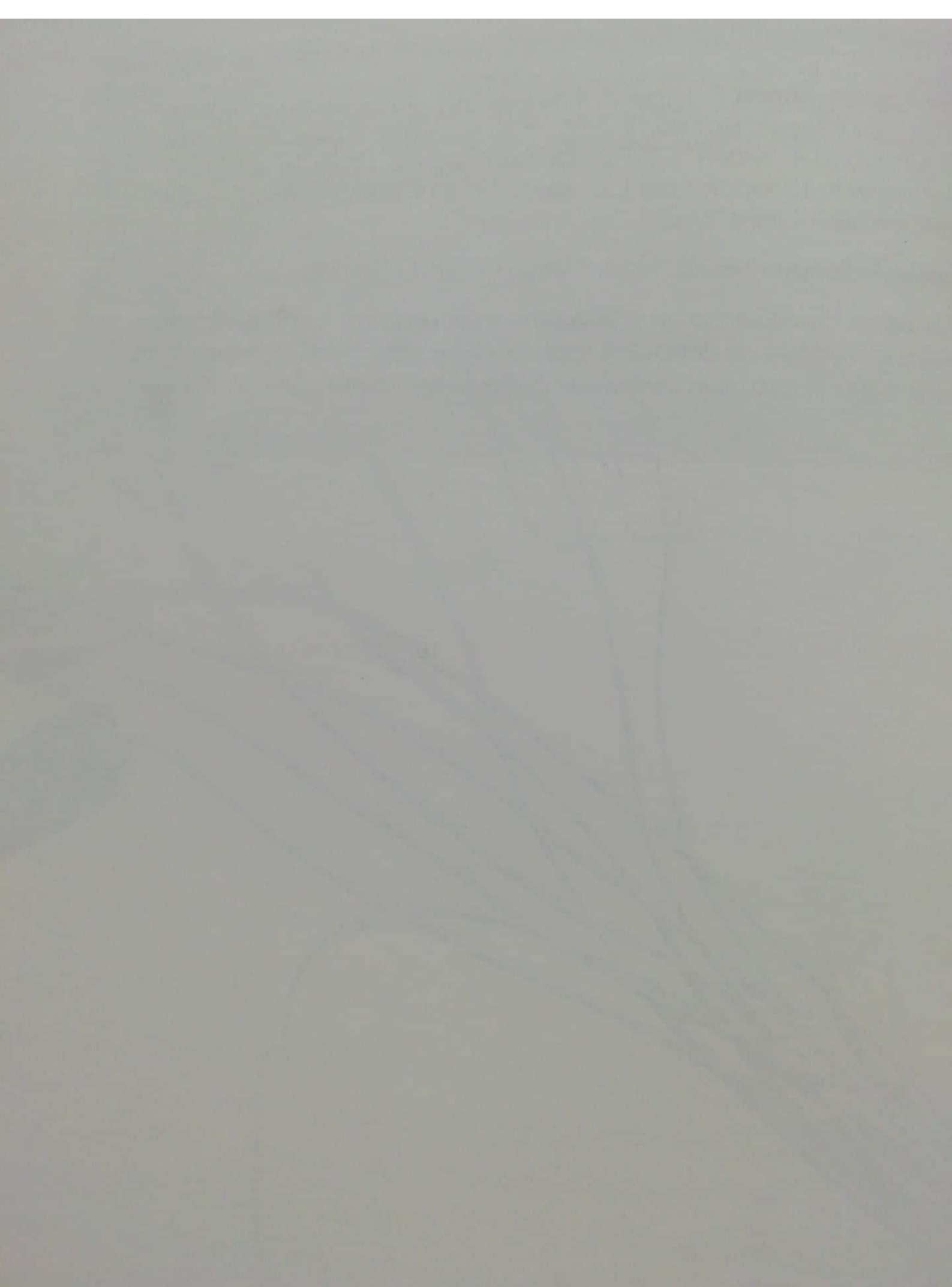
Moreover it is to be added that this plant produces from its glandulous foot from its side, a similar root by which it is propagated.

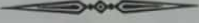
Has no use in medicine.

Aponogeton natans (L.) Engl. & Krause in Engl., Pflanzenr. IV.13, Heft 24: 11. 1906; Bruggen, Blumea 18: 177. 1970; Bruggen in Dassan. Rev. Handb. Fl. Ceylon 6: 4. 1988 ("1987"). - *Saururus natans* L., Mant. 2: 227. 1771. *Aponogeton monostachyos* L.f., Suppl. Pl. 214. 1782 ("*monostachyon*") [APONOGETONACEAE].

Parua-kelangu Rheede, Hort. Malab. 11: 31, t. 15. 1692.

The name Paruvakezhengu [Malayalam script on t. 15] is still used; paruva means spreading in all directions, especially as a creeper; and kezhengu refers to the tuber. It occurs in freshwater ponds in the coastal plains of Malabar.





Nirtsjembu

FIG. 16.



THE plant is aquatic. Root is watery, fleshy, white, fixing itself to the bottom of the water by means of very many fibres.

The leaves are attached erect to the stalks, which come out from the root and are green white, soft, and are spongy inside, with the upper part green, the lower part red-bluish, lance shaped, thick, where they are covered with many pronounced ribs.

Flowers are attached in their own and green involucre, to stalks which spring forth from the root, and are oblong, round, fleshy, white ligules which are with a narrow peduncle, and are pronounced with a thick, round, red node, rough with small buds. No use in medicine.

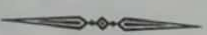


Fig. 16

Theriophonum infaustum N. E. Br., J. Linn. Soc. Bot. 18: 260. 1881; Sivadasan & Nicols., Kew Bull. 37: 282. 1982; Manilal & Sivar., Fl. Calicut 305. 1982; Suresh et al., Taxon 32: 129. 1983; Sasidh. & Sivar., Fl. Thrissur 488. 1996; Sivar. & Philip, Fl. Nilambur 760. 1997. - *Calyptracoryne wightii* Schott, Oesterr. Bot. Wochenbl. 7: 262. 1857, non *Theriophonum wightii* Schott 1858 (= *Theriophonum minutum* (Willd.) Baill.). *Calyptracoryne minuta* Schott, Prodr. Syst. Aroid. 105. 1860, non *Theriophonum minutum* (Willd.) Baill. 1895. *Theriophonum wightii* (Schott) Engl. in DC., Monogr. Phan. 2: 608. 1879, non Schott 1858 [ARACEAE].

Nir-tsjembu Rheede, Hort. Malab. 11: 33-34, t. 16. 1692.

The name Neerchembu (Malayalam script on t. 16) is not used now; neer means water and chembu in general refers to an aroid, particularly *Colocasia esculenta*. No Malayalam name is currently known for this. It occurs along the coastal region of Malabar.



Nelenschena Minor

FIG. 17.



S a small plant, growing in sandy and rocky soils. Root is covered with oblong, white fibres.

Leaves arise in downward bent, white, watery petioles of theca-shaped cavity and are green towards the upper side; are oblong, narrow, with an obtuse tip, sinuous, somewhat shining on both sides. The mid-rib is thick, white, stands out with its vein - lets on the lower side.

In the place of flowers in oblong, foliaceous, theca-shaped, light-green involve (covering), the neck of which is bulged out and turns red, and opens itself more and more with a cleft (opening) towards the lower part, is hidden an oblong, red, style with a yellow head on the top, on the lower foliaceous part of the neck beset with oblong, yellow-red small buds, a little below the head, surround a theca-shaped node, which is oblong and as if filled with grains because of small buds, fleshy, light purple.

(Its Uses)

A drink prepared from the leaves relieves colic pains.



Fig. 17

Theriophonum infaustum N. E. Br., J. Linn. Soc. Bot. 18: 260. 1881; Sivadasan & Nicols., Kew Bull. 37: 282. 1982; Manilal & Sivar., Fl. Calicut 305. 1982; Suresh et al., Taxon 32: 129. 1983; Sasidh. & Sivar., Fl. Thrissur 488. 1996; Sivar. & Philip, Fl. Nilambur 760. 1997. - *Calypetrocoryne wightii* Schott, Oesterr. Bot. Wochenbl. 7: 262. 1857, non *Theriophonum wightii* Schott 1858 (= *Theriophonum minutum* (Willd.) Baill.). *Calypetrocoryne minuta* Schott, Prodr. Syst. Aroid. 105. 1860, non *Theriophonum minutum* (Willd.) Baill. 1895. *Theriophonum wightii* (Schott) Engl. in DC., Monogr. Phan. 2: 608. 1879, non Schott 1858 [ARACEAE].

Nelenschena minor Rheede, Hort. Malab. 11: 33-34, t. 17. 1692.

The name Nilamchena [Malayalam script on t. 17] is not used for this species now but is used for *Typhonium flagelliforme* (Lodd.) Bl. Nilam means terrestrial (land) and chena refers to *Amorphophallus*. It occurs along the coastal region of Malabar.



S c h e n a

FIG. 18.



HERE are four species of this plant. *Schena*, *Nelenshena*, *Cattu-Schena*, *Mulen-Schena*. The first one is called *Surno* by the Brahmins, likes sandy soil, of three or four feet in height. Root very big (large) plain, round, almost a span long, thick, nearly a cubit broad, on the upper part, around the stem, surrounded by white fibres in all directions, inside thick, succulent, sticky; and with from white to light yellow flesh, of watery and somewhat punching taste, is used as food, and is sold in market places.

A single stalk springs up from the root where it is white, divided on the top into three branches which send out here and there smaller branches and sometimes spread asunder into two thicker ones; and both stalks and branches are tender, soft, glabrous, light green, white, variegated with dark-green, small-waves (undulations), inside watery, with a white, spongy pulp, dropping out from tubes a clean, light reddish liquid, which on falling on the hand, somewhat punches it, and thicken in air.

The leaves which cover the branches and shoots of the stalks, into which it is divided, are oblong-round, narrow, cuspidate above, light green, arising from the lower part of the stalk making (rendering) the stalk winged with a narrow



Sena L.

മെറ്റി മല

فليج Arab

ಸೆನಾ kann

Fig. 18

lobe, punches and tears the tongue. Nerve-lets go out from the thick mid-rib, in parallel and oblique trail, which (nerve-lets) turning back from the margin leaves in that place a fringe together with the mid-rib standing out on the lower part and striating the upper part.

Flowers are down before the father (ancestor) and arise from the root in an oblong head, which comes out with a foliaceous, thick, white covering, which is inside light red and are yellow buds placed around the head, the lower covers of which are longer and the upper ones smaller; when they have faded away, the stalk comes out clothed with leaves. Is seen only in the rainy season; during the summer season dies with the lower part of the root, the upper part of which is surrounded by fibres and remains and again grows into a thick root.

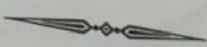
(Its Uses)

The bulb, cut into parts, dried in the sun, pulverised, is given to those suffering from black bile.

Amorphophallus paeoniifolius (Dennst.) Nicols., Taxon 26: 338. 1977; Manilal & Sivar., Fl. Calicut 305. 1982. - *Arum paeoniifolium* Dennst., Schlüssel 13, 21, 38. 1818 ("*paeoniaefolium*"); Manitz, Taxon 17: 499. 1968. *Arum campanulatum* Roxb., Pl. Corom. 3: 68. 1819, nom. illeg. (incl. type of *Arum paeoniifolium* Dennst. 1818). *Arum rumphii* Gaud. in Freyc., Voy. Uranie 2: 43. 1826, t. 27. 1827, nom. illeg. (incl. type of *Arum paeoniifolium* Dennst. 1818). *Amorphophallus paeoniifolius* var. *campanulatus* (Decne.) Sivadasan, Taxon 32: 130. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 40. 1988 ("1987"). - *Amorphophallus campanulatus* Decne., Nouv. Ann. Mus. Hist. Nat. Paris 3: 366. 1834. *Amorphophallus dubius* Bl., Rumphia 1: 142. 1837. *Amorphophallus campanulatus* var. *campanulatus* and var. *blumei* Prain, Bengal Pl. 2: 835 (repr. ed. 1963). 1903 [ARACEAE].

Schena Rheede, Hort. Malab. 11: 35-36, t. 18. 1692.

The name Chena [Malayalam script on t. 18] is still used for this unarmed variety of the wild species. It is widely cultivated in Malabar for its starchy corms used as a vegetable.



Mulenschena

FIG. 19.



LS a species of *Schena*; *Caleri-Surno* in the language of the Brahmins, taller than the others, rising up to a height of almost five feet, in the greatest part agreeing with *Schena*; but the root is more large, the stalk more thick, almost split into many branches, clothed with more numerous leaves; in the bark, which on the outside is light green, white, sprinkled with dark green waves, beautifully variegated, covered with thick, rough and bulging out outgrowth (buds), when cut dropping copious quantity of water; sharply punching and tearing the tongue.

(Its Uses)

The root crushed and taken in with goat's milk, strengthens powers.



Fig.19

Amorphophallus paeoniifolius (Dennst.) Nicols. var. **paeoniifolius**; Sivadasan, Taxon 32: 128, 130. 1983; Nicolson in Dassan., Rev. Handb. Fl. Ceylon 6: 39. 1988 ("1987"); Sasidh. & Sivar., Fl. Thrissur 484. 1996; Sivar. & Philip, Fl. Nilambur 750. 1997 [ARACEAE].

Mulenschema Rheede, Hort. Malab. II: 37, t. 19. 1692.

The name Mullenchena [Malayalam script on t. 19] is not commonly used; mullu means spine or thorn [prickly] and Chena refers to the unarmed cultivated variety of *A. paeoniifolius*. It is more commonly called Kattuchena, kattu meaning wild. It occurs in uplands of Malabar.



Nelenschena Major

FIG. 20.



Is the second species of *Schena*; *Cayeri-Surno* according to the Brahmins, grows in sandy soil, greatly liking wet soil, of one foot in height. Root white, a fist thick, dense, watery, giving out very many white, hairy fibres which later turn yellow and are corrugated into rings, very sharply burning the tongue, giving out new eyes from itself for the propagation of plants similar to itself.

Many stalk-lets arise from the root, are slender (tender) round, striated inside, green, whitish towards the root and bellow-like (balloon-like) with which follicles they mutually envelop each other, more or less a span long.

The leaves shoot up from the tip of the stalks, are oblong, smacking an oblong roundly cuspidate mattock, with round margin, tapering to a tip, slender, plain, dark-green, greatly shining on the lower part. The mid-rib, with transverse ribs somewhat stands out on the lower side.

Flowers are seen in their own stalk-lets, which arise from the root among the stalks of the leaves, are round, green, striated in length with vein-lets, hiding

an oblong style within the tailed follicle, at the base of which they are placed around; their petals are white, anteriorly bifid, bent towards the inside, the margins of which have red colour.

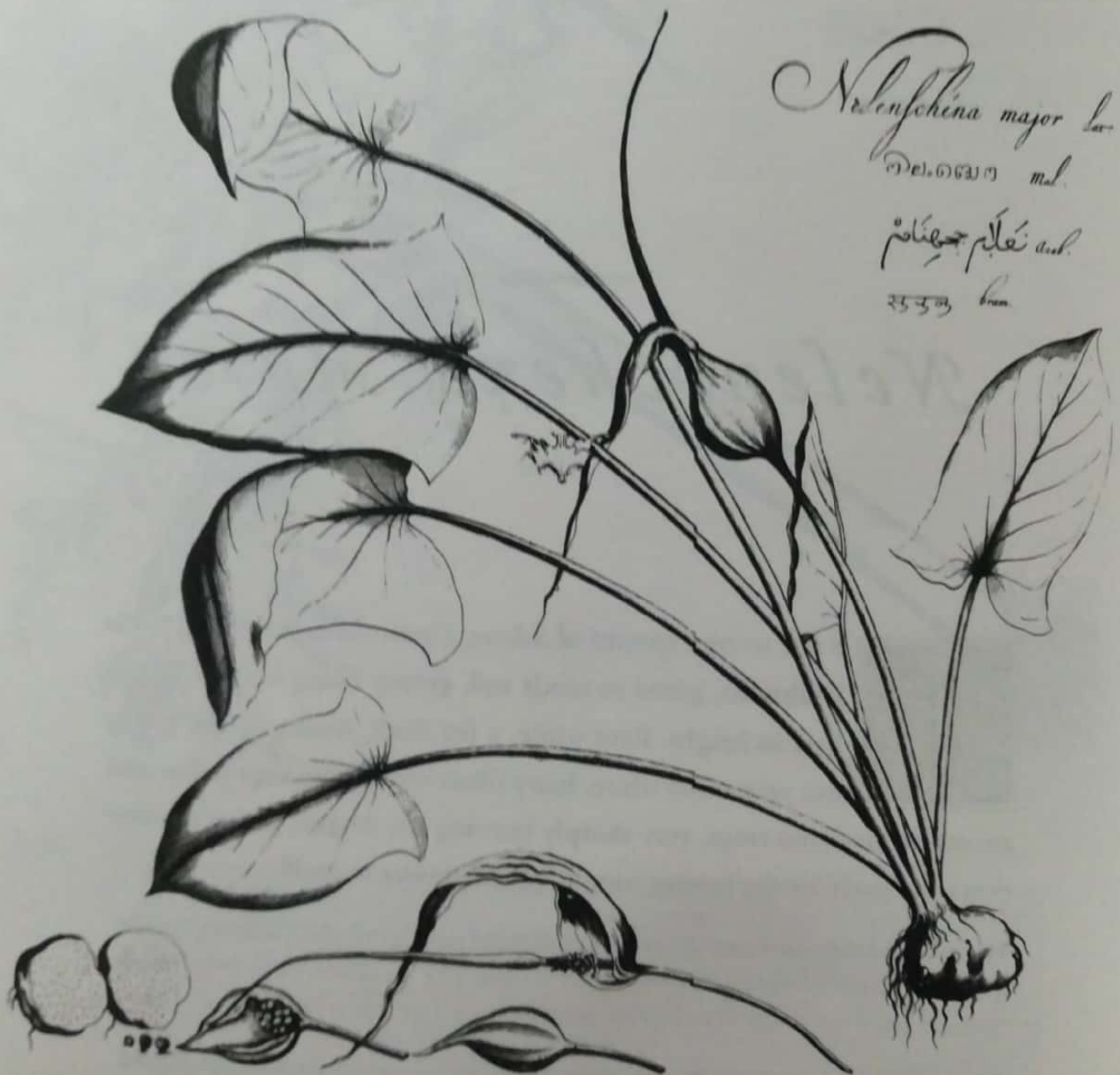


Fig. 20

Seeds come out from nodules in the lower part of the base of the style, which is surrounded by very many nodules compactly placed among themselves,

are oblong-round, first green, on that side by which they project out of the nodules, more narrow and white. This plant is seen except in the rainy season.

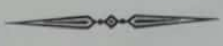
(Its Uses)

The bulb reduced to powder, taken with butter and *sugar*, refreshes the stomach.

Typhonium flagelliforme (Lodd.) Bl., Rumphia 1: 134. 1837; Nicols. & Sivadasan, Blumea 27: 489. 1981; Manilal & Sivar., Fl. Calicut 305. 1982; Suresh et al., Taxon 32: 129. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 65. 1988 ("1987"). -*Arum divaricatum* L., Sp. Pl. 966. 1753, non *Typhonium divaricatum* Bl. 1834, nom. illeg. (= *Typhonium roxburghii* Schott). *Arum flagelliforme* [Roxb., Hort. Beng. 65. 1814] Lodd., Bot. Cab. 4: t. 396. 1819. *Arum cuspidatum* Bl., Catal. 101. 1823. *Typhonium cuspidatum* (Bl.) Bl. in Decne., Nouv. Ann. Mus. Hist. Nat. Paris 3: 39. 1834 [ARACEAE].

Nelenchena major Rheede, Hort. Malab. 11: 39, t. 20. 1692.

Nilamchena [Malayalam script on t. 20] is still used; nilam meaning terrestrial (land); and chena refers to *Amorphophallus paeoniifolius*. It occurs in the coastal plains of Malabar.



Katu-schena

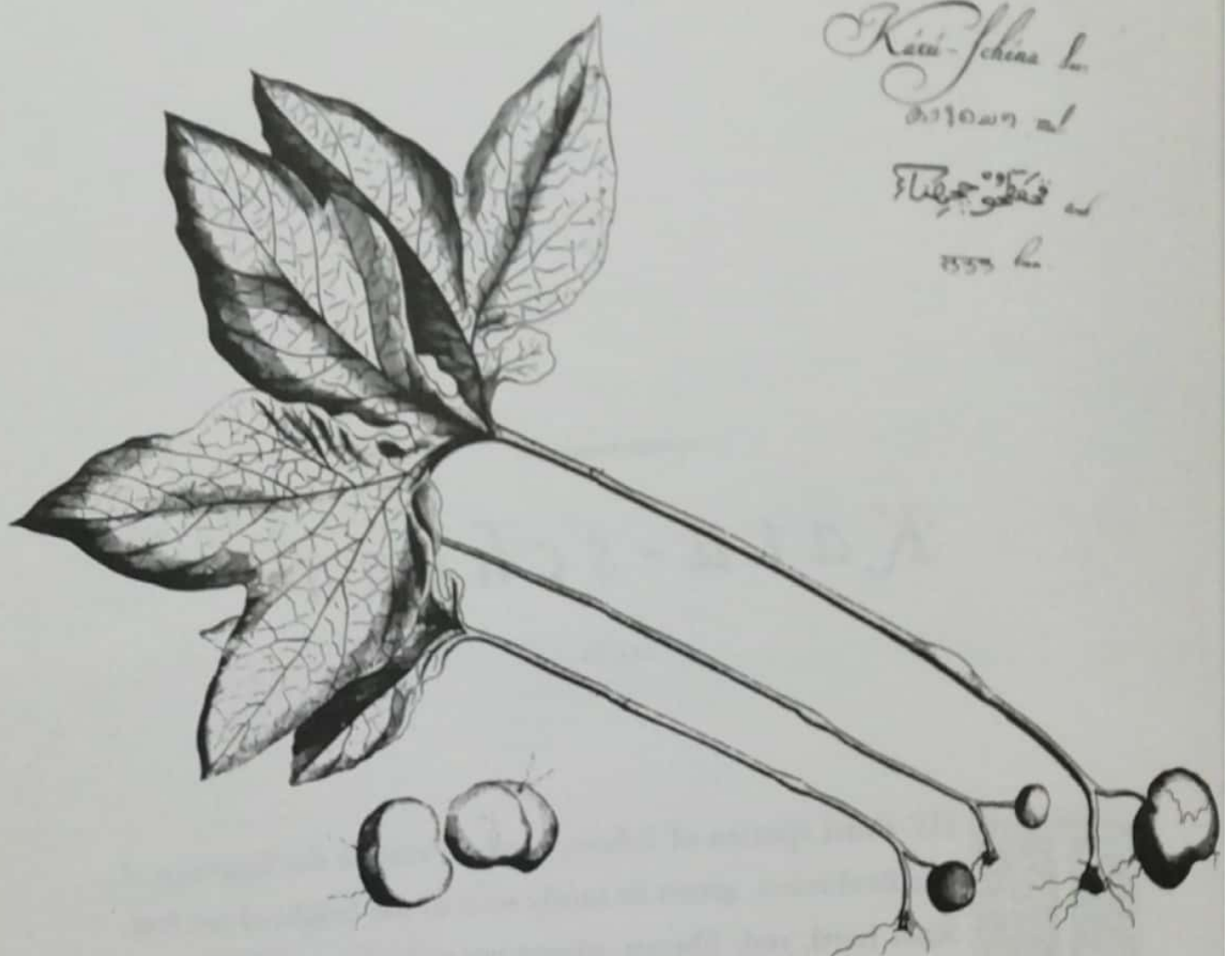
FIG. 21.



THE third species of *Schena*; *Cajuro-Surno* in the language of the Brahmins, grows in sandy soils to the height of two feet. Root hard, red, fibrous, giving out a single stalk, and in the space of two transverse digits, sending down a short foot, to which a new root is born, which, the first one being dead, remains for the propagation of the new plant.

The stalk is simple, light green, striated, watery, not divided into stalk-lets, lower down in the space (interval) of three or four transverse digits, is white and swollen, more slender above the swelling; from its tip there come out there leaves, two lateral ones of which are divided into two larger lobes, to which are appended still smaller lobes, with round margin, drawn to a tip, are slender, soft, on both sides light green; burning the tongue. The mid-rib with lateral ones is light green and white, and stands out on the lower side, striates the upper.

Is without flowers.



Kai-china L.

മലബാർ

കൈ-ചിന

855 L.

Fig. 21

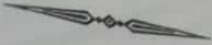
(Its Uses)

The bulb crushed and in concoction given with oil stops the flow of haemorrhage; taken with some milk excites appetite.

Tacca leontopetaloides (L.) Kuntze, Rev. Gen. Pl. 704. 1891; Drenth, Blumea 20: 375. 1972. -*Leontice leontopetaloides* L., Sp. Pl. 313. 1753. *Podophyllum trilobatum* J. Burm., Fl. Malab. 6. 1769. *Tacca pinnatifida* J. R. & G. Forster, Char. Gen. Pl. 35, t. 35. 1775. *Arum gracile* Roxb., Hort. Beng. 65. 1814, nom. illeg. (incl. type of *Podophyllum trilobatum* J. Burm. 1769) [PONTEDERIACEAE].

Katu-schena Rheede, Hort. Malab. 11: 41, t. 21. 1692.

The name Kattuchena [Malayalam script on t. 21] is still used. In a wide sense, this name includes wild aroids with tubers; kattu means wild and Chena refers to *Amorphophallus paeoniifolius*. The species is now rare but has been collected from the foothills of Nellianpathy Hills of the Palghat District of Malabar.



Weli Ila

FIG. 22.



THE plant is aquatic. The root is thick, clothed in a circle with thick, long, red, hairy fibres, giving out here and there from the side more oblong, more thick, knotted fibres for the production of new plant, is inside with white, thick, juicy flesh.

Many green stalks spring forth from the root, some to the top of which a leaf is attached, others which on their tip bear a flower, all are spongy, tubular, soft, tender, inside white, watery, when cut oozing out a somewhat viscous liquid, those in which leaves are seen, from one part they are of white colour gradually tapering towards the leaf, round about the node (?) above, a little below, on one side broadly and deeply hollowed out, receiving, within the hollow, as a theca, flower-bearing, which are round, somewhat plain and slender, with almost equal thickness, but not so tall, surrounded by a thin, white, transparent membranous covering, which is covered outside with two fringes.

Leaves are oblong and very large, gradually tapering towards the anterior part into a tip (point) from the posterior part, towards which it projects itself

more broadly. On both sides stretched out into a tip, deeply cut by means of curve or a corner (angle) in between two tips or bases of leaves, surrounded in the margins with a fringe, of tough and thin texture, soft, with a very level,

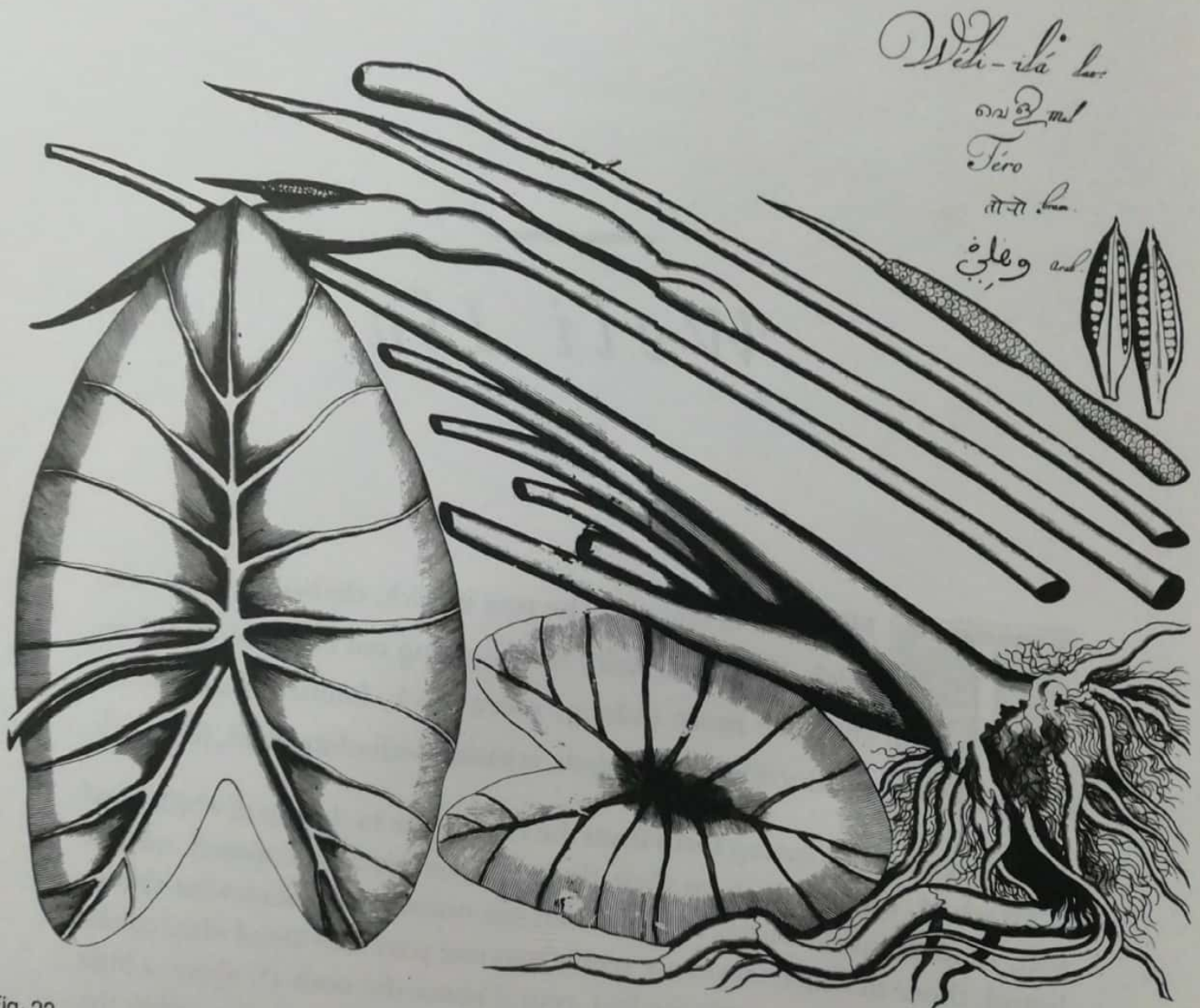


Fig. 22

plain surface, of lively, full, light bluish colour, on the lower side, of more clear colour, of burning taste, but when cooked is a food stuff. The rib, with lateral ones stands out greatly on the lower side.

At the tip of their own stalks wrapped in the theca or yellow, reddish or saffron covering, almost a span long covering (involucre) is hidden an oblong,

thick, hard head, beset with globular or compact small, yellow-red or saffron small buds, in the margins; in the neck of the head, which is more short and more thick, and hidden by a swollen, green theca, are seen buds much larger and of irregular shape, in a compact order, below the flocculous globules, there are the rudiments of fruits and arise together with the florets; and these buds in the neck are first wholly white, later, when they become more swollen, green, with which colour they are tinged on one side, the tip still being white, some more quickly while others more slowly, so that they are seen placed here and there in between green ones with buds; when they are mature, they are plain, marked in the middle at the top with a small tip (point), of a colour turning more deeply reddish and orange from yellow, are soft, succulent, and then are of slight sweet taste and are eaten.

The middle head or the style so also the unripe buds of the fruits are of burning taste; when these buds become mature, the head falls away from the neck. In each bud or fruit there are more or less nine or ten seeds hidden, are round-oblong, cuspidate, from whitish to light red, shining a little.

(Its Uses)

The leaves crushed, roasted, and tied into a knot, give warming (fomentation) to parts affected by numbness from the compression of nerves; shavings of fruits mixed with the eggs of red ant, give the same effect. The bulbs of the root heals bleeding gonorrhoea.

Colocasia esculenta (L.) Schott in Schott & Endl., Melet. Bot. 18. 1832; Manilal & Sivar., Fl. Calicut 304. 1982; Suresh et al., Taxon 32: 131. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 54. 1988 ("1987"); Sasidh. & Sivar., Fl. Thrissur 485. 1996; Sivar. & Philip, Fl. Nilambur 754. 1997. -*Arum esculentum* L., Sp. Pl. 965. 1753. *Arum colocasia* L., Sp. Pl. 1753. *Caladium nymphaeifolium* Vent., Mag. Encycl. 4: 471. 1801. *Colocasia nymphaeifolia* (Vent.) Kunth, Enum. Pl. 3: 37. 1841 [ARACEAE].

Weli-ila Rheede, Hort. Malab. 11: 43-44, t. 22. 1692.

The name Veli [Malayalam script on t. 22] is not used; veli (a colloquial version of velli) means silver, alluding to its shining, lively, light bluish colour of the leaves; ila means leaf. Today it is called Chembu. It occurs in the wild and is also cultivated.



Karin-pola

FIG. 23.



THIS also is an aquatic plant, the root of which is oblong, thick, with whitish and watery flesh, furnished with oblong, round, white, thick fibres. The stalks, to which leaves are attached, arise from the root, are somewhat plain on the inside, especially about the base, more narrow in the upper part, forming the rib of the leaves, are dark green, turning lightly red, spongy and watery inside, on the upper side of deep and shining colour, on the lower side, of light colour.

The leaves are oblong-round, tapering into a tip (point) in the margins somewhat covered, soft, smooth, with plain and glabrous surface, striated with veins obliquely ascending from the mid-rib, the rib is thick, standing out high on the upper surface.

Flowers arise in their own stalks, which also come out from the root, and are green, spongy, watery, somewhat plain, bulging out with a thick neck above, and are reddish there, are large, conical in a spoon shaped manner, with a curled tip, fleshy, on the outside rough, purple-red, on the inside wrinkled, blood-red.

From a reddish ball-like globule, placed in the bottom of the neck there arises a white style, capped with a yellow, oblong, grainy head, passing through a head like, spongy, reddish theca beset with furrows, gaping in the middle. The globule, which appear in the bottom of the neck when the flowers have withered away, turns red, is furnished with coils (spirals) covered near the trail of the spiral with pronounced granules, plain above and turning reddish.



Fig. 23

In this seeds are enclosed in numerous fleshy, green cavities, hidden very near to the bark, in each cavity one, placed transversely in the globule in length, placed around a fleshy white style.

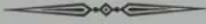
(Its Uses)

Bath prepared from this plant refreshes all the heat of the body.

Lagenandra ovata (L.) Thwaites, Enum. 334. 1864; Suresh et al., Taxon 32: 127. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 77. 1988 ("1987"). - *Arum ovatum* L., Sp. Pl. 967. 1753. *Caladium ovatum* (L.) Vent., Mag. Encycl. 4: 471. 1801. *Cryptocoryne ovata* (L.) Schott in Schott & Endl., Melet. Bot. 16. 1832 [ARACEAE].

Karin-pola Rheede, Hort. Malab. 11: 45, t. 23. 1692.

The name Karimpola [Malayalam script on t. 23] is not used; karim means black and pola means sheath, an apt expression for the dark spathe. No Malayalam name is currently known for this plant. It occurs in marshy places in uplands of southern Malabar.



Pongati

FIG. 24.



Is an aquatic plant, whose root is very fibrous and white. The stalk arising from the root is watery, spongy, light green, giving out from the side new stalks, inside with a large cavity, with a dark green pith, from which, membranous partition walls run towards the bark.

Leaves are attached to the stalk by means of light green peduncles, plain on the inside, are oblong-narrow, drawn into a tip, pale, soft, slender, smooth, of deep greenness on the upper side, on the lower of light greenness, where they are striated with many pronounced nerves from the mid-rib; of displeasing taste.

Flowers are seen many clustered together at the tip of the stalks, in oblong head, the buds are round, which when open are five-petalled and white.

Seed-bearing globules, which are round, green, somewhat cuspidate, almost enclosed within the petals of flowers, follow them. In them are placed numerous, sand like seeds in a compact heap, like the eggs of fish, on the

surface of the green globule, which is divided into two by a middle partition.
The lower buds of flowers open first, upper ones later.

There is top silence on the powers.



Pongatia L.
 മലബാർ മരം mal.
 يانغيا طري arab.

Fig. 24

Sphenoclea zeylanica Gaertn., Fruct. 1: 113, t. 24, f. 5. 1788; Airy Shaw in Fl. Males. I, 4: 27. 1948; Manilal & Sivar., Fl. Calicut 155. 1982; Sasidh. & Sivar., Fl. Thrissur 258. 1996. - *Gaertnera pangati* Retz., Obs. Bot. 6: 14 ("24"). 1791. *Pongatium indicum* Lam., Tabl. Encycl. 1: 444. 1792; Poir. in Lam., Encycl. 5: 564. 1804, nom. illeg. (incl. type of *Sphenoclea zeylanica* Gaertn. 1788). *Sphenoclea pongatium* DC., Prodr. 7: 548. 1839, nom. illeg. (incl. type of *Sphenoclea zeylanica* Gaertn. 1788) [SPHENOCLEACEAE].

Pongati Rheede, Hort. Malab. 11: 47, t. 24. 1692.

The name Pongathi [Malayalam script on t. 24] is still used. Pongu refers to sponge, alluding to the spongy stalks. It occurs on the coastal plains of Malabar.





Kurka

FIG. 25.



ROWS in sandy soils. Root is round, bulbous, very fibrous, hairy, in the fibres furnished with new bulbs, inside thick, watery. The stalks are four cornered, and light green.

Leaves arise from the sides of the stalks, in pairs, in a decussate order, on long, plain, thick petiole, furrowed on the inside and somewhat downy, are oblong, round, minutely serrate, having in the margin, beset with very minute and hirsute hairs, thick, soft, green. From the mid-rib, lateral ribs run out obliquely towards the anterior end, accompanied by veins which are covered all over in a trellis manner, striating the upper part and standing out on the lower.

Nothing is known about its powers.

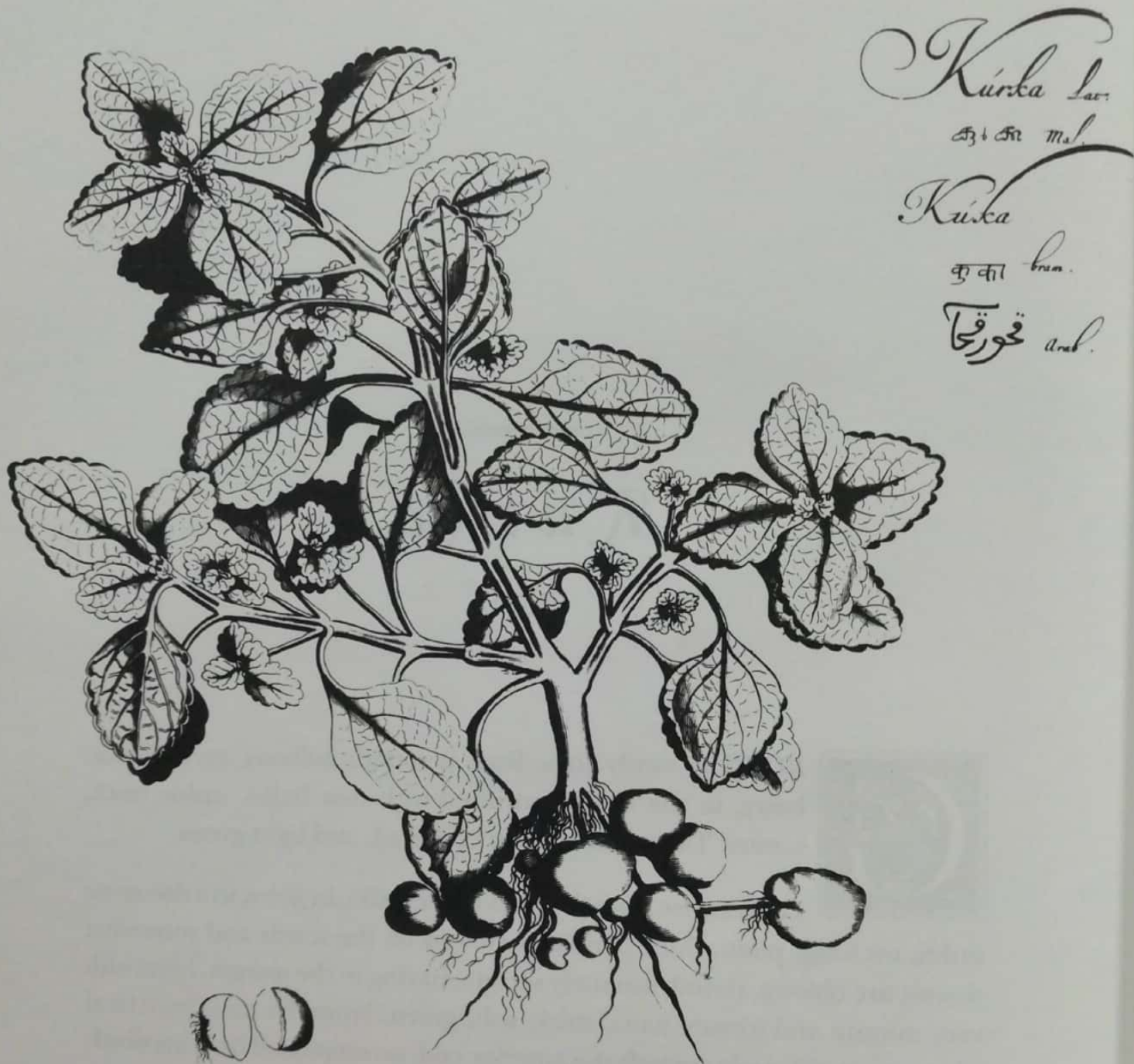
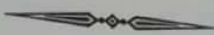


Fig. 25

Coleus rotundifolius (Poir.) A. Chev. & Perrot in A. Chev., Veg. Ut. Afr. Trop. Franc. 1: 101, 119. 1905; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 139. 1982. - *Nepeta madagascariensis* Lam., Encycl. 1: 712. 1785, non *Coleus madagascariensis* (Pers.) A. Chev. 1953. *Germanea rotundifolia* Poir. in Lam., Encycl. Suppl. 2: 763. 1812. *Plectranthus rotundifolius* (Poir.) Spreng., Syst. Veg. 2: 690. 1825; Keng in Fl. Males. 1, 8: 388. 1978. *Solenostemon rotundifolius* (Poir.) J. K. Morton, J. Linn. Soc. Bot. 58: 272. 1968 [LAMIACEAE].

Kurka Rheede, Hort. Malab. 11: 49, t. 25. 1692.

The name Koorka [Malayalam script on t. 25] is still used. Koorka is from kuria, meaning small, alluding to its small roundish tubers. It is cultivated as a vegetable in Malabar.



Ambel

FIG. 26.



HERE are different species of *Ambel*, *Areca-Ambel*, *Cit-Ambel*, *Nedel-Ambel*, *Ottel-Ambel*, and all are aquatic plants. The first one is called *Saluca* in the language of the Brahmins. The Root is white, covered with white, fistular fibres with watery taste; for the propagation of a new plant, it brings forth a root, which they call *Kelangu*, it becomes a palm long, is thick, black on the outside, white inside, of watery and slightly astringent taste, is used as food. Stalks are round, fistular, simple, without nodes, light green.

Leaves and flowers arise on their own stalk-lets and are attached to their tips. They (leaves) lie upon water, are oblong-round, with round margin anteriorly more slender however, with a round obtuse tip, with the posterior part, by which they run out far from the stalk, cut almost up to the stalk by a straight incision, in the margin cut in an arched manner with round teeth, on the inside with plain, glabrous surface, on the upper side of lively, shining greenness on the lower of red or of liver colour, on the outside they have a thick, very pronounced mid rib, giving out here and there transverse branch-

lets, which again divide themselves into numerous branches (arms) and send branch-lets into the apices of the teeth, five on both sides.

Flowers which when open stand out outside the waters, are like rose, many petalled, the petals being oblong-round narrow, anteriorly smoothly drawn

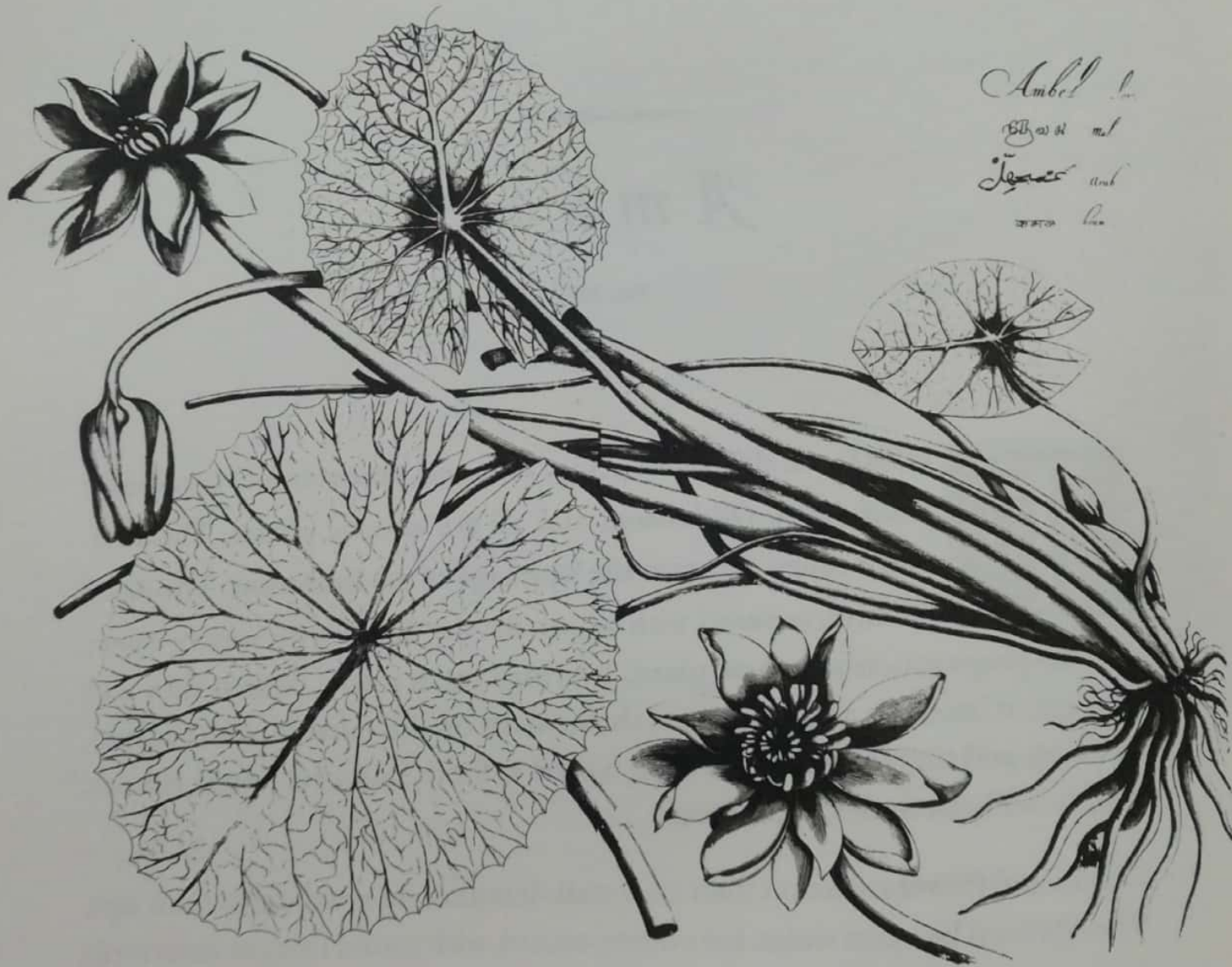


Fig. 26

into a tip, of white and light rose colour, on the inside with light and white colour, with deeper colour below, are furnished with a brush of long stamens, which are broader, plain, yellow, placed around a middle, short, broad, round style, broader on the upper part and bent towards it (style) of which those in

the outer series jut out more than other, are more erect and less bent, and the inner ones are very near to the style, not so long, more curved towards the style, the style in its base is marked with a rose on the upper surface, is formed of small, yellow short stamens, greatly bent and narrow towards the centre; the outer leaves which enclose the flowers in the bud are also oblong in shape, similar to the petals of flowers, on the outside, of green colour and striated in length by reddish veins, the margin of which are also red, the inner part is more light and white. The buds are round and cuspidate.

Numerous seeds are placed in the style, separated mutually from themselves in their own cells by means of membranous and folded partition walls, are small, round, first whitish, but when mature like that of *Nasturtium* but more dark.

Nymphaea pubescens Willd., Sp. Pl. 2: 1154. 1799; Maheshwari in Manilal, Bot. Hist. Hort. Malab. 125. 1980; Manilal & Sivar., Fl. Calicut 31. 1982. - *Castalia sacra* Salisb., Parad. Lond. 1: sub t. 14. 1806, nom. illeg. (incl. *Nymphaea pubescens* Willd. 1799). *Castalia pubescens* (Willd.) Sm. in Rees, Cycl. 6: no.4. 1819 [NYMPHAEACEAE].

Ambel Rheede, Hort. Malab. 11: 51-52, t. 26. 1692.

The name Aambel [Malayalam script on t. 26] is still used for this species and *N. nouchali* (sensu *N. stellata* Willd.). It grows in freshwater ponds throughout Malabar.

Areca Ambel



Yet another species, called *Areca Ambel*, whose petals of flowers are a bit larger, of less rose colour, more white, also the style, around which are placed the stamens in the base is marked with a plain rose, formed of yellow ribs, which run from the middle node, which is in the centre of the foot (base) to its round edge.

(Its Uses)

The bulbous root of the first one and of this is given in decoction for dysuria (difficulty or pain in passing urine). The seeds heal the ardour of bones, when pickled with *sugar* and eaten. The leaves, together with the leaves of *Ottel-Ambel* crushed together and boiled with butter, gives an errhinum (sternuatory, that cuses sneezing) for the pain of eyes.

Rheede mentioned "*Areca Ambel*" in which the flowers are less rosaceous and more white. This probably is also *Nymphaea pubescens* (*teste* Backer & Bakh., Fl. Java I: 148. 1964) that has flowers opening in the morning and closed at night. [no Figure]

Cit-Ambel

FIG. 27.



IT-AMBEL, as if you say *small Ambel*; according to the Brahmins *Casturi Camalla*, agrees with the first, is only a smaller species, with more slender stalks, smaller leaves, so also smaller seeds.

There is also yet another species of the same name, differing only in it that the petals of flowers are either bluish, or red or of another colour.

(Its Uses)

Flowers crushed in decoction are used for dysuria (difficulty or pain in passing urine); the seeds used with *sugar* are a suitable remedy for diabetes.

Nymphaea nouchali N. Burm., Fl. Ind. 120. 1768; Backer & Bakh., Fl. Java I: 149. 1964; Maheshwari in Manilal, Bot. Hist. Hort. Malab. 125. 1980; Manilal & Sivar., Fl. Calicut 31. 1982. - *Nymphaea malabarica* Poir. in Lam., Encycl. 4: 457. 1798. *Nymphaea stellata* Willd., Sp. Pl. 1153. 1799. *Castalia stellaris* Salisb., Parad. Lond. 1: sub t. 14. 1805, nom. illeg. (incl. *Nymphaea stellata* Willd. 1799) [NYMPHAEACEAE].

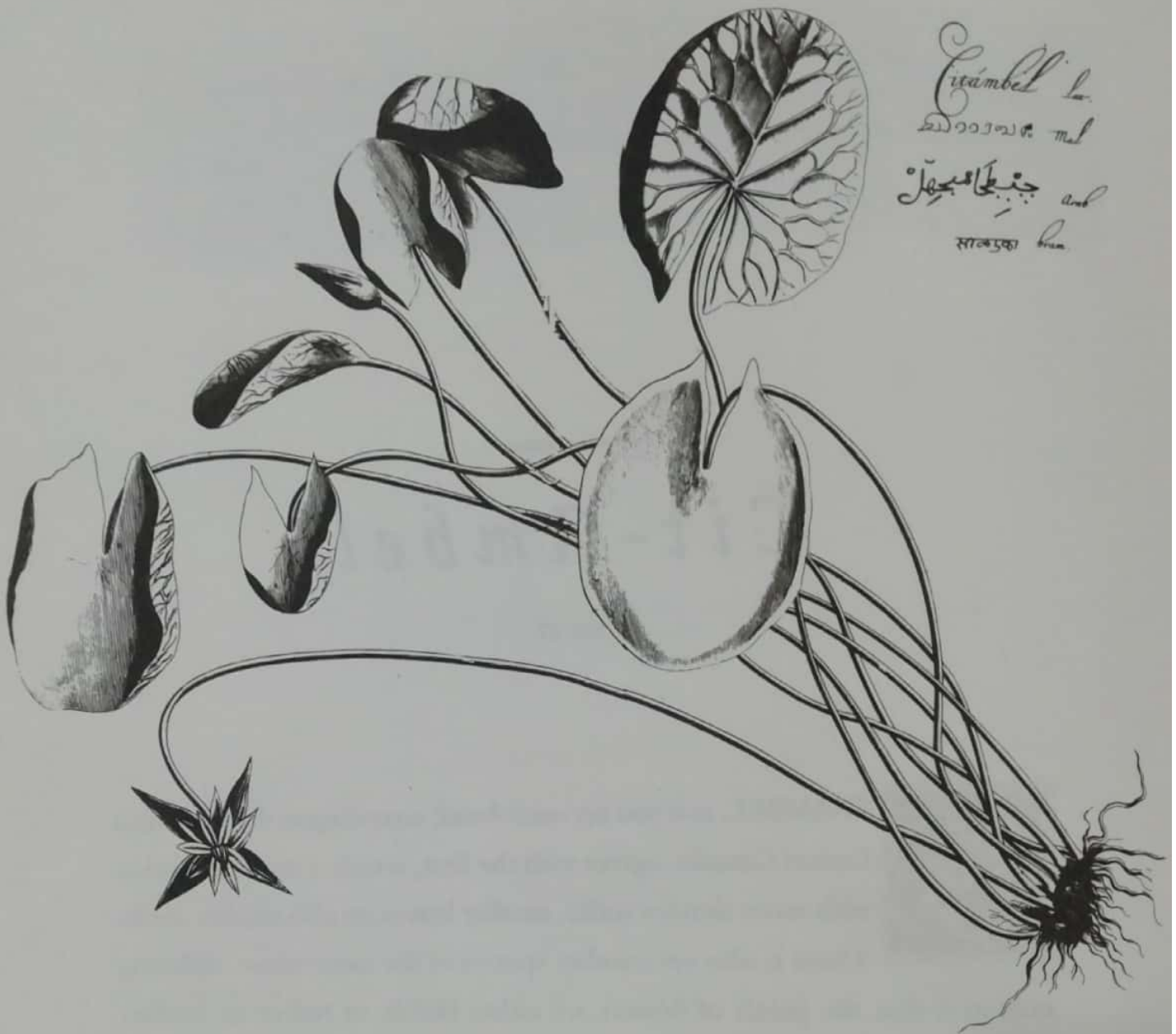


Fig. 27

Cit-ambel Rheede, Hort. Malab. 11: 53, t. 27. 1692.

The name Chittaambel [Malayalam script on t. 27] is still used; chitt means small (referring to the small sized flowers;) and Ambel refers to *Nymphaea*. Today this species, as well as *N. pubescens* Willd., is more commonly called simply as Ambel. It occurs in freshwater ponds throughout Malabar.



Nedel Ambel

FIG. 28.

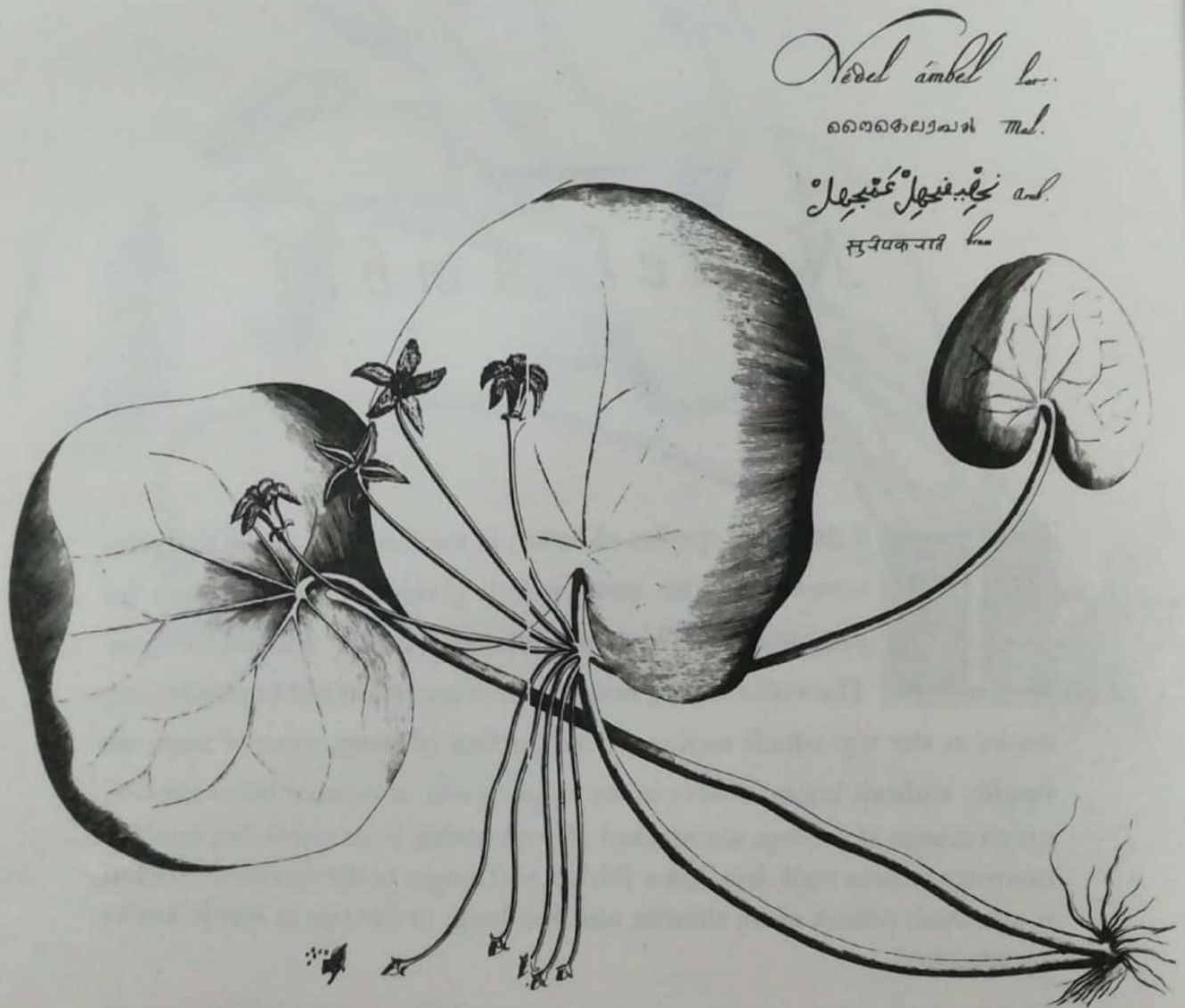


Is the third species of *Ambel*, in the language of the Brahmins *Commodu*. The root, which gives out smaller ones for propagation, is covered with round, fistular, and whitish fibres. The stalks arising from the roots are round and fistular, bearing leaves at the top which recline on the surface of water, some of them are simple, without knots, others in the upper parts, somewhat below the leaf, which is seen at the top, are marked off with nodes, from which they send out many transverse stalk-lets, some thicker and longer to the tips of which a leaf is attached, others more slender and less long, to the tips of which flowers are attached.

The leaves themselves are smaller than those of *Cit-Ambel*, with a more round shape or less oblong, incised towards the petiole with round margins not straight, like *Ambel* striated with less thick ribs from the petiole, with uneven margin, not however provided with teeth in an arched manner.

Flowers when open, stand up above water, are totally white, five petalled, with oblong round, cuspidate, slender petals, spread out like a star, with the

interior part covered from one side, by another petal which is produced from the middle, like a star, with the interior part covered from one side, by another petal which is produced from the middle, like a lobe, on the inside, beset wholly with thick, white, long filaments. In there are ten small, slender stamens, furnished with yellow, striated apices, five of them stand out above



Nodol ambel L.

നൊളാമ്പലം Mal.

نُؤُولُ اَمْبَلِ and.

सुनीयकजारी L.

Fig. 28

others and with them forming a green, cuspidate capitulum in the middle, the seed-bearing capsule, at the tip furnished with a small knob of four buds. The calyx is five - foliate, which (leaves) are small, oblong - narrow, cuspidate, bright green, Flower buds are round and cuspidate.

After the flower heads, seed-bearing capsules come out, they are cuspidate, containing in themselves numerous round seeds which are first white, but when mature, take the colour of the seeds of *Nasturtium* just the same as those of *Ambel*.

(Its Uses)

The whole plant crushed and cooked in butter and taken in, is an antidote against the sting of snake called *Cobra Capella*.

Nymphoides indica (L.) Kuntze, Rev. Gen. Pl. 2: 429. 1891; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 207. 1981; Manilal & Sivar., Fl. Calicut 175. 1982; Sivar. & Philip, Fl. Nilambur 436. 1997. - *Menyanthes indica* L., Sp. Pl. 145. 1753. *Villarsia indica* (L.) Vent., Choix Pl. 9. 1803. *Villarsia rheedei* Kostel., Allg. Med.-Pharm. Fl. 3: 1031. 1834 ("rheedi"). *Limnanthemum indicum* (L.) Griseb., Gen. Sp. Gent. 343. 1838 [MENYANTHACEAE].

Nedel-ambel Rheede, Hort. Malab. 11: 55-56, t. 28. 1692.

The name Neithalambel [Malayalam script on t. 28] is still used. But, more commonly it is now called Neyytaal-ambel. Nei (or ney) means ghee (clarified butter); taal is leaf; and Ambel generally means *Nymphaea*-like plant. The allusion is to the shining or oily appearance of the leaves. It occurs in [freshwater] ponds throughout Malabar.



Tsjeroea Cit Ambel

FIG. 29.



S a small species of *Ambel*, the leaves and the stalks and the root, in every part agree with those of *Cit-Ambel*.

The flowers are small and simple, five petalled, oblonge round, star-shaped, on the inside, in the middle of each petal, are winged lengthwise with foliaceous flap, in the mouth beset with yellow hairs. In there are five short stamens which come out in the inter spaces of petals, are furnished with erect and white apices, with five stamens placed in-between, with which from the middle of the mouth, arises a green, cuspidate, globule like a style. The calyx is five foliate, which leaves are decussately placed in between (interposed) the petals of flowers.

(Its Uses)

From the bulb of the root in water, cooked in burnt wine and butter, an ointment is prepared against bleeding. From the same fried with crabs on land (land crabs) in oil, a medicine is made against the molesting head ache, namely smeared on the temples. From the same with both *Sandal* and milk, a drink is made to check the burning of the body.

Tsieroëa - citámbe lac.
കിറ്റാമ്പെ മല.

Cumudi
കുമുദി bram.

جيتھاوہلہ arab.

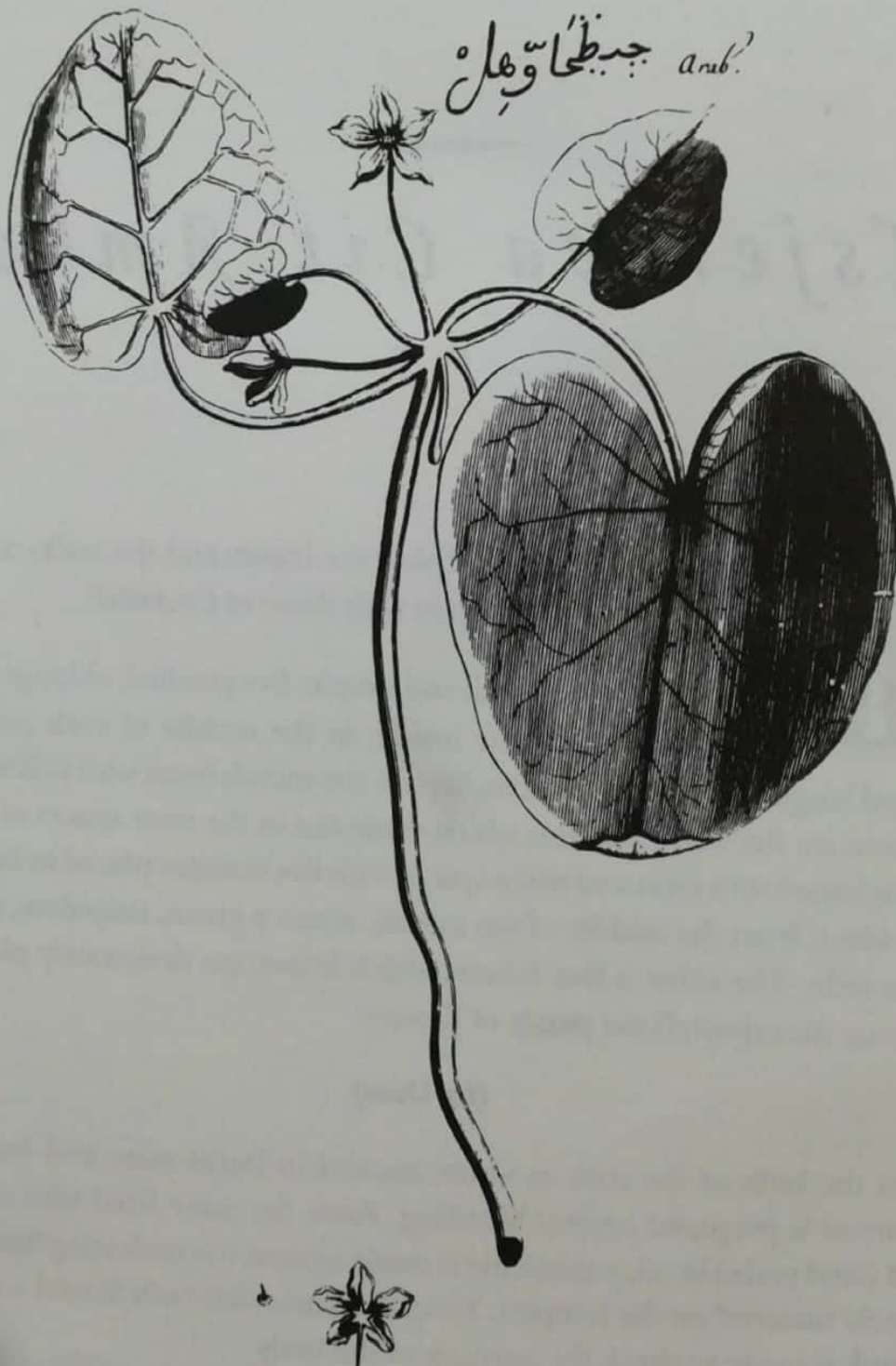
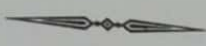


Fig. 29

Nymphoides hydrophyllum (Lour.) Kuntze, Rev. Gen. Pl. 2: 429. 1891; Abeyw., Ceylon J. Sci., Biol. Sci. 2: 211. 1959; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 208. 1981. - *Menyanthes hydrophyllum* Lour., Fl. Cochinch. 105. 1790. *Menyanthes cristata* Roxb., Pl. Corom. 2: 3, t. 105. 1798. *Villarsia hydrophyllum* (Lour.) Roem. & Schult., Syst. 4: 181. 1819. *Limnanthemum cristatum* (Roxb.) Griseb., Gen. Sp. Gent. 342. 1838. *Limnanthemum hydrophyllum* (Lour.) Griseb., Gen. Sp. Gent. 348. 1838. *Nymphoides cristatum* (Roxb.) Kuntze, Rev. Gen. Pl. 2: 429. 1891 [MENYANTHACEAE].

Tsjeroea-citambel Rheede, Hort. Malab. 11: 57, t. 29. 1692.

The name Chittambel is all that appears in Malayalam script on t. 29, a name referring to *Nymphaea nouchali*. Tsjeroea (cheria) Chitambel means *little Chitambel*. It occurs in freshwater ponds throughout Malabar.



Tamara

FIG. 30.



HERE are three species of this plant, *Tamara*, *Bem Tamara*, *Culy Tamara*; the first one is called *Pada Mactu* by the Brahmins, is an aquatic plant. The root sent deep down is thick, somewhat hard, fistular, permeated by broad tubes, white, knotted lower down, giving out from which, as if from primary root, new stalks come out; these are simple, round fistular, green, sprinkled with spots.

Each leaf is attached to its stalk, is very large, rotund bent towards the inside, thick, soft, very smooth like velvet, on the upper side dark green, but when looked at obliquely hyaline, or of green-blue colour, on the lower light green. The ribs, which are light green and shining, come out from the tip of the stalk like radii from a centre, which after a certain space (interval) each one is split into two or three branches, are taken very near to the margin in an arched or ant-like (?) manner. Among these, pronounced only on the lower side, transverse veins mutually ingrafted are seen.

Flowers which are attached to their own stalks, are very large, formed of compact petals, of rose-white colour, of pleasing smell, emitting the smell of

"Anysum", the petals themselves are oblong-round, with round margins drawn into a tip, striated with veins in length, from the claws, of rose colour, on the upper part more deep, the outer ones are larger and broader than the inner ones; these are cut into two, three or more tips and are furnished with yellow

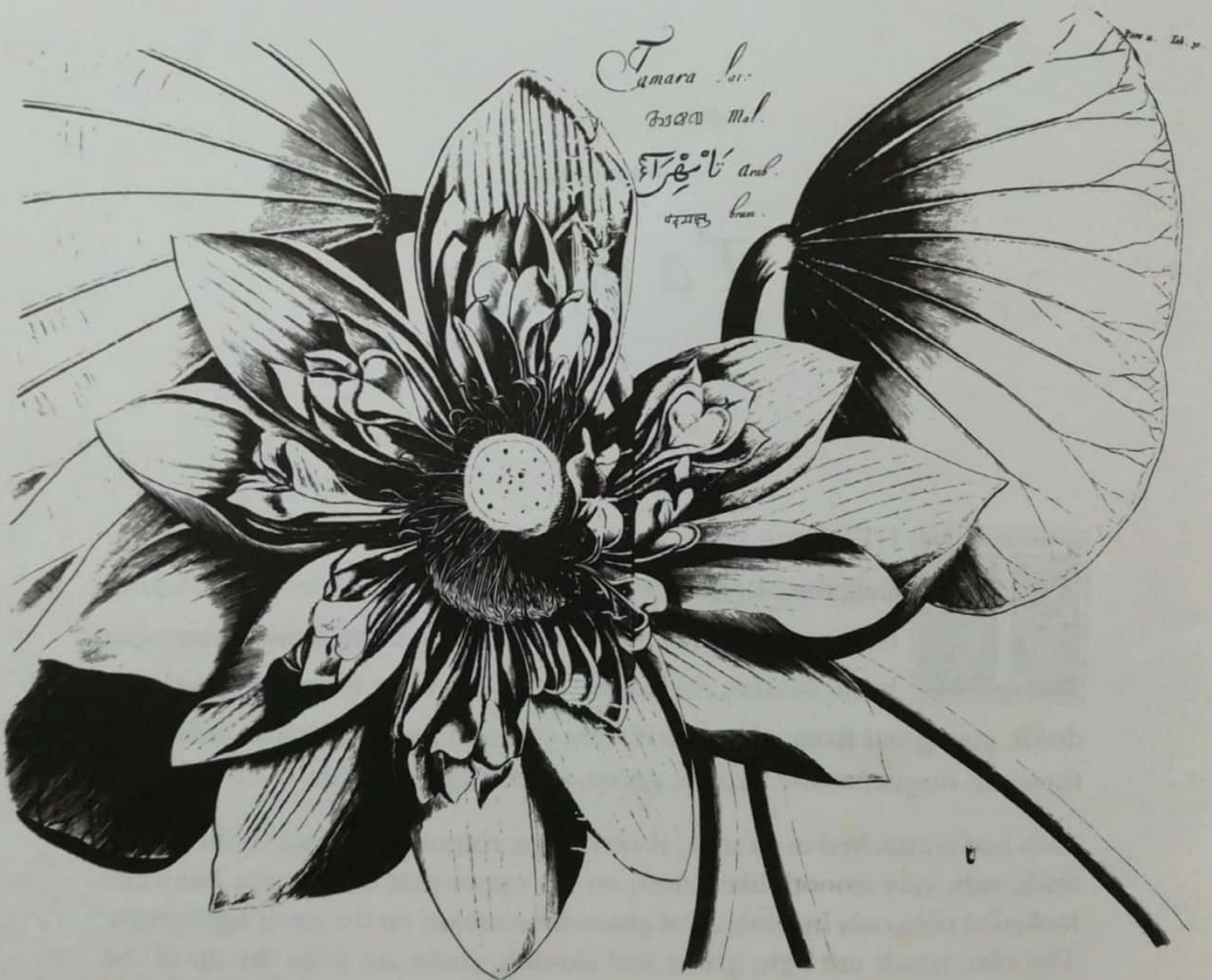


Fig. 30

stamens which stand out from the corners (angles) of the incision with white apices or knobs. In the middle of the flowers is a thick brush of long, plain, saffron stamens, provided at the tip with oblong and white knobs, similarly white is produced, it is placed around a round yellow style, with a plain and

broad surface at the top, more narrow towards the lower parts spongy inside, towards the upper base hiding seeds in their own cavities or cells, like plain round buds (eyes) stand out of it.

The seeds themselves are first white, light yellow, cylindrical in shape, then approaching an elliptical shape and enlarging their cells, more and more bulging out (rising up) from the upper base (foot) of the style, are black, dark.

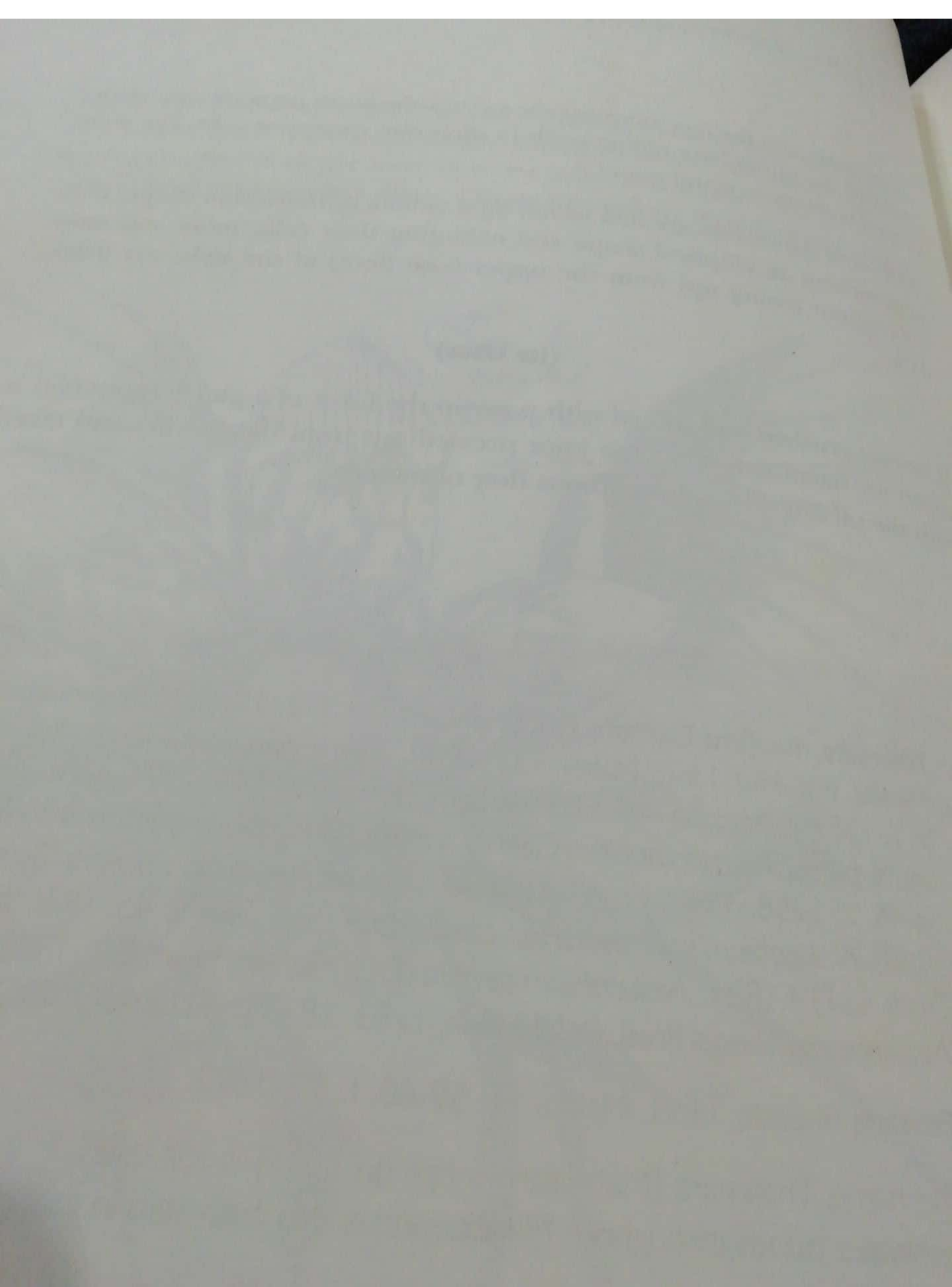
(Its Uses)

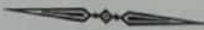
The root crushed and mixed with *sugar* in the form of a pickle (preserve) is given for haemorrhages. The juice pressed out from the flowers and taken with the oil *Zirgelim*, stops copious flow of menses.

Nelumbo nucifera Gaertn., Fruct. 1: 73, t. 19, f. 2. 1788; Maheshwari in Manilal, Bot. Hist. Hort. Malab. 123. 1980. - *Nymphaea nelumbo* L., Sp. Pl. 511. 1753. *Nelumbo indica* Poir. in Lam., Encycl. 4: 543. 1797, nom. illeg. (incl. type of *Nelumbo nucifera* Gaertn. 1788). *Nelumbium speciosum* Willd., Sp. Pl. 2: 1258. 1799, nom. illeg. (incl. type of *Nelumbo nucifera* Gaertn. 1788). *Nelumbium speciosum* var. *tamara* DC., Syst. Veg. 2: 45. 1821; DC., Prodr. 1: 114. 1824. *Nelumbium tamara* (DC.) Sweet, Hort. Brit. 14. 1827. *Nelumbium rheedei* Presl, Rel. Haenk. 1: 83. 1835 [NELUMBONACEAE].

Tamara Rheede, Hort. Malab. 11: 59-60, t. 30. 1692.

The name *Thaamara* [Malayalam script on t. 31] is still used. It occurs in freshwater ponds throughout Malabar and is also cultivated in gardens for its flowers.





Bem Tamara

FIG. 31.



HIS plant similarly aquatic, differs from *Tamara* only in it that the flowers are a bit larger; then petals are white, of somewhat more strong smell.

After a more careful observation we deem that the following have to be added; namely that the leaves of *Tamera* and *Bem Tamera* are of two feet in diameter; the stalks are fistular, watery very near to the root, in the upper parts milky inside, from these white, very thin, numerous filaments, like cobweb (strands) are drawn out from this juice by interlacing and are stretched (drawn out) in length, are sufficiently stable (strong). From the foliaceous stalks only four are pervaded by larger tubes, are provided with numerous smaller tubes towards the side; when these stalks are cut very near to the navel or centre, the ribs, which are counted twenty one from the navel, correspond to the lateral tubes of the stalks, are pervaded with tube - like cavities; but in the middle of the cut navel, stalks, namely a fleshy matter appears, one upper part of which is narrow towards the side of the leaf.

Moreover the seven flower-bearing stalks are also pervaded by hollow tube-lets and in their middle is the style from which arise the partition walls of tubules and it is pervaded by a single tube in the middle.

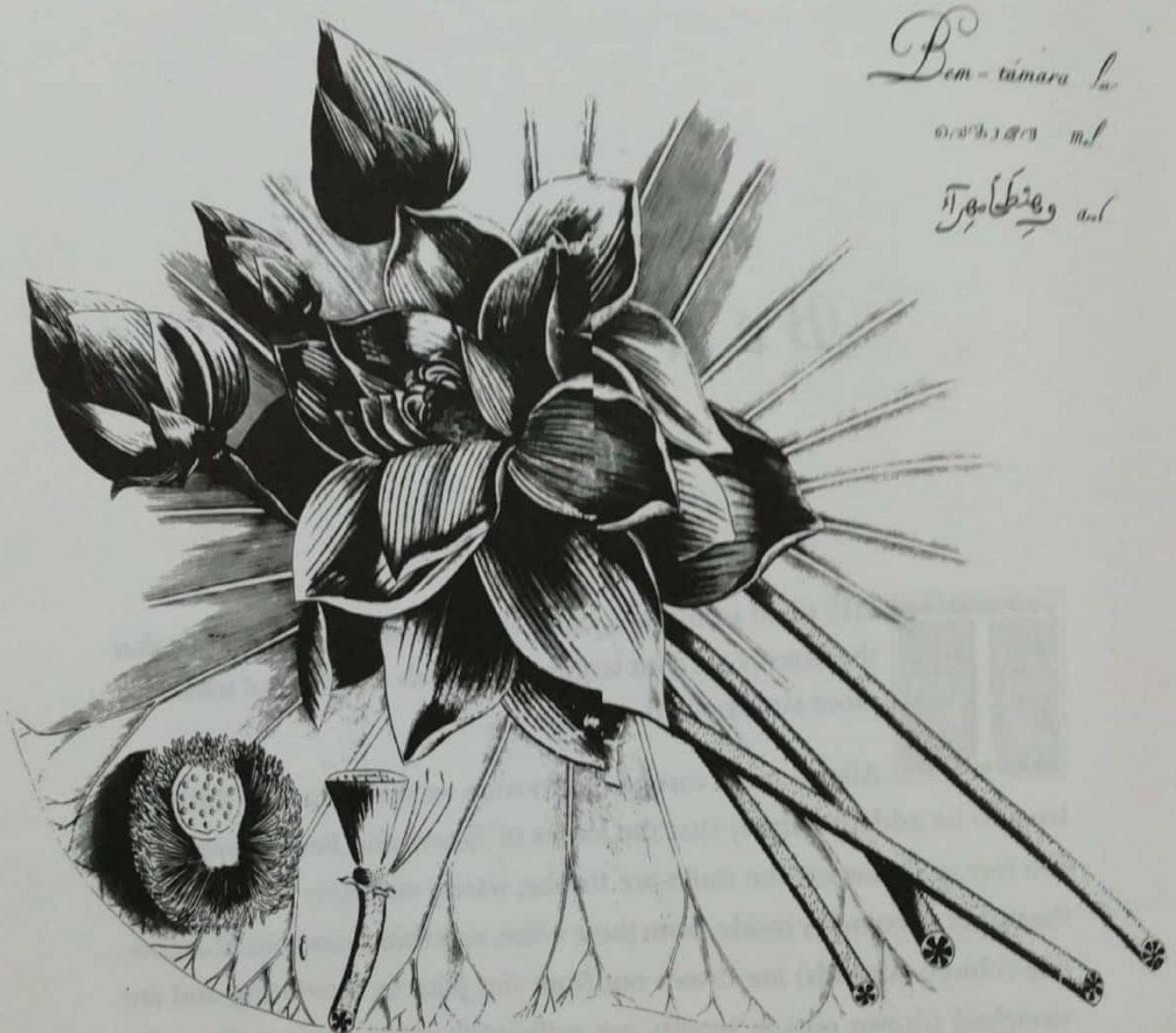


Fig. 31

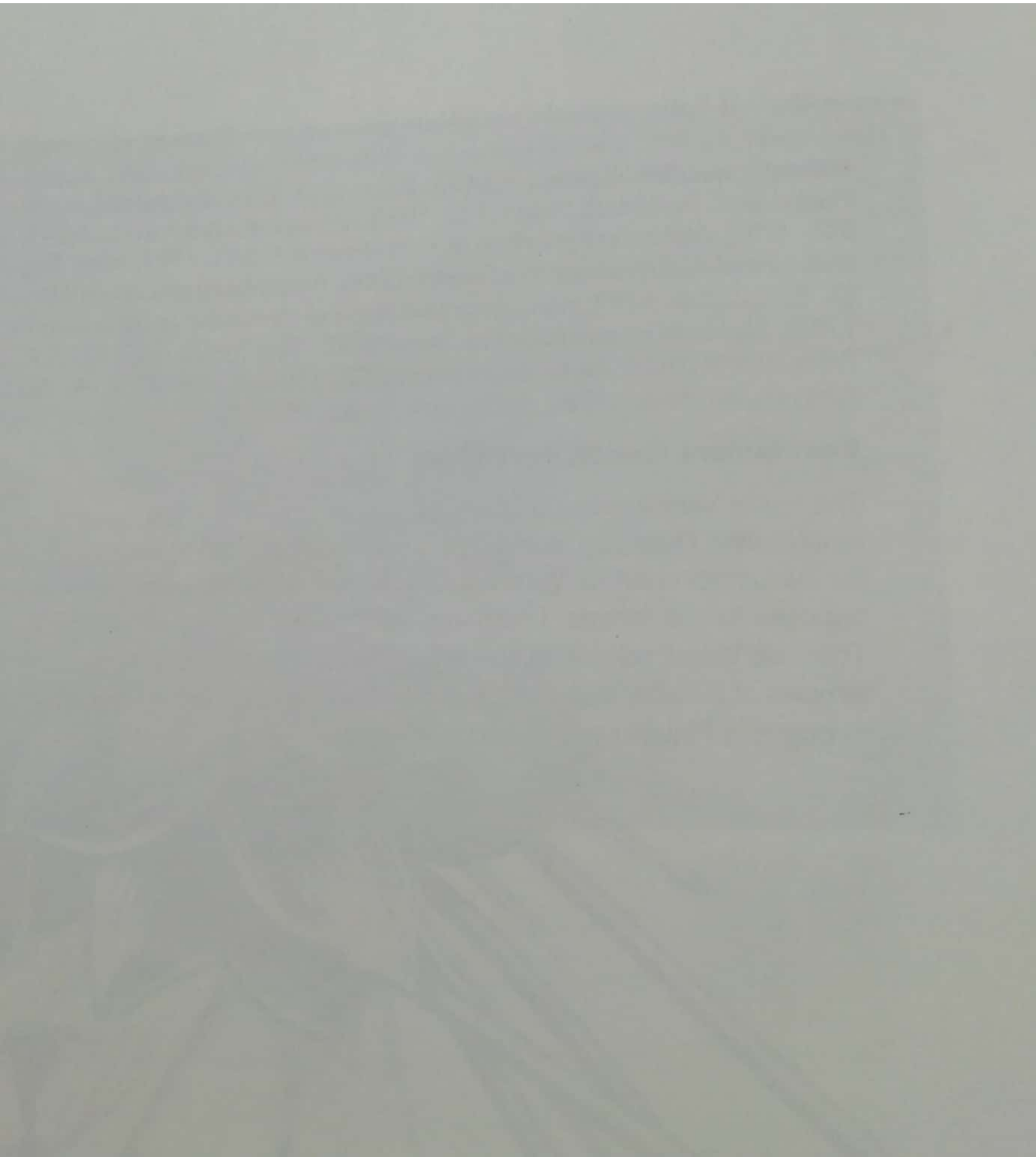
(Its Uses)

The bulb made into an ointment with butter, sets aright all the defects of eyes. The same crushed with *Ginger* and *coriander* in butter is applied for haemorrhage.

Nelumbo nucifera Gaertn., Fruct. 1: 73, t. 19, f. 2. 1788; Maheshwari in Manilal, Bot. Hist. Hort. Malab. 123. 1980. - *Nymphaea nelumbo* L., Sp. Pl. 511. 1753. *Nelumbo indica* Poir. in Lam., Encycl. 4: 543. 1797, nom. illeg. (incl. type of *Nelumbo nucifera* Gaertn. 1788). *Nelumbium speciosum* Willd., Sp. Pl. 2: 1258. 1799, nom. illeg. (incl. type of *Nelumbo nucifera* Gaertn. 1788). *Nelumbium speciosum* var. *tamara* DC., Syst. Veg. 2: 45. 1821; DC., Prodr. 1: 114. 1824. *Nelumbium tamara* (DC.) Sweet, Hort. Brit. 14. 1827. *Nelumbium rheedei* Presl, Rel. Haenk. 1: 83. 1835 [NELUMBONACEAE].

Bem-tamara Rheede, Hort. Malab. 11: 61, t. 31. 1692.

The name Venthaamara [Malayalam script on t. 31] is not used; it is also simply called Thaamara. Ven means white (colour) and Thaamara is the name for *Nelumbo nucifera*. Venthaamara means white flowered Thaamara, as opposed to the former Thaamara, with rose coloured or pinkish flowers. The rose coloured/pinkish flowers alone are used for ceremonies in Hindu temples of Malabar and not the white flowers. It occurs in freshwater ponds throughout Malabar and is also cultivated.





Kodda Pail

FIG. 32.



Is a small aquatic and swimming plant, creeping with transverse, watery and whitish stalks, which give out oblong, white, hairy fibres in thick tufts (fascicles).

Leaves, many clustered together arise at the tufts of roots, are oblong, at the sides with straight margins, at the top with round margin, curled, (curved) along with the stalks quite fragile; of hyaline colour, white lower down, anteriorly striated with oblong, branched nerves, on the outside wrinkled in length with pronounced folds, lightly hairy, lower down to the root covered with a hairy down, fleshy, thick, inside covered over with small, round tubes.

Flowers, without smell, come forth from the middle of leaves, the petals of which are tender, curled, one of them is oblong and white, on the inside hollow like a spoon, anteriorly more narrow split in the middle of the upper part, in the margins on both sides, towards the side with a ring-like fold, on the inside highly wrinkled, from the middle of which, above the folding, rises up a small and erect style, which is furnished with five, white buds above in a circle, at the origin is provided with a round leaflet, which below is with

two lobes like two ears, as if girded by collar from below. The neck of the flowers is oblong, hairy with oblong white hairs; from its mouth stands up a cuspidate, white light green bud, furnished with a white watery knob, in which seeds are seen.

Kooda-pail
കൂട്ടാപൈല
Zelo
सेको
فأطى بقتل

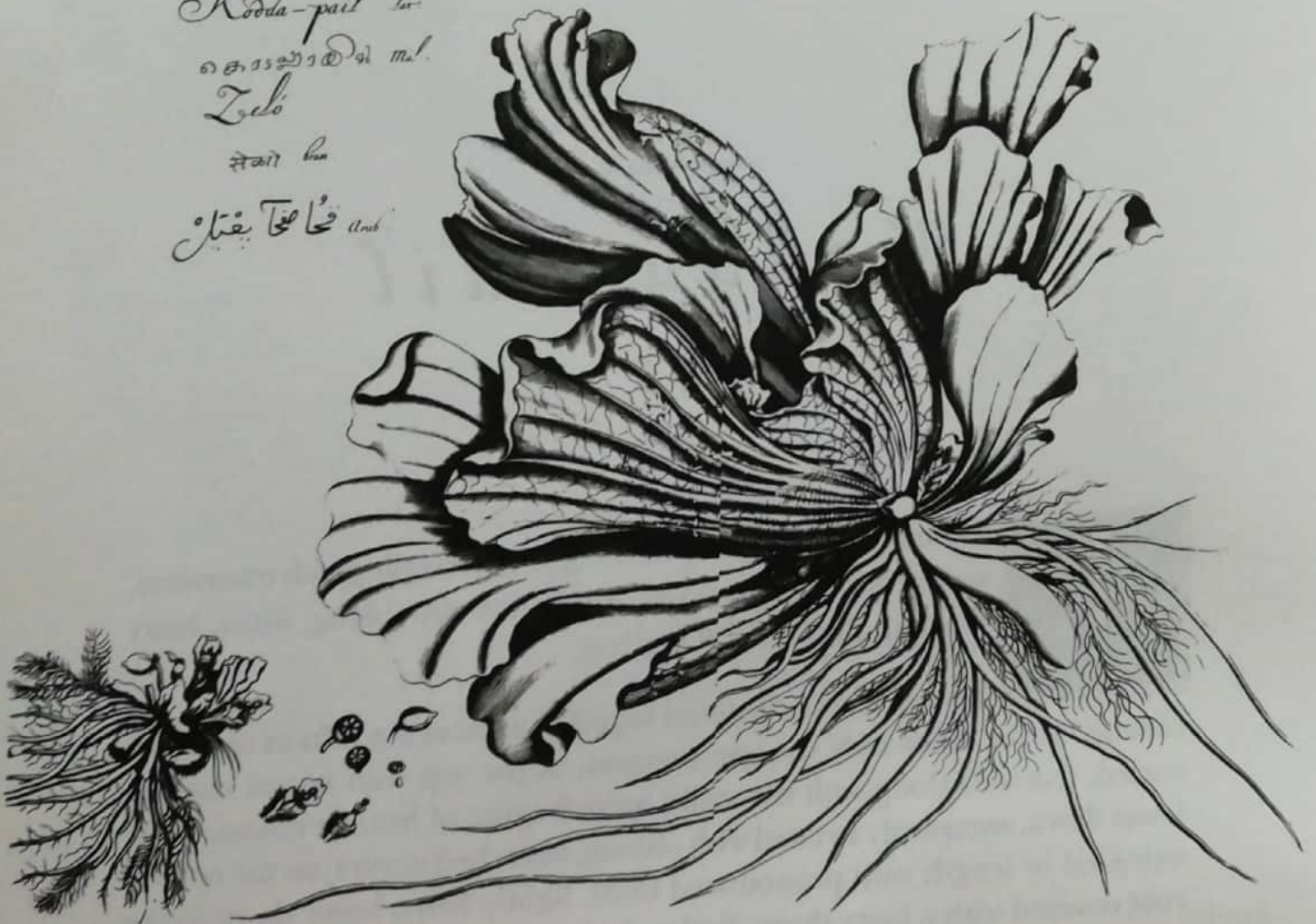


Fig. 32

The seed-buds become oblong-round, attached to the bark, transparent like glass, transversely by means of petioles, with one side by which they are turned to the sky, getting decayed, transversely adhering to the petals of flowers, inside filled with a watery liquid. In them are six, oblong, light green seeds, attached inside to the bark (rind) bud, around that part, by which they adhere to the petal.

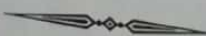
(Its Uses)

The leaves levigated with rice in the milky juice of coconut gives a medicine against dysentery. Given with rose-water and *sugar*, sets aright severe coughing and purulent phlegm, check *haemopsia* (a constitutional tendency to excessive bleeding when any blood vessel is even slightly injured: haemophilia?). Root crushed with *cumin* in cow's milk and drunk moves the bowels, smoothens tenesmus (painful and ineffectual straining to relieve the bowels), relieves the pains of loins and of hypogastrium (lower median part of the abdomen). The same effect is given if it is taken with *Aromatic reed* and hot water.

Pistia stratiotes L., Sp. Pl. 963. 1753; Manilal & Sivar., Fl. Calicut 302. 1982; Suresh et al., Taxon 32: 127. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 100. 1988 ("1987") [ARACEAE].

Kodda-pail Rheede, Hort. Malab. 11: 63-64, t. 32. 1692.

The name Kudapayil [Malayalam script on t. 32] is still used; kuda means umbrella and payil refers to floating aquatic plants. It occurs in freshwater ponds on the coastal plains of Malabar.



Panover Tsjeraua

FIG. 33.



Is an aquatic plant. Stalks are knotted, creeping over the bottom, watery, green-white, giving out two or more fibres on rootlets from the nodes, covered thickly with green filaments.

Leaves arise in stalks on oblong, watery white petioles, on the upper side bulging out with a smooth belly (venter) and hairy, and are broad, cuspidate, incised at the margin with sharp, deep, notches, in the posterior part with straight and even margins towards the petiole, thick, dense, on the inner surface very plain, quite glabrous, on the outside beset with thick green-white, branched ribs, coming out from the mid-rib and running into the tips of veins, of blood red colour; of no taste.

When the plant is old, from the top of the stalks, in the common base, there arise clustered together numerous and larger leaves, thickly as in a fascicle, giving the impression of the shape of rose sending down many roots below the said tuft.

Out of use in medicine.

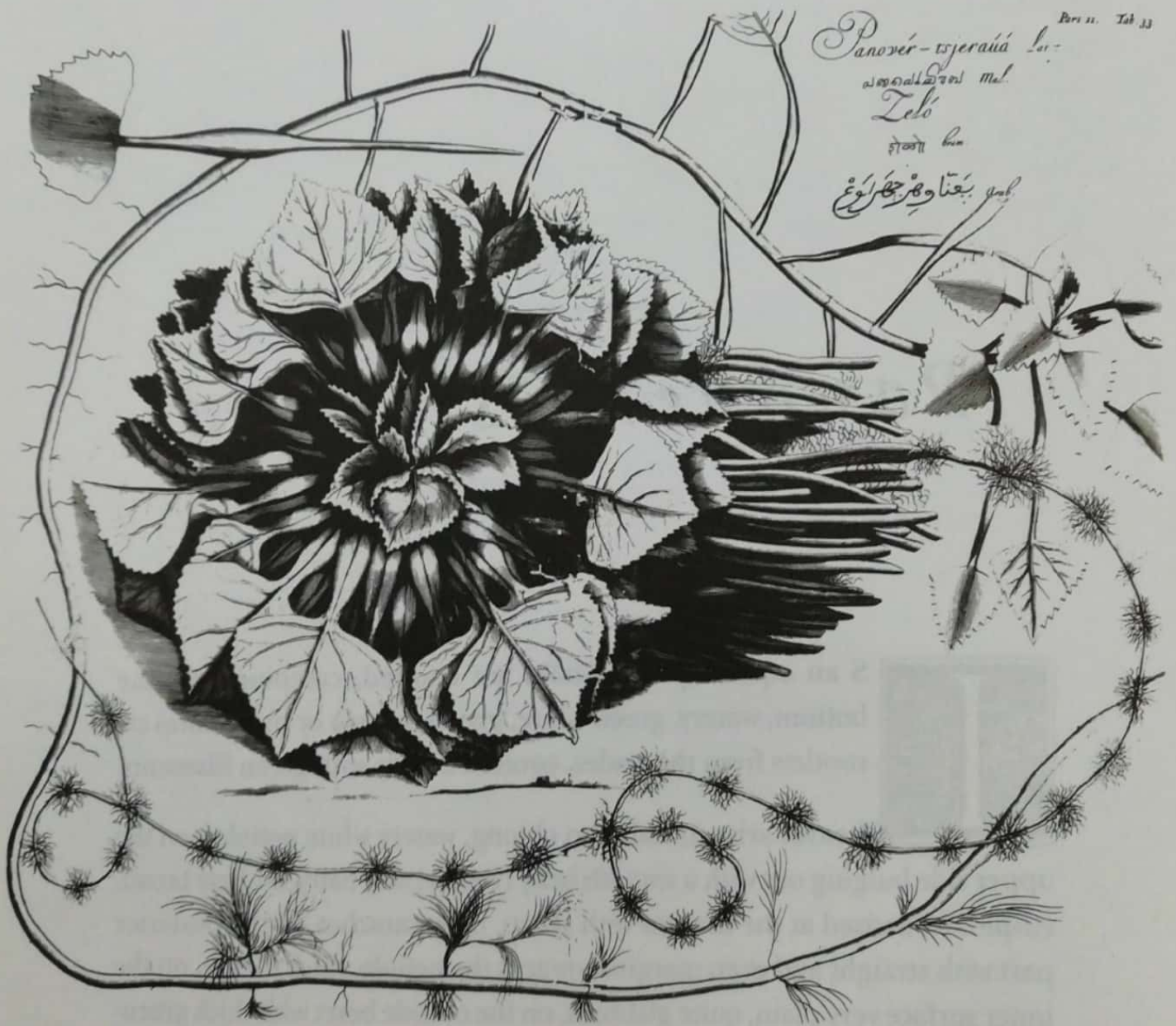
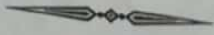


Fig. 33

Trapa natans L., Sp. Pl. 120. 1753. - *Trapa natans* var. *bispinosa* (Roxb.) Makino in *linuma*, Somoku-Dzusetsu ed. 3, 1: 137. 1907; Brenan in Turrill & Redhead, Fl. Trop. E. Africa (Trapac.) 3.1953. *Trapa bispinosa* Roxb., Pl. Corom. 3: 29, t. 234. 1815; Ghazanfar in Nasir & Ali, Fl. West Pakistan 97: 1: 1976. [TRAPACEAE].

Panover-tsjeraua Rheede, Hort. Malab. 11: 65, t. 33. 1692.

The name Panaverchiraba (Malayalam script on t. 33) is not used. Chirab(v)a is a serrated, oval blade, used by the local people to grate coconut kernal (allusion to the shape of the leaves); and Panavar means a tabor, referring to the characteristic leaves grouped together on one side. No Malayalam name is currently known being used for this plant. It is of scattered distribution in the freshwater ponds of Malabar.



Naru Kila

FIG. 34.



S a plant growing in watery places. Root is black, covered with fibres. Stalks round; somewhat plain, glabrous, green, with the inner surface hollow, receiving tender stalks within the cavity, with the upper part marked with a single node, inside with a spongy, white and watery core (pith).

Leaves arise on the tips of stalks, on each one, are large, oblong-round, cuspidate, striated to the margins with very fine parallel veins, from the mid-rib, which stands out on the upper surface, of strong and shining greenness, on the lower, of light greenness. Very much similar to the leaves of *Kattubala*, but smaller.

Flowers arise in stalks, on their own petioles, attached to their tips as if in a cluster (tuft) from the open cleft of the stalk, which is seen about the upper node, and within which were first enclosed, giving out as if a sheath or theca below the leaves, coming out from oblong, large, green and reddish calyces.

Of unknown use.



Fig. 34

Phrynium rheedei Suresh & Nicols., Taxon 35: 355. 1986. -*Pontederia ovata* L., Sp. Pl. 288. 1753, non *Phrynium ovatum* Nees & Mart. 1823. *Phrynium capitatum* Willd., Sp. Pl. 1: 17. 1797, nom. illeg. (incl. *Pontederia ovata* L. 1753) [MARANTACEAE].

Naru-kila Rheede, Hort. Malab. 11: 67, t. 34. 1692.

The name Narukkila [Malayalam script on t. 34] is not used now. Narukkila means a piece of leaf (narukku is a cut-piece; and ila is leaf); the allusion is to the similarity of the banana leaf, on which food is served by local people. No Malayalam name is currently known for this plant. It occurs in forests of southern Malabar.



B e l a P o l a

FIG. 35.



THE plant is similarly aquatic. Root bulbous, (the bulbs are round, first white, thence green, fleshy inside, with somewhat succulent and viscid flesh, white, green, the bulbs mutually propagating themselves) giving out thick, oblong fibres covered with many thin filaments, first white, then turning reddish. The stalks, arising from the roots are round, simple, covered with leaves on the inside white, succulent and viscid.

The leaves which cover the stalks, and mutually rolled over themselves by means of hollow bases, are oblong-narrow, drawn into a tip, a cubit long, four transverse fingers broad, but in the middle more, striated with five veins in length, with the sides a bit closed towards the lower part, of deep greenness on both sides. The rib stands out on the lower side, is thick, green-white, from the side two or three smaller ones are seen striating the upper side as if with furrows; with unpleasant smell, with somewhat the taste of leeks, the outer leaves which cover the stalk about the root, are small and white.

Flowers comes out in fascicles at the tip of stalks, on green, shining, erect, striated, thick peduncles, bulging out more on the upper part, and slightly bent lower down surrounded (girdled below) by a long, narrow, green leaf;

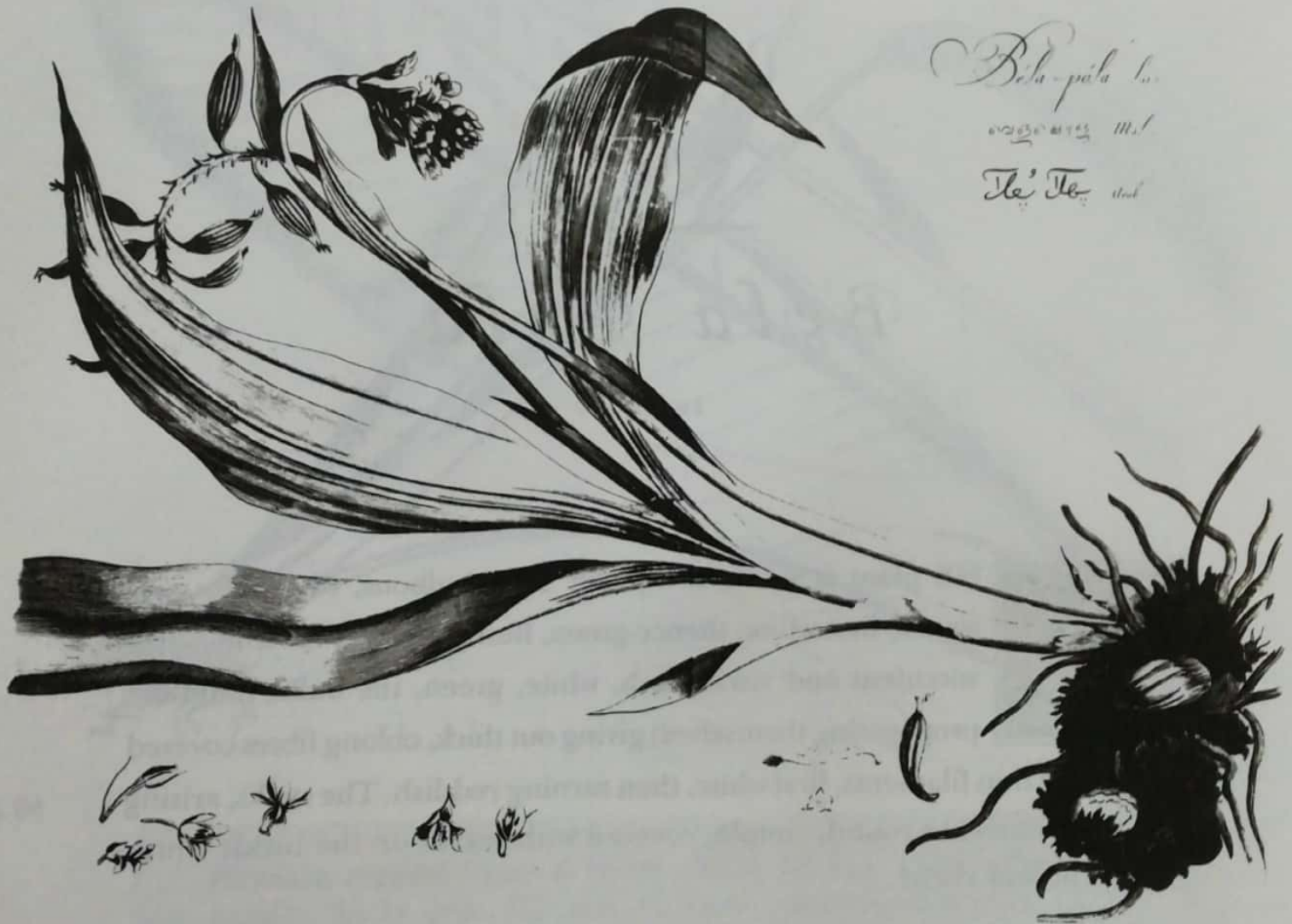


Fig. 35

are six petalled, five of them are oblong narrow, similar, wholly white; but three outer ones are more narrow, shining on the outside, less white; the sixth one is more broad and spoon-shaped, oblong, placed towards the venter of the petiole, opposite to the middle outer leaf, which springs forth from the back, on the outside totally white, white in the interior margin, within the margin marked in the middle with two oblong, broad, yellow furrows, at

the furrows rose-red, lower down from the middle, striated obliquely towards the margin with slightly reddish veins. From the lower mouth a ligule comes out, obliquely erect, white, thick, somewhat cuspidate, the plain part of which is turned to the spoon-shaped hollow petal, provided with a thick, yellow bud below the tip. The flowers are totally bad smelling emulating the smell of soap. Flower buds are green, then white, very much bulging out towards the part of the spoon-shaped, hollow petal.

Fruits are oblong, three cornered, covered in the middle of the sides with a thick and very pronounced rib, with a thick, watery, deep green, shining rind, of bean like woody and viscid taste, in the middle filled with flour-like, red powder; it is to be noted that the petals themselves of the flowers are the rudiments (germs) of fruits, which are quite similar to that of *Marabara*.

(Its Uses)

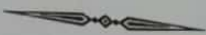
The bulb is prepared into an ointment with rice water against phlegm, swellings and abscesses.

Geodorum densiflorum (Lam.) Schlechter, Feddes Repert. 4: 259. 1919; Santapau & Kapadia, Orchid. Bombay 203. 1966; Seidenfaden, Opera Bot. 72: 61. 1981; Manilal & Sivar., Fl. Calicut 284. 1982; Manilal, Fl. Silent Valley 284. 1988; Sasidh. & Sivar., Fl. Thrissur 442. 1996; Sivar. & Philip, Fl. Nilambur 688. 1997. - *Limodorum densiflorum* Lam., Encycl. 3: 516. 1792. *Malaxis cernua* Willd., Sp. Pl. 93. 1805. *Otandra cernua* (Willd.) Salisb., Trans. Hort. Soc. 1: 298. 1812. *Cistella cernua* (Willd.) Bl., Bijdr. 7: 293. 1825. *Ortmannia cernua* (Willd.) Opiz, Flora 17: 592. 1834 [ORCHIDACEAE].

Bela-pola Rheede, Hort. Malab. 11: 69-70, t. 35. 1692.

The name Vellappola [Malayalam script on t. 35] is not used now. Vella (from vellam) means water and pola means sheath. The allusion is to its aquatic habitat. No Malayalam name is currently known.

Seidenfaden (1981) mentions its occurrence in Thailand and Indo-China. However, it appears that his plant is entirely different from Rheede's species and is something else.



El a Pol a

FIG. 36.



ROWS in sandy soils. Root bulbous, down below covered with white fibres, inside with thick, humid viscid flesh covered over with harder fleshy fibres; with unpleasant smell.

Many leaves come out from the root, on oblong, round, theca shaped bases, in which other more tender ones are enclosed, are oblong, drawn together to a tip, shining, inside striated in length with very fine veins, on the lower side provided with five woody, pronounced ribs, the middle one of which is thicker, all are glabrous, striating the upper part; of displeasing smell.

Flowers arise in simple, round, glabrous, green, knotted stalks, on petioles coming out from the root, clothed around the nodes with oblong-narrow, cuspidate leaves, inside covered over with fleshy, thick, woody fibres within the humid flesh; the flowers themselves are attached to the upper part of the stalks, in that place, where they are less woody, at the origin girded under by a small, oblong-narrow, cuspidate, green, leaflet, are oblong, cyathia like or bell-shaped, on the outside spread over in length by three pronounced sutures;

on the inside, from the mouth up to the middle bluish, on the outside whitish. A black style stands up in the middle, furnished with a yellow knob the mouth.

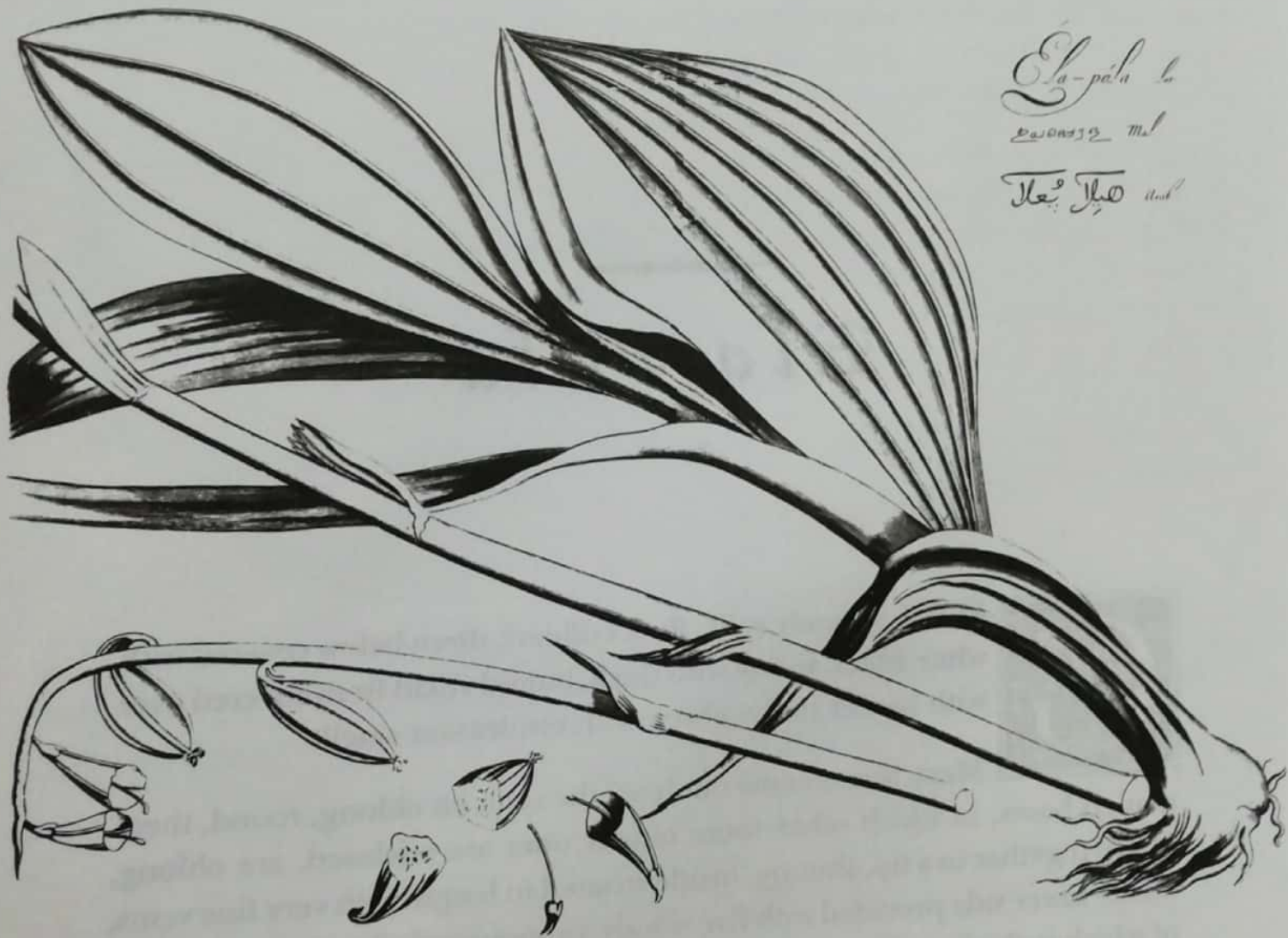


Fig. 36

The fruits which sit on the tips of the stalks from every part, are oblong, triangular, the sides of which are plain, narrow above and below, dark green, glabrous, in the middle of the sides covered with a thick, round, green and greatly pronounced suture, provided with a red, projecting navel (tip) at the top; the membrane with which they are covered is fleshy and thick, on the inner part green-yellow; with no seeds, but inside filled with downy, white, balls which later turn reddish, especially at the corners; also the petals of flowers grow into fruits.

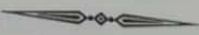
(Its Uses)

From the root, leaves and fresh *Curcuma* (Turmeric) an ointment is prepared to be applied to the temples for cephalgia (gout in the head).

Eulophia spectabilis (Dennst.) Suresh, in Nicolson *et al*, Interp. Rheede's Hort. Malab. 300. 1988. - *Wolfia spectabilis* Dennst., Schlüssel II, 25, 38. 1818. *Eulophia nuda* Lindl., Gen. Sp. Orchid. 180. 1833; J. Hook., Ann. Calcutta Bot. Gard. 5: 32. 1895; King & Pantling, Ann. Calcutta Bot. Gard. 8: 180. 1898 [ORCHIDACEAE].

Ela-pola Rheede, Hort. Malab. II: 71, t. 36. 1692.

The name Ilapola [Malayalam script on t. 36] is not in use now; ila means leaf and pola means sheath. No Malayalam name is currently known for this. It is common along forest margins in high lands near the coast of Malabar.



Belam Canda Schularmani

FIG. 37.



RAHMINS call it *Arty*, is a plant rising up to the height of a man, enjoying sandy soil. Root is glandulous, thick, white, inside dense, light yellow, slight bitter, giving out long, white, and slightly hairy fibres, bringing forth from itself three or four eyes. A single stalk arises from the root, a thumb thick, noddled, inside, inside white and spongy, covered with leaves at the nodes.

Leaves are oblong-narrow, three feet long, one and at times two thumbs broad, sword-like, striated in length with veins, from one part of the margin, which is more deep towards the bottom, gaping, clasping the stalk, and tightly embracing with their tips, on the outside of common and shining greenness, on the inner part where they gape, covered with a white membrane.

Flowers come out four, five clustered together in the node of the stalk itself or of the lateral stalk-lets, which arise here and there from the nodes of the stalk, on tender green yellow, curved petioles, many from one and the same node, are six petalled, oblong-round, narrow towards the petiole, towards the anterior part drawn into a tip, variegated on the yellow colour with deeply

red marks on the inside; three petals which are shorter and less broad, on the whole surface on the inside are variegated. The remaining three, which are a little longer and broader, and placed in between each of the former one's, are variegated from the claw up to the middle, anteriorly with light

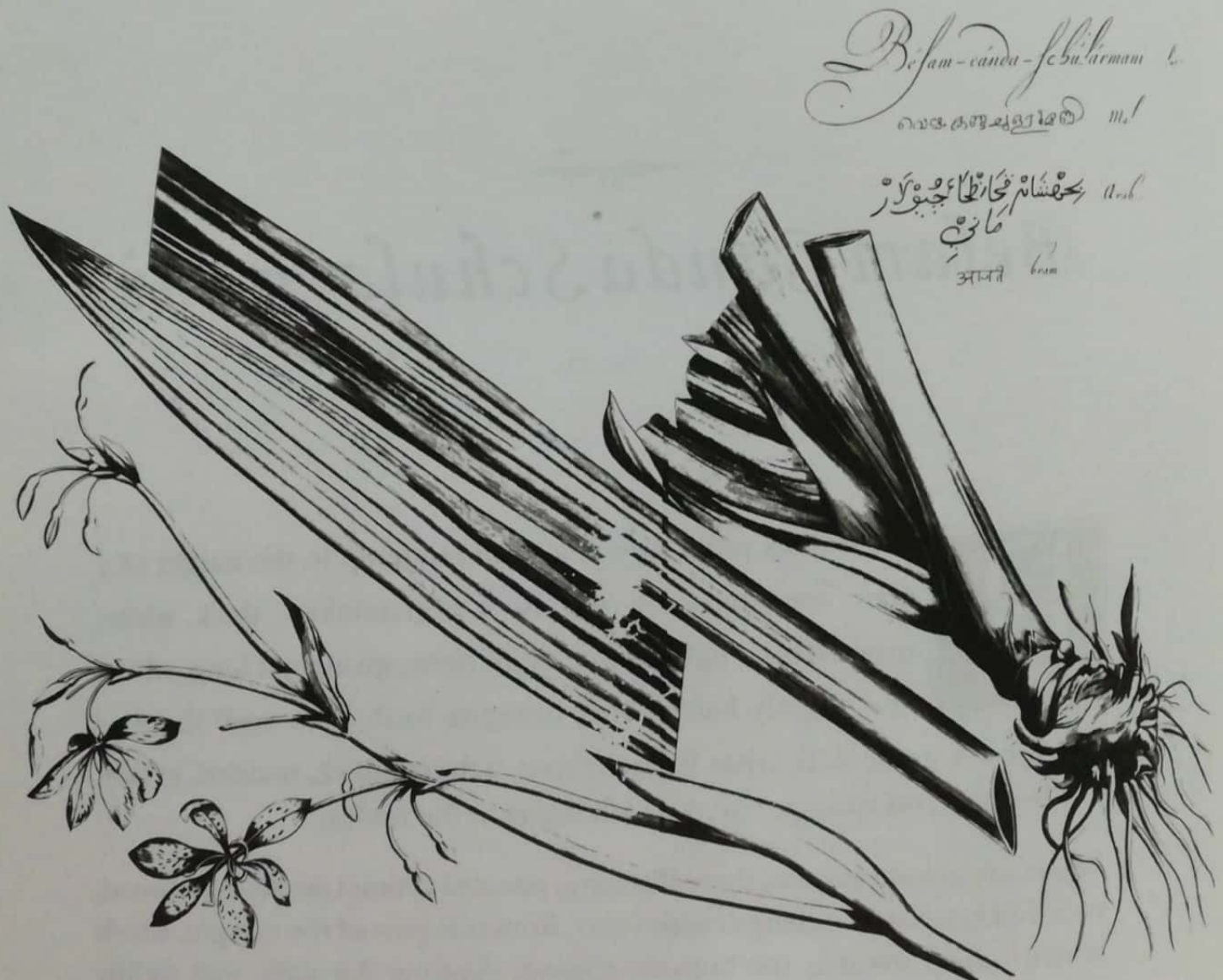


Fig. 37

red colour; on the lower side the petals are yellow at the margins only with transparent marks, and striated with a pronounced rib in the middle; of no smell. In them are seen three red and erect stamens, furnished with yellow ligules; the style is thicker, round, triangular; are devoid of calyx.

The petioles, very near to the flowers are thicker and swollen, circumscribed, with three sides plain, striated in the middle, forming seed-capsules, which when the flowers have faded enlarge, and from green-light yellow become more green and are separated into three seed-bearing locules by middle partition walls.

(Its Uses)

The whole plant boiled and used for washing the body, is an antidote against all poison. The root crushed and applied to the sting of the snake called *Cobra Capella*, heals it. The leaves with oil *Schergelim* are used by the natives for cows and cattle infected with poisonous material in their food or for curing poisoned animals, taken and applied both inside and outside.

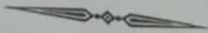
Belamcanda chinensis (L.) DC. in Redoutt, Liliac. 3, t. 121. 1805; Geesink in Fl. Males. I, 8: 82. 1977. - *Ixia chinensis* L., Sp. Pl. 36. 1753. *Moraea chinensis* (L.) Poir. in Lam., Encycl. 4: 274. 1797. *Pardanthus chinensis* (L.) Ker-Gawl., Ann. Bot. 1: 247. 1805 [IRIDACEAE].

Belam-canda-schularmani Rheede, Hort. Malab. 11: 73-74, t. 37. 1692.

The Vezhemkandachularmani [Malayalam script on t. 37] is not used now. Vezham means poison; kanda here means which contains (infected), chular, from Chulukku is undaunted; and mani means prominent or favourite. The allusion is to its power to act against poison. Today it (and also *Hypolytrum*) is called Cherukaida; cheru means little and Kaida refers to *Pandanus*. It is cultivated in Malabar as an ornamental and for medicinal purposes.

(Page 1 of 1)

Belutta Pola Taly

FIG. 38.



LS an aquatic plant, which is seen around the banks of rivers. The thick, bulbous, fleshy, watery root is as if formed from coatings thrown over themselves, with a yellow pith, giving out from the lower part thick, oblong fibres, they are first white, then turn yellow; of watery taste.

Leaves come out from the root, are oblong, like swords, tapering to a tip, with the lower part rolled round like a theca, with the inner part closed, thick, spongy, striated in length with veins, light green, whitish towards the root. The stalk arising from the root is plain, round, light green, white at the roots, spongy and watery in the bark, if peeled off from the flesh, on the inside like silk.

Flowers, without smell, eight or ten together arise from the node of the stalk, from an oblong, light green neck, from which they turn back somewhat, towards the outside, on the inside bulging out at the origin with a thick base; six or eight of them are (there) outer ones in order, two interiorily placed ones, one interspersed with white filaments below, lily-like, five-petalled,

narrow, cuspidate, very white, in the middle and on the outside slightly swollen, striated in length with veins, totally bent towards the out side. In them are five oblong-round stamens, furnished with oblong, transverse apices, swaying to and fro, sprinkled with a saffronous dew, black under the dew, for



Fig. 38

the rest are red-purple, shining, white in the lower part, inserted to the upper orifice of the neck, at the claws of thee petals. The erect, oblong, red-purple and shining style stands out in the middle of the flowers, is white below, from the base of the neck. The flower buds are oblong, narrow, conical, first from yellow to white, then more whitish, on the outside, in the middle where they are swollen, somewhat reddish.

But it is to be noted that the flowers clustered together are enclosed in a foliaceous wrapping which splits itself into two cuspidate leaves, forming an oblong, thick head; but when the covering is broken they come out with two leaves, which are green on the outside and white on the insides, girded below (surrounded below) at the plain side of the stalks.

The fruits are similar to those of *Pola Taly* in the same way they grow from the base of the neck of the flowers; they contain white, fleshy, succulent seeds.

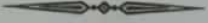
(Its Uses)

From the plant cut into pieces and burnt, two knots (lumps) are made, which placed on both the cheeks cures those suffering from spasmodic distortions.

Crinum defixum Ker-Gawl., J. Sci. Arts London 3: 105. 1817; Manilal & Sivar., Fl. Calicut 290. 1982 [AMARYLLIDACEAE].

Belutta-pola-taly Rheede, Hort. Malab. 11: 75-76, t. 38. 1692.

The name Polathali [Malayalam script on t. 38] is still used; pola means sheath and thaali refers to mucilage-containing plants. Belutta is from Velutha, meaning white [allusion to the white flowers]. It is common along the coast of Malabar.



Sjovanna Pola Taly

FIG. 39.



S a species of *Taly*, Brahmins call it *Gola Kondo*, a plant of three feet in height, liking sandy places, also banks of rivers. The root is bulbous and white, underneath giving out very many white, spongy, humid fibres; of watery and slightly bitter taste.

Leaves (as) of sword-plants or like the leaves of Lily, come out mutually from themselves, at the root united, broad, thick, extenuated into a thin margin, protected with minute and loose tips in the margins, striated in length with veins, pervaded inside with very many big pipes or tubules; (which are placed in a simple order and series, mutually separated by intermediary membranous walls in an orderly way).

From the middle of the leaves a green plain, compressed, stalk comes out from the root, is inside white, spongy, fistular, in the tip of which flowers arise, many together, five or six clustered, each on its own round, green yellow petioles, which come forth from upper node of the stalk, are monopetalous, oblong-narrow, cuspidate, white, four or five thumbs long, one thumb broad, striated in length, closed, with margins somewhat turned to the inside; of

weak but pleasing smell. In them are six long, stamens with their greatest part inserted to the petals, purple-red, shining, white towards the lower part, furnished with rather large, moon-shaped, swinging apices, sprinkled with a yellow dew; with these is seen a thin style, wholly purple-red which passes through the petiole and there is party white.

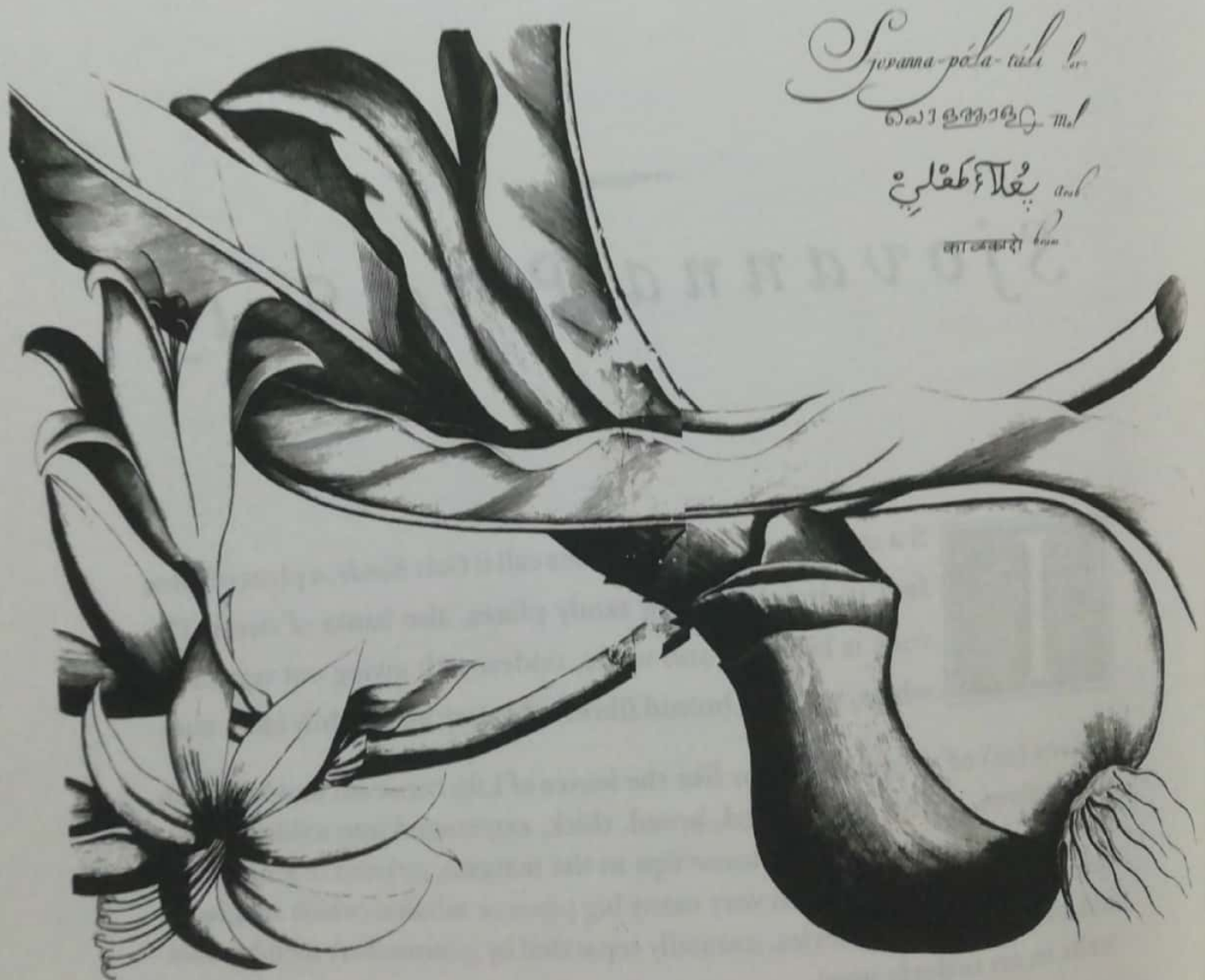


Fig. 39

The flowers having faded, the petioles become more green and in the lower part which is around the node and is thicker, they bulge out and become swollen into seed capsules, so that many seed-capsules are attached in a cluster to the node of the stalk; and these are thinly covered to the shape of petiole,

first oblong-round, different only in thickness from the remaining part of the petiole, then, when they have come to the expected sizes after the upper stalk having fallen away, round, or round-plain, with light green yellow rind, striated in length with veins, the flesh of which is inside white and spongy.

In them are contained three, five or seven seeds according to their size, filling the whole space under the rind, slightly fenced in here and there by certain spongy, white filaments of different shapes, with one side which is the nearest to the rind, round, at the other plain, of white and light green colour; their flesh is white and watery, the taste also is watery. Flowers once every year, namely during the rainy season.

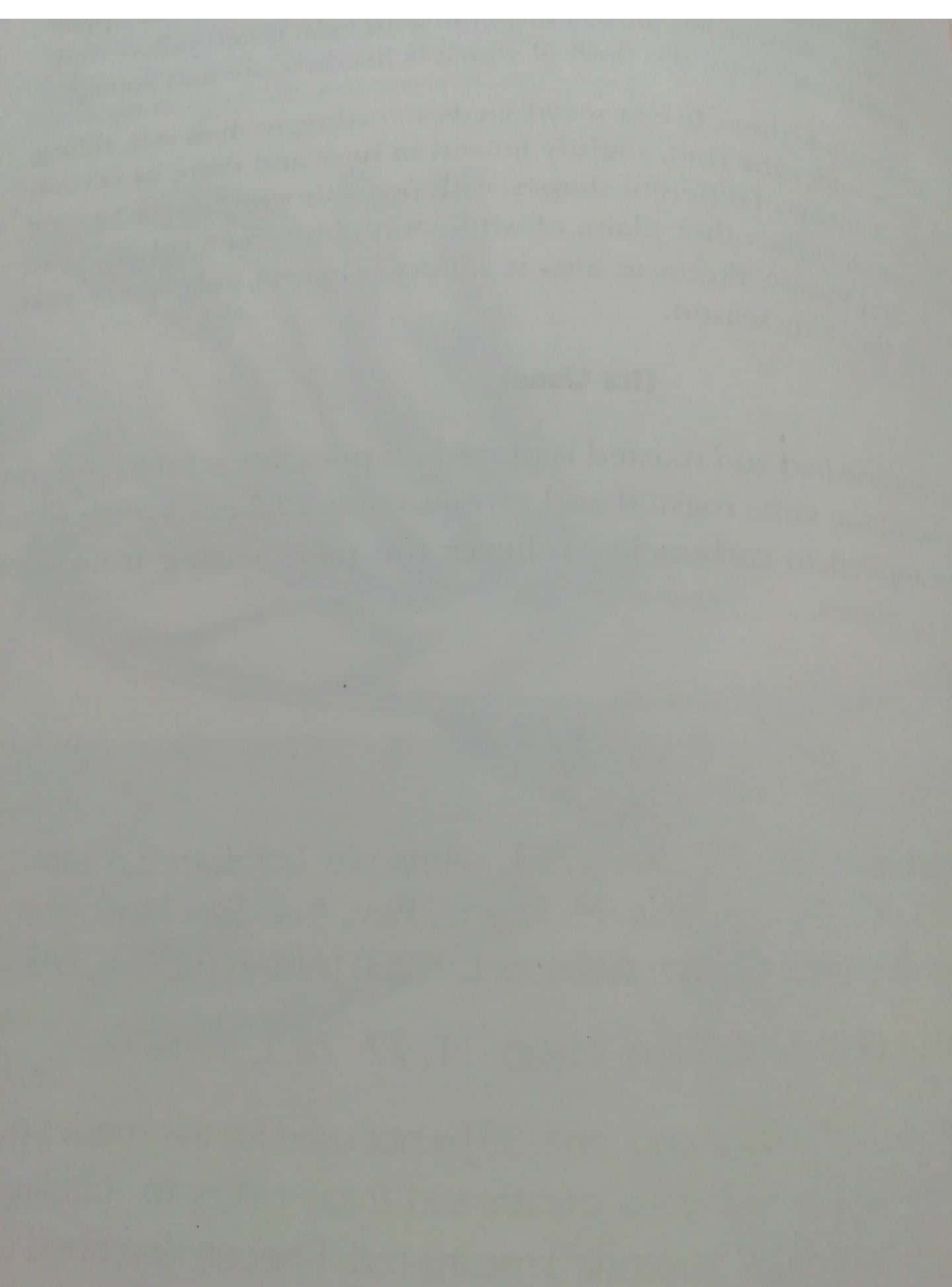
(Its Uses)

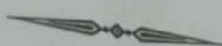
The bulbous root crushed and roasted is placed on piles, is useful in ripening and opening boils; the same roasted and given to dog, makes its teeth to fall, roasted leaves applied to carbuncles, relieves the pain arising from them; heals nails cut to pieces.

Crinum latifolium L., Sp. Pl. 291. 1753. -*Amaryllis latifolium* (L.) Lam., Encycl. 1: 124. 1783. *Crinum linnaei* M. Roem., Pam. Nat. Syn. Monogr. 4: 89. 1847, nom. illeg. (incl. *Crinum latifolium* L. 1753) [AMARYLLIDACEAE].

Sjovanna-pola-tali Rheede, Hort. Malab. 11: 77-78, t. 39. 1692.

The name Polathali [Malayalam script on t. 39] is not used for this species but is for *Crinum defixum*; pola means sheath and thaali refers to mucilage-containing plants. Chuvanna ("Sjovanna") means red. Rheede described the flowers as white but his illustration suggests that there may be color near the throat. The Malayalam name mentioned by him suggests red colour. Today no Malayalam name is known for this. This plant has only been found in cultivation in gardens in Malabar, in which the flowers are pale pink.





Cattulli Pola

FIG. 40.



plant one and a half feet in height, growing in sandy soils. The root is bulbous, and white, underneath giving out thin, white fibres.

The leaves which arise from the root like Lily or gladiolus-like, oblong, tapering into a tip, striated in length with vein-lets, in the middle swelling up with a thick back, a bit closed inside. Among the leaves arises from the root a single, compressed, green stalk, a span long, knobbed at the apex.

Flowers are seen many clustered together on their own stalk-lets at the tip of the stalk, seven or eight arising together from one and the same node of the stalk; are wholly white, with weak but pleasing smell, well formed, consisting of a double order of petals, tapering to a tip, striated in length with veins, provided with a rib, standing out a bit on the lower side, you may call it a six cornered star, in the inner row the bell shaped star in towards the centre, projecting with twelve tips in the margins, to which the outer leaves are bound together with bottom part. In them are six white stamens, striating a bell shaped star inside from the centre, and each one runs into intermediary

corners of tips in order that they jut out from the corners, furnished with yellow and bent apices. Flower buds are oblong-round, from green, turning more and more white, striated with six furrows, which join together at the top.

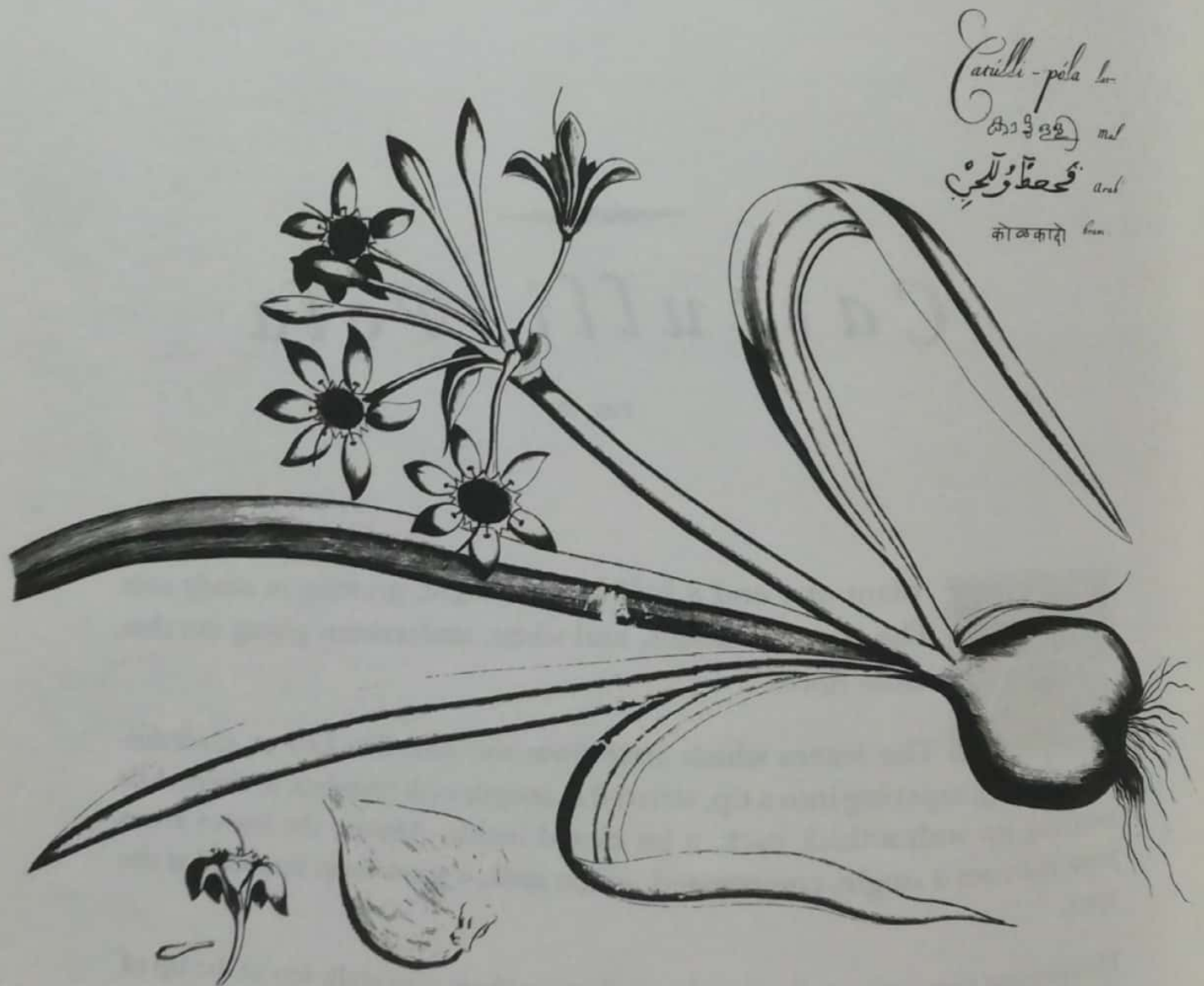


Fig. 40

The fruits arise in the same manner as those of *Pola Tali*. Also the seeds are white, the flesh of which is white and watery, the taste also is watery. Flowers once every year, namely in the rainy season.

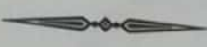
(Its Uses)

The root dried in the sun and reduced to powder is given with *black sugar* for piles; its decoction in water gives the same (result), namely when employed for washing. Roasted and then crushed, are placed over for ripening and opening boils; with oil added, gouts are smeared with it; leaves wrapped round nails, relieves their pain.

Pancratium triflorum Roxb., Fl. Ind. 2: 126. 1832; Manilal & Sivar., Fl. Calicut 289. 1982; Sasidh. & Sivar., Fl. Thrissur 466. 1996. - *Pancratium malabathricum* Herb., Amaryllid. 202, 206. 1837 [AMARYLLIDACEAE].

Catulli-pola Rheede, Hort. Malab. 11: 79, t. 40. 1692.

The name Kattulli [Malayalam script on t. 40] is still used; kattu means wild and ulli means onion (bulbs). "Pola" (not in Malayalam script) means sheeth. It occurs in uplands of Malabar.



Katsjula Kelengu

FIG. 41.



RAHMINS call it *Capura Catari*, is a plant growing in sandy soils. The root is fleshy, white, giving out fibres and propagating itself with new eyes, of fragrant and aromatic smell, especially when dry, like ginger, when dry with white flesh, with a red and wrinkled bark.

Two leaves arise from the root on erect, broad and hollow peduncles spread transversely, placed adversely, are large, round, cut lower down by a concave narrow curve, thick, fleshy, glabrous, striated by very fine ring-like veins, which go inside the leaf in an obscure trail, from a middle vein, of deep, dark greenness on the upper surface of the leaf, that which is turned towards the root, of light greenness, provided with a reddish fringe in the margins, of pleasing and aromatic smell.

Flowers arise erect from the root among the middle leaves, with oblong petiole or neck, are three-petalled, two of them oblong-round and white, both on the inside and outside, the third one is opposite to these, anteriorily in the middle is divided into two, like petals, on the inside, white, in the middle

and in the bottom part towards the base purple-red, on the outside white, in the base on the inside lightly yellowish and greenish and are on the whole girded below by three oblong-narrow, white leaflets or ears.

Karsjula - kelingu la.

കടലുപയോടുകൂടിയ മല

Capura - catari

കാപ്പുനകവരി

فخاچوولا فخا، هنغاف

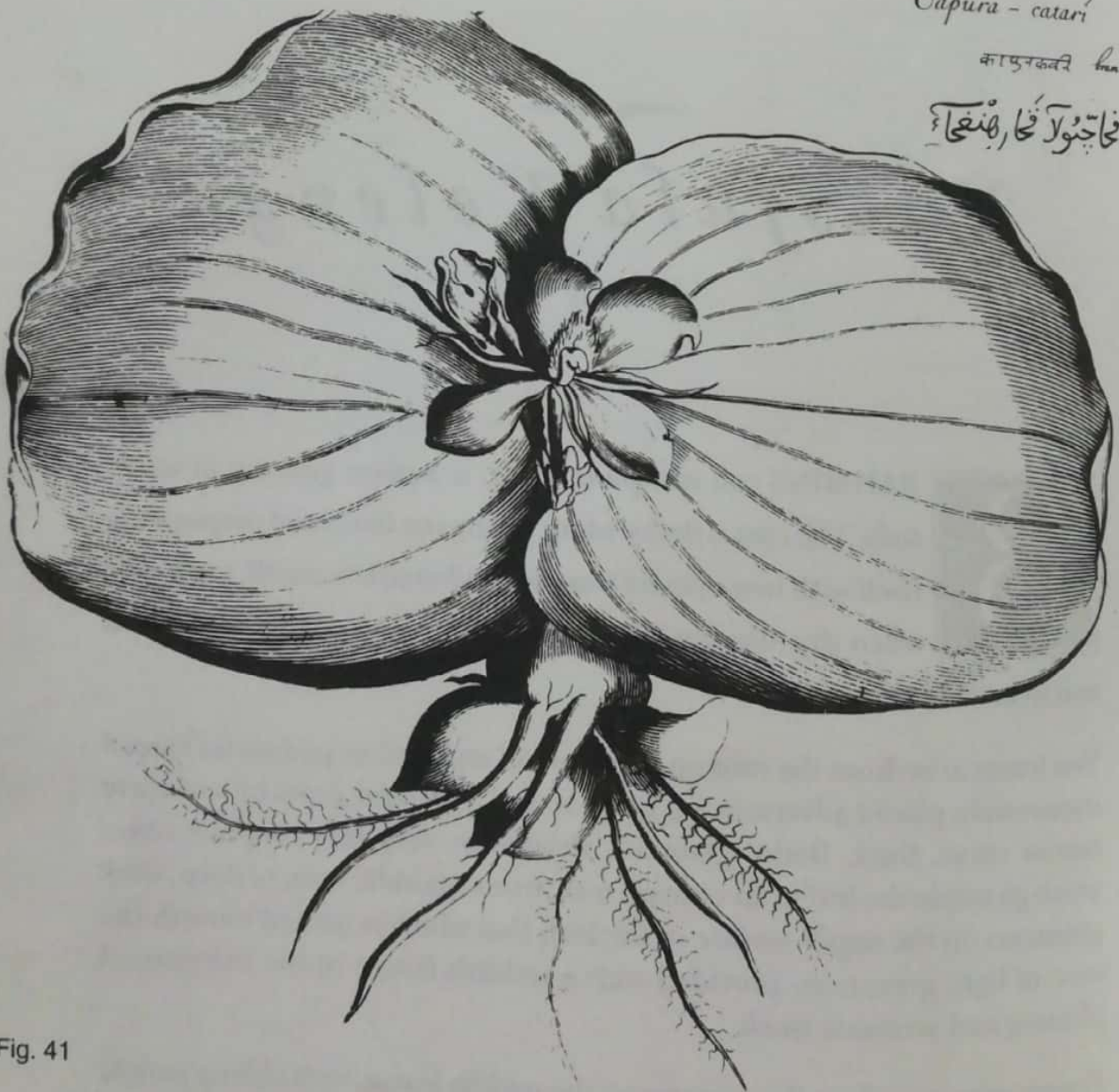


Fig. 41

From the middle of the flowers springs forth a broad, foliaceous, white style, lying near the base of the purple-yellow petal, split above into two claws, which are bent away from the purple petal. In the middle is yellow, inside

with a narrow, theca-shaped cavity through which another white, very thin, style passes, capped with a knob; flowers on the whole not dissimilar to those of *Tsjengeli-nel-Kelangeu*.

Moreover we have observed that in the place of faded and fallen flower, during one night a new flower with petiole almost a thumb long, springs out from the root, therefore they grow quickly.

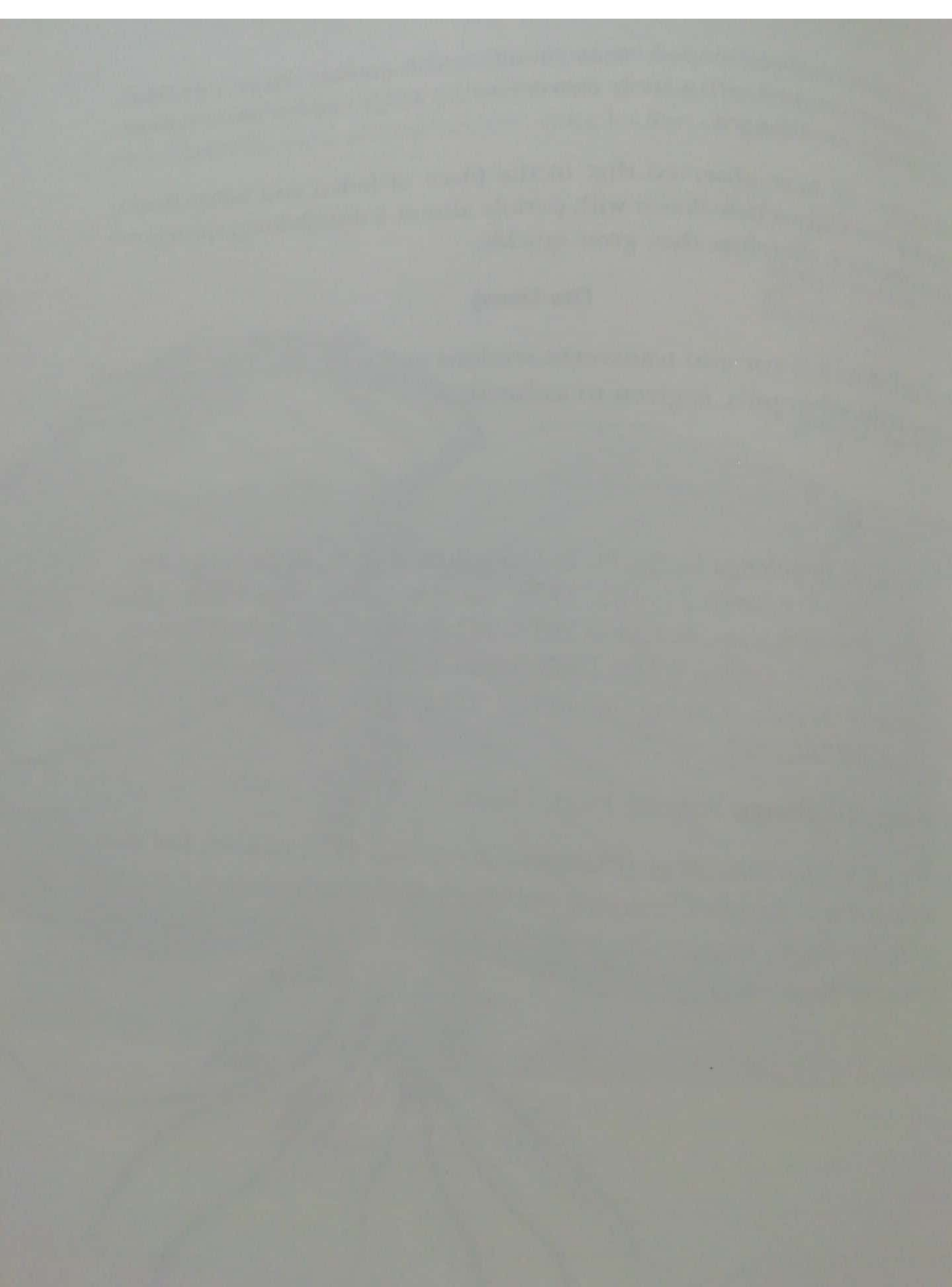
(Its Uses)

The dried root is cut into transverse sections and sold. The bulb with fresh butter reduced to pills, is given to asthmatics.

Kaempferia galanga L., Sp. Pl. 2. 1753; Burt & R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 31: 185. 1972; Burt, Bot. Hist. Hort. Malab. 145. 1980; Manilal & Sivar., Fl. Calicut 287. 1982; Burt & R. M. Smith in Dassan., Rev. Handb. Fl. Ceylon 4: 509. 1983; Sasidh. & Sivar., Fl. Thrissur 464. 1996. -*Alpinia sessilis* Koenig in Retz., Obs. Bot. 3: 50("62"). 1783 [ZINGIBERACEAE].

Katsjula-kelengu Rheede, Hort. Malab. 11: 81, t. 41. 1692.

The name Kachulakizhengu [Malayalam script on t. 41] is still used; Kachulam is the name of the plant [meaning not clear]; and kizhengu means tuber. It is more commonly known simply as Kachulam. It is cultivated in Malabar as a medicinal plant.



Katu Kapel
or
Cadenaco

FIG. 42.



ROWS in sandy soils. The root is fibrous, inside with whitish flesh, covered over with woody filaments, with a red bark, of watery taste.

Leaves rise up to two cubits from the oblong root, lower down surrounded by smaller leaves, on the outside convex, on the inside concave, green, rigid, striated in length by downy veins, very thick and fleshy, inside with thick, white, watery flesh.

Flowers arise in their own stalks, which originate from the root, are clothed with round, oblong slender petals, on the outside watery reddish, in the inside watery green, attached to their upper part every where, in twos or threes together in one common peduncle, are six petalled, oblong-round, narrow, shining, in the middle striated with a vein, the neck is oblong and white. In them are six oblong, white stamens, furnished with oblong, yellow, swinging apices. The style is also oblong and white, coming out from a white globule, situated lower down in the neck.

Fruits are round, simple, or also two joined together, light-green, two sides of which are globose; in which one or two seeds are hidden, which when tender are of bean taste.



Fig. 42

(Its Uses)

The leaves crushed and reduced to the shape of pills, are taken against ophthalmia (inflammation of eye) and jaundice of eyes; with the root, adding garlic and orpiment (yellow mineral, arsenic trisulphide) and cooked in oil *Sergelim*, heals gonorrhoea, namely if the head is smeared with that oil; the

bulb crushed with *citrus*, *sandal* wood and buffalo's butter, gives an ointment, to be used in the contraction and burning of nerves. Therefore the whole plant cooked with oil and butter corrects all the defects of eyes.

Sansevieria ebracteata (Cav.) Suresh, in Nicolson *et al*, Interp. Rheede's Hort. Malab. 271. 1988. - *Salmia ebracteata* Cay., Icon. 3: 24 (sub *Salmia spicata* Cay.). 1795. *Sansevieria lanuginosa* Willd., Sp. Pl. 2: 160. 1797, nom. illeg. (incl. *Salmia ebracteata* Cav. 1795); N.E. Br., Kew Bull. Misc. Info. 1915: 225. 1915 [AGAVACEAE].

Katu-kapel, Cadenaco Rheede, Hort. Malab. 11: 83, t. 42. 1692.

The name Kattukappel [Malayalam script on t. 42] is not used; kattu means wild and kappel means ship (allusion not clear). Kadanakku (another colloquial version of "Cadenaco") was also cited by Rheede for *Aloe vera* and is not used for this plant, this name refers to the cuttle-fish bone. Today it is called Ammaiamanakku; ammaia means mother-in-law and nakku means tongue, i.e., Mother in law's tongue. In some dry areas near the border with Tamilnadu, it occurs in the wild and is cultivated elsewhere in Malabar.



Katu Bala

FIG. 43.



RAHMINS call it *Rana Queri*, is a plant rising up to the height of human stature, liking sandy and wet soil. Root oblong, round, clothed with barks, surrounded on all sides with hairs, with eyes, from which they are again propagated. The stalk arising from the root with a simple base, is round, green, knotted, at the nodes tightly covered and hidden by leaves, giving out new stalks from the lower nodes to the root, above the origin of leaves.

The leaves, with the stalks are covered, still young, are on the whole rolled over themselves, are oblong-round, broad, soft, plain smooth, glabrous, striated with parallel veins from the thicker mid-rib, which is very much pronounced on the lower part, in general similar to the leaves of *Bala* or *Figueira*, on account of which it is called *Figueira de Mato* by the Portuguese; on the upper side of deeper and shining greenness, on the lower of light greenness, arising mutually from themselves, and on the upper part, by which they leave the stalk, rolled up with an open orifice, those at the top are those that clasp the stalk more tightly and are somewhat red.

Flowers come together with the fruits at the tip of stalks, where they are pressed together into three acute angles (cones), are dark-reddish, attached to the top of flowers, they arise two by two in an alternate order from the angles of the stalk on light green, semi-uncial, angular and hard petioles, and each one is girded below at the origin of petioles by a balloon-like leaf,



Fig. 43

by which first they are covered with their flower. The flowers are eight petalled, oblong, irregular, of scarlet colour or beautifully lead-red, lower down to the claws yellow, one of the petals bigger, more oblong, more broad and very smooth, like velvet; two are rather broad; one variegated with red marks in yellow colour; one projecting with an oblong, red, apex or stamen in the

margin; all are bound together and not spread out, and this, because of the tight mouth of the calyx by which they are clasped. Calyx is formed of three oblong, cuspidate, rigid, constricted, erect leaves which are dark red and more shining, inside striated with veins towards the tip. In the middle of the flower a plain, broad, light yellow, shining style is seen, on the upper part a bit reddish. Flower buds are oblong-round, tapering to a point. The calyx, in which the flowers are enclosed, is dark red.

The fruits are the very same oblong-narrow-round head, marked (separated) with sutures, roughened every where in a studded manner with spine-shaped, rigid, transparent balls, entirely green, in the tips of the buds reddish, when dry they are black, armed with a small spine, when the flowers fall down.

The seeds are placed within each side of the fruits, in so many separate capsules, which are on the inside separated mutually from themselves by a membrane, in each capsule three or four not adhering to any claw, but enveloped by a thick, white down, exactly round in shape, of the size of a pea, first white then red or light red, sprinkled with black spots, of a bit astringent taste.

(Its Uses)

From slightly roasted fruits the juice is drawn out, which when put into ears relieves their pain. From the same with *sugar* a mass is made and applied to the navel region against diabetes originated from hot fevers. The juice of root breaks the poison of sublimate of Mercury.

Canna indica L., Sp. Pl. 1. 1753; Kränzlin in Engl., Pflanzenr. IV.47: 59. 1912; Manilal & Sivar., Fl. Calicut 288. 1982; Matthew & Britto in Matthew, Fl. Tamilnadu Carn. 3(2): 1621. 1983. - *Canna orientalis* Rosc., Monandr. Pl. t. 12. 1828; Kranzlin in Engl., Pflanzenr. IV.47: 47. 1912. *Canna indica* var. *orientalis* (Rosc.) Baker in J. Hook., Fl. Brit. India 6: 260. 1892 [CANNACEAE].

Katu-bala Rheede, Hort. Malab. 11: 85-87, t. 43. 1692.

The name Kattuvazha [Malayalam script on t. 43] is not used for this species now but is used for wild *Musa*; kattu means wild and vazha refers to *Musa*. Today, it is called Katta-vazha in some areas of Malabar, excepting which no other Malayalam name is currently known for this. It has been widely cultivated as a garden plant in Malabar till recently but, now it is not popular and, hence, is rarely seen in public and domestic gardens.

Carim Gola

FIG. 44.



Is an aquatic plant rising to the height of a cubit. Roots fistular, white and reddish, covered with fibres, they are first white, then saffron, with many yellow hairs almost bent in a circle. Stalks arise many united and combined together, are round, somewhat plain around the inner part, spongy, very tubular, here and there extenuated into follicles, from which new stalks come forth.

The leaves which, each one in number arise at the tip of the stalks, are in the shape of an oblong heart, more broad below, and towards the top tapering to an acute tip, with a bit round margins, smooth in surface, thick, very dense, soft in texture, striated with close veins all of which run out and enter into the tip; provided with a nerve, only a little standing out on the lower side, of dark greenness on one side, on the other of common greenness, of slightly astringent taste.

Flowers arise with a fistular stalk-let from the upper follicle of stalks, below the leaves, attached to the petiole of the stalks in a cluster, of no smell, are six petalled, the petals themselves are oblong-round, erect, slender, membranous,

on the whole of bluish glittering and sparkling colour, like the wings of butterflies, especially if they are seen in the sun; in the outer part are striated with a green rib through the middle; three of them are more broad, these are more narrow, placed in between each broader one. In them are seen six blue

Carim-gola Lat.
കരിമുള Mal.

كحارينغولا Arab.
കരിമുള Kan.

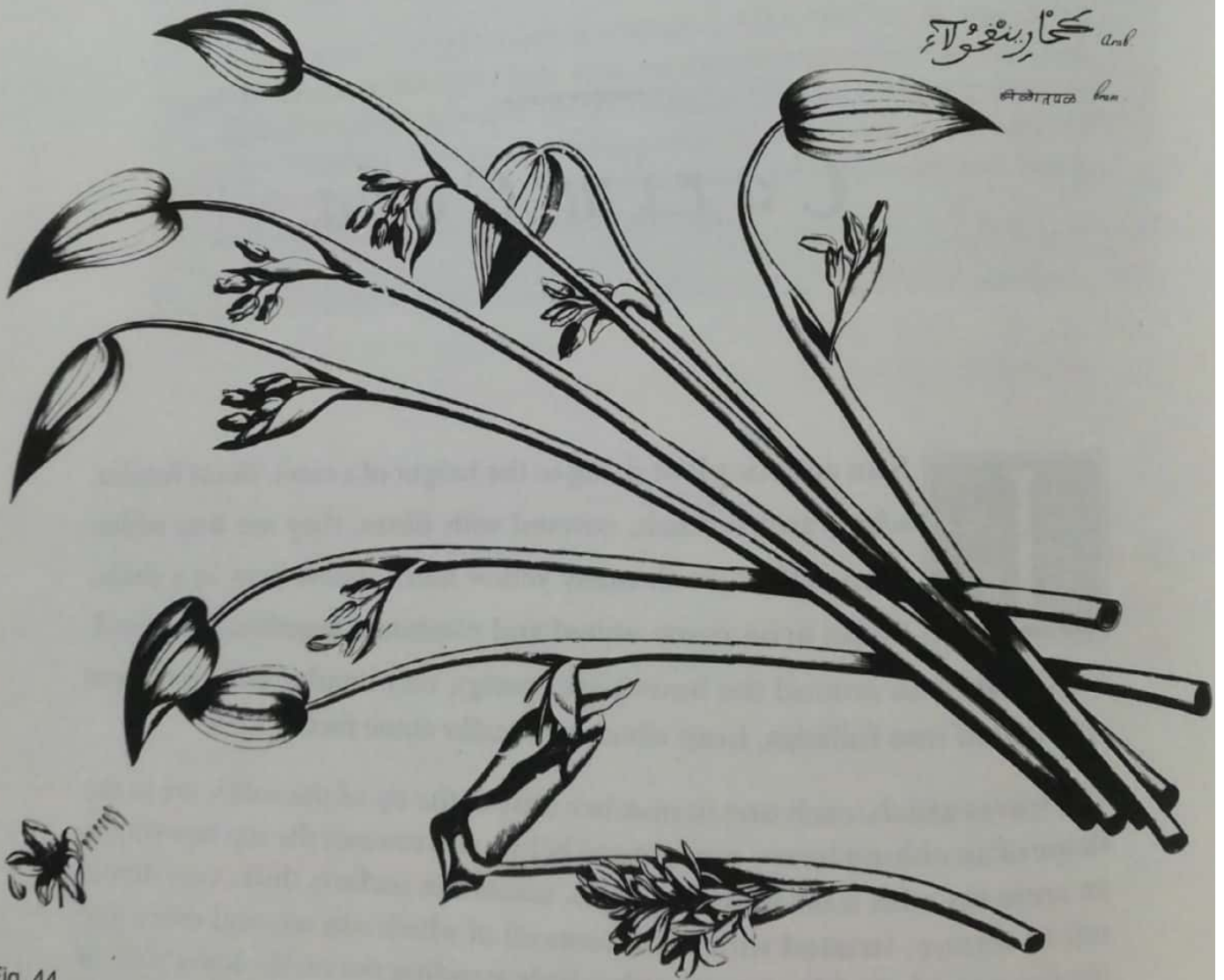


Fig. 44

stamens, furnished with erect, striated and yellow apices, one of them blue-pale and more broad, having a blue-green ligule, which is longer, broader than others and standing more out; underneath the ligule having a flap like a small leaflet. Among them from a green, light yellow globule, which adheres

to the mouth of the flowers, comes out a bluish-white style, thicker than the stamens, furnished at the top with a white outgrowth (knob).

Flower-buds are oblong, striated by five or six pronounced rib-lets, somewhat curled, or if you prefer, wrinkled; their leaves are first transparent and clean, like the wings of butterflies, tinged with no bluish colour; in them are seen the subtle trails of veins, which spread itself into many branch-lets, and arise here and there from the mid-rib, but they lose sight in the blue and glittering leaves.

The seed-bearing capsules are three sided, oblong-round, radiated in length with three furrows, entirely contained by leaves, provided with very thick and bulging and contracted and dark red rib-lets. In them are contained numerous seeds, arranged in three series, separated by an inner, slender membrane, which runs from the middle of the fruit to the space between, among the intermediary furrows and is bound (connected) closely to the furrows of the outer rind; are round in shape, a bit oblong and white, when mature have the colour of the seed of *Nasturtium*.

(Its Uses)

The whole plant crushed and given in milk, heals "coleric fever" (choleric?). Eye affections are removed, if the head is smeared with its concoction and oil. Root cooked and taken with *sugar*, sets aright the defects of liver, disperses gas; crushed in butter and oil and thus drunk, removes the inflammation or redness of the eyes. The bark of the root reduced to powder and taken with *sugar* is against asthma; the same chewed and detained in the mouth, relieves and smothers odontalgia (tooth ache).

Monochoria vaginalis (N. Burm.) Presl, Rel. Haenk. 1: 128. 1827; Backer in Fl. Males. 1, 4: 256. 1951; Manilal & Sivar., Fl. Calicut 293. 1982; Sivar. & Philip, Fl. Nilambur 731. 1997. - *Pontederia vaginalis* N. Burm., Fl. Ind. 80. 1768 [PONTEDERIACEAE].

Carim-gola Rheede, Hort. Malab. 11: 91-92, t. 44. 1692.

The name Karinkula [Malayalam script on t. 44] is still used; karim means black (possibly a reference to the dark blue flowers) and the meaning of kula is not clear. It is also known as Karimkuvalam and occurs in marshy places in many regions of Malabar.



Culi Tamara

FIG. 45.



Is the third species of *Tamara*. The roots, by which it adheres to the bottom are hairy fibres joined together into one bundle, white; older ones are covered with a yellow coating corrugation (wrinkling) themselves with ring-like furrows. The stalks are

thick, fistular, quite light, at the root more thick, drawn together towards the upper part into a narrow tip, angular, inside somewhat milky.

Each leaf stretches out from the tip of the stalks, from the stalk they run out far towards the posterior part with two flaps as if with wings (each one of which draws itself into a tip), and towards the anterior part, draw themselves together into an obtuse tip, with round margins; are broad, and somewhat closing the inner part towards itself, on both sides, of the same greenness, beset with very small spines, chiefly on the lower part, where they are also rough, easy to touch. From the stalk more or less thirteen ribs run out, of which some to the rear part (back) are taken to the tips of flaps or wings; others with the thicker mid-rib towards the obtuse tip of the leaf, giving out here and there transverse nerve-lets; all project on both sides, mostly on the

lower part, except the transverse nerve-lets, they are stretched out only on the lower part, on the upper they are conspicuous.

Flowers come out on their own knotted stalks, they are beset with minute hairs and are very rough; from the inner node, where they are surrounded



Fig. 45

by small, oblong, cuspidate leaves and striated in length like the leaves of grasses, give out three or four knotted stalk-lets, and they burst forth from each node of the stalks, many together, on slender, rigid, and somewhat erect petioles; are small, three petalled they are broad-round, spoon-like towards the interior, white, a little glittering, standing somewhat apart from themselves mutually, with their own claws, with a green knob or head, marked out with

small buds, placed around a swollen petiole, from which come forth many, short, thin, white, obliquely erect stamens, furnished with six yellow apices from which come forth many, short, thin, white, obliquely erect stamens, furnished with six yellow apices from the inner part; the petals themselves of flowers are girded under by green leaflets.

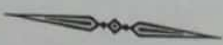
The head bulges out into larger, round, very shining, and transparent, rough buds (outgrowths), striated in the middle with acutely pronounced suture; in these, which are watery, is a green and thick partition wall, on both parts leaving a small cavity towards the sides, in which are concealed two white seeds.

This plant is of unknown use among the Indians.

Limnophyton obtusifolium (L.) Miq., Fl. Ind. Bat. 3: 244. 1855; den Hartog in Fl. Males. I, 5: 324. 1957. - *Sagittaria obtusifolia* L., Sp. Pl. 993. 1753 [ALISMATACEAE].

Culi-tamara Rheede, Hort. Malab. II: 93, t. 45. 1692.

The name Kuzhithaamara [Malayalam script on t. 45] is still used; kuzhi means pit and Thaamara refers to *Nelumbo*. It occurs in waterlogged areas on the coastal plains of Malabar.



Ottel Ambel

FIG. 46.



THE fourth species of *Ambel*; Brahmins call it *Odeca-aloen*, very much differing from the first ones. Root is like round node, the bark of which is yellow, giving out very many slender and yellow fibres, also for the further propagation, giving out a new root. The stalks arising from the root are simple, tender, fistular, but thicker and cornered, light green, white.

The leaves are like those of the preceding species, are not attached to the stalks, neither swims (floats) on water or recline on water, but stand out both under the water or outside water, with the margin rolled over downwards and drawn towards each other mutually; mostly spread out in width, with round margins towards the stalk, anteriorly drawn together into a tip, very rigid, easy to break, here and there undulating into small flaps, glabrous. With the middle nerve, large nervelets come out in an oblique and arched trail, from the stalk itself, on both sides, three or four at random, from which (trail), turning off from one brought into the tip, standing out on the lower side and striating the upper side.

Flowers are attached to their own quadrangular stalks, one in number on each, which stalks, on the upper part, very near to the flowers are winged, namely drawn together with five other larger, broad, rigid ones, like the leaves and intermediate with the smaller ones. The flowers are white, irregular,

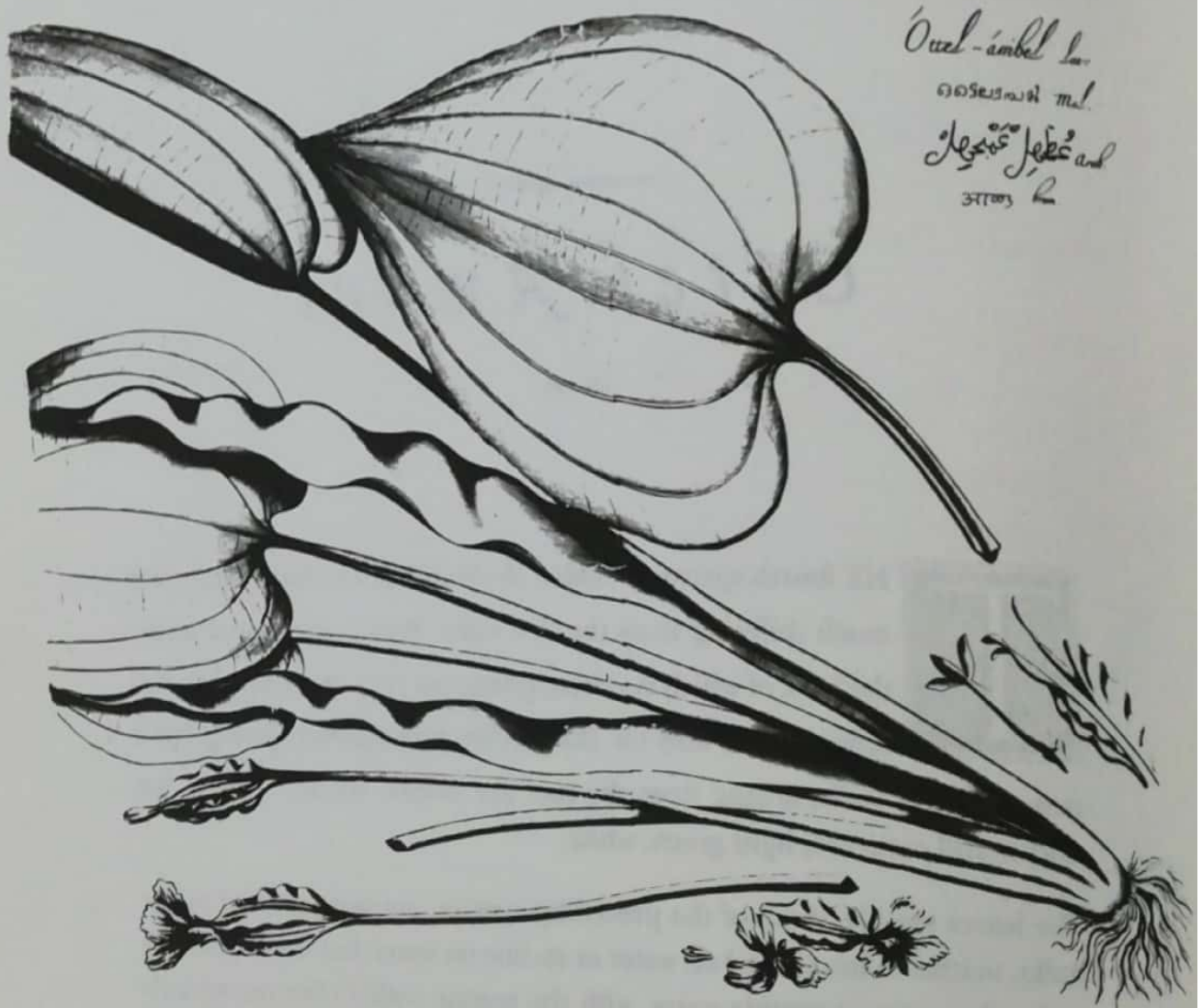


Fig. 46

three petalled, smooth, curled, striated in length with veins. The stamens are yellow; among them a cuspidate head comes out; lower down they are surrounded by three green, narrow, erect, cuspidate leaves, which are everywhere covered with dark-green nerves.

Seed capsules are round, oblong, cuspidate; in them are seen numerous, round, minute, seeds of red colour when they are mature.

(Its Uses)

These, as also those of the remaining species, are used in food.

Ottelia alismoides (L.) Pers., Syn. Pl. 1: 400. 1805; den Hartog in Fl. Males. I, 5: 398. 1957; Manilal & Sivar., Fl. Calicut 281. 1982; C. D. Cook et al., Aquatic Bot. 20: 133. 1984; Sivar. & Philip, Fl. Nilambur 675. 1997. - *Stratiotes alismoides* L., Sp. Pl. 535. 1753. *Damasonium indicum* Willd., Sp. Pl. 2: 276. 1799, nom. illeg. (incl. *Stratiotes alismoides* L. 1753) [HYDROCHARITACEAE].

Ottel-ambel Rheede, Hort. Malab. 11: 95, t. 46. 1692.

The name Ottalambel [Malayalam script on t. 46] is not used now but its shortened version "Ottambel" is used; ottal (from ottuka) means to stick (a reference to the thin leaves, the margins of which are rolled over, sticking. Ambel refers to *Nymphaea*. It is very common in freshwater ponds in the coastal plains of Malabar.



Tsjem Cumulu

FIG. 47.



HIS plant likes sandy soil, running far. Root is white and fibrous. Many stalks arise from the roots, are simple, round, rigid, woody, watery, from white, turning yellow, striated with three veins. Is devoid of leaves.

Irregular flowers are transversely attached to the tip of stalks which are thicker above, somewhat bent to one side, are two petalled, one of them is blood red and purple, on the inside in the mouth besmeared with a sticky liquid; the other (namely the outer one) is cuspidate, with a curved-back, closed sides, coral-red, lower down, from the venter, contracted back by which it faces the back of the cuspidate petal. In its mouth is seen a thick style, white, reddish, the head of which is white-yellow, plain, round, covered with minute, white hairs; with the style are found two small, reddish stamens, together, inserted to the side of the bell.

Moreover it is to be noted that the style arises from a rather large, round globule, placed in the bottom of the calyx; and this globule is white-yellow, covered with a membranous reddish coating, which is easily peeled off; when dissected crosswise it is seen to be formed of humid, fleshy folds.

(Its Uses)

The leaves, applied to the gums with *Moschata* nut and sugar, prevents the decay of teeth and kill their worms. From the juice of leaves and wood together,

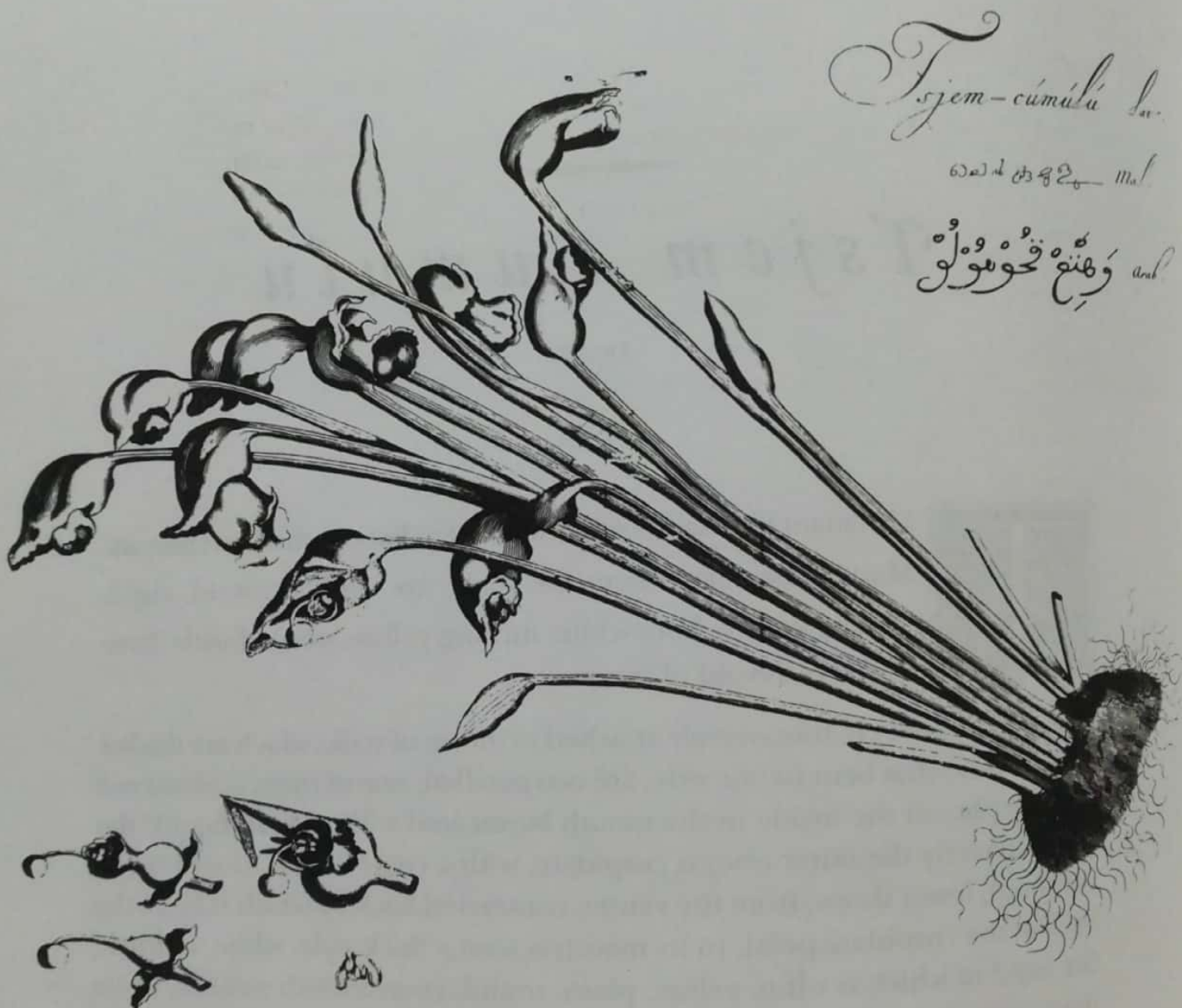


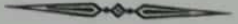
Fig. 47

lamp-wicks are prepared which dipped in the oil of the leaves of *d' Emsermo* and lighted, leave light ashes which choke the worms of eye lids and other parts; the bulb of the root gives the same if you place in the ears and apply to the front, pulverised, namely and roasted.

Aeginetia indica L., Sp. Pl. 632. 1753; Manilal, Fl. Silent Valley 198. 1988; Sasidh. & Sivar., Fl. Thrissur 327. 1996; Sivar. & Philip, Fl. Nilambur 479. 1997. -*Orobanche aeginetia* L., Sp. Pl. ed. 2, 883. 1763, nom. illeg. (incl. *Aeginetia indica* L. 1753) [OROBANCHACEAE].

Tsjem-cumulu Rheede, Hort. Malab. 11: 97, t. 47. 1692.

The name Chenkumulu [Malayalam script on t. 47] is not used now; Chen (from chuvappu) means red; and kumulu means anything that is globular or knob-like. The allusion is to the blood red flowers and the somewhat globular or capsular structure. No Malayalam name is currently known to be used for this plant. It occurs on forest margins in northern Malabar, during the monsoon.



V a e m b u

FIG. 48.



IN the language of the Brahmins *Bembi*, is an aquatic plant. Root is of very sweet smell, of very cutting taste, giving out numerous, yellow, hairy fibres, from one side, downwards, creeping lengthwise, when dry with soft and white cuticle, has a pith, marked off from the inner flesh by a yellow ring like mark, is propagated through new eyes which protrude from the root.

Leaves arise crosswise from the nodes of the root, are "latooblonga", or oblong-narrow, equaling three or four feet, closed towards one side, and there covered with a white coating, striated with very fine veins, clothing the root with yellow bases, mutually rolled round, of sharp taste and smell.

(Its Uses)

Leaves crushed with dry *Ginger* relieve the tearing of joints and arthritic pains from salty and sharp phlegm. The root burnt to charcoal and reduced to powder is a tooth powder, with which if the gums are brushed with rice-water cures spasmodic distortions. The same powder taken with a convenient

liquid, heals cholera; nay is taken against colic pains tearing the stomach. When eaten excites the damaged appetite so much that it also promotes saliva. Levigated in water and given, nay, used in bath, heals epileptic children.

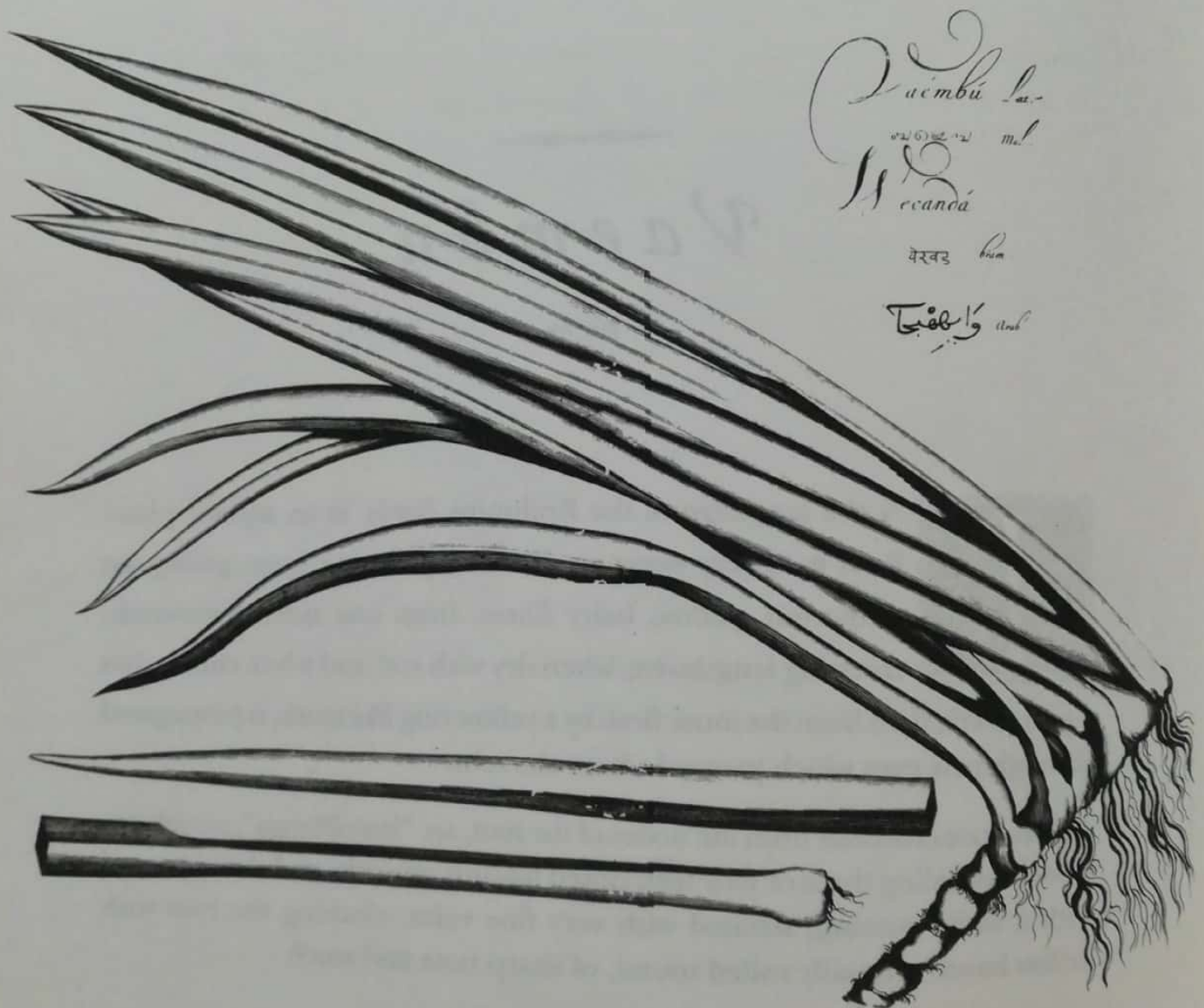


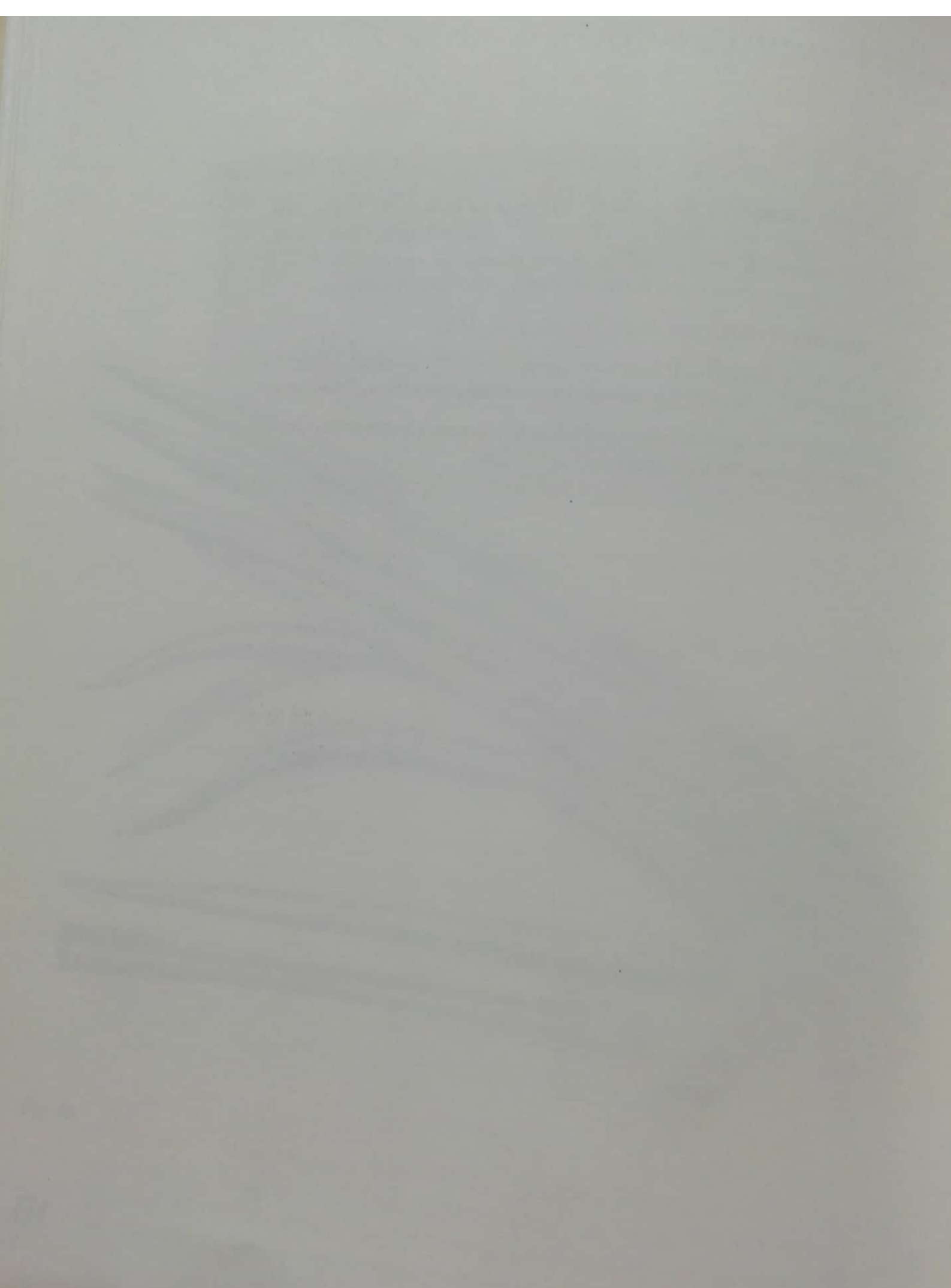
Fig. 48

Acorus calamus L., Sp. Pl. 324. 1753; Manilal & Sivar., Fl. Calicut 306. 1982; Suresh et al., Taxon 32: 130. 1983; Nicols. in Dassan., Rev. Handb. Fl. Ceylon 6: 28. 1988 ("1987"). -*Acorus calamus* var. *verus* L., Sp. Pl. 324. 1753. *Acorus verus* (L.) J. Burm., Fl. Malab. 10. 1769 [ARACEAE].

Vaambu Rheede, Hort. Malab. 11: 99, t. 48. 1692.

The name Bayambu [Malayalam script on t. 48], a colloquial form of "Vayambu" is still used. It is cultivated as a medicinal plant throughout Malabar.

It is especially given to infants and babies to promote appetite and encourage them to consume food properly.





Pal Modacca

FIG. 49.



THE second species *Modacca*; the Brahmins call it *Cuvali*, is a climber growing in sandy soils. Root thick, tuberous, a cubit long, white inside, milky, soft, less woody, black on the outside, giving out thin fibres here and there, emulating acorns in smell and taste. The stalks are slender, milky, older ones ash-grey, green under the outer shell, on one side very reddish, glabrous, shining, humid.

Leaves arise here and there on reddish petioles, striated on the inside, each one split and separated into seven lobes, on the upper side dark green, somewhat shining, on the lower clear green soft and milky. The rib standing out also on the upper side, is reddish there, goes to each lobe, on the lower side is light green.

Flowers many clustered together arise on their own pedicels, in a common plain, somewhat bent, reddish, a span long petiole, coming forth from the origin of leaves, are small purple-red bells, marked, from the neck with a star of five oblong tips which run out very near to their margin, and are striated in length with vein-lets; the tips themselves are deeply purple in the neck, at

the extremities light purple-red, on the outside from purple to white, in the star shining; of no smell. In them there rise up fine purple-white stamens, furnished with oblong erect, whitish, bearing at the top a thick, round and floury knob, which arise from the rudiment of the fruit, situated in the calyx.



Palmetto
 மலையாள மல
 مل مفعلة
 மல மல

Fig. 49

The calyx is five foliate, very tightly clasping the neck of the bell, each leaf is swollen like a round bladder dark red bordering on deep red; the flowers having fallen down, they close tightly and envelop the greatest part of the fruit, even when it is mature and also when they are green.

Fruits are round berries, with the greatest part covered by the leaves of the calyx, with the upper part red, inside green, striated in length with four subtle vein-lets, and as if divided (separated) into as many locules, two of which are separated by a thin intermediary membrane from the remaining two. In each one seed, connected to the side of the rind by means of silvery filaments, of irregular shape, of two or three sides, the inner pulp from yellow turns white.

(Its Uses)

The root dried in the sun, crushed, reduced to powder, boiled with *sugar* and butter and taken, it is said, renders the lean people fat, but also stops the copious flow of menses and helps in the fever of bones.

Ipomoea mauritiana Jacq., Collect. 4: 216. 1791; Jacq., Hort. Schoenbr. 2: 39, t. 200. 1797; Verdc. in Fl. Trop. E. Africa, Convolvulac. 135. 1963; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 331. 1980; Manilal & Sivar., Fl. Calicut 183. 1982; Sasidh. & Sivar., Fl. Thrissur 309. 1996; Sivar. & Philip, Fl. Nilambur 451. 1997. - *Convolvulus paniculatus* L., Sp. Pl. 156. 1753. *Ipomoea paniculata* (L.) R. Br., Prodr. 486. 1810, non N. Burm. 1768. *Batatas paniculata* (L.) Choisy, Mém. Soc. Phys. Hist. Nat. Genève 6: 436. 1834. *Ipomoea digitata* sensu auct., non L. 1759: C.B. Cl. in J. Hook., Fl. Brit. Ind. 4: 202. 1883; Ooststr. in Fl. Males. I, 4: 483. 1953 [CONVOLVULACEAE].

Pal-modecca Rheede, Hort. Malab. 11: 101-102, t. 49. 1692.

The name Palmothekka [Malayalam script on t. 49] is still used; pal means milk (milky sap found in tuber) and Mothekka refers to *Adenia hondala*. It is very common on the coastal plains of Malabar.



Munda Valli

FIG. 50.



S a climber, liking sandy soils, affixing itself to trees. Stalks round, green, not knotted.

Leaves arise on oblong, thick, green petioles, striated on the inside, accompanied here and there by new shoots, have the shape of heart, anteriorly cuspidate, at the base incised with a curve (notch), soft, smooth, of dark greenness on the upper side, on the lower of light greenness; when crushed is of pleasing smell, of no taste. The mid-rib is broad, plain, green-white, along with the lateral ones standing out on both sides; chiefly on the lower.

Flowers arise two or three joined together on oblong, thick, green, tortuous petioles, are monopetalous, very large, imitating bells, springing forth a broad and large mouth, striated with a star of five oblong tips (corners) which are swollen on the outside, from the upper part of the neck where they are curly slightly with small wrinkles, with slender and transparent texture, very smooth and soft, of shining snow colour, very delightful to sight; the star is green on the outside; smell like that of our *Lillies*. From them come out five white, shining stamens, which are from the inner part of the neck, to which they are

served on the inside, are furnished with white decumbent apices, sprinkled with white flour. The style arises free from the calyx, is white, thick, standing out above the stamens with its round, white, and flowery head. The calyx is five foliate, the leaves are oblong, narrow and cuspidate, of green, black colour, clasping tightly the neck of the flowers. Flower buds are oblong, conical, light green.

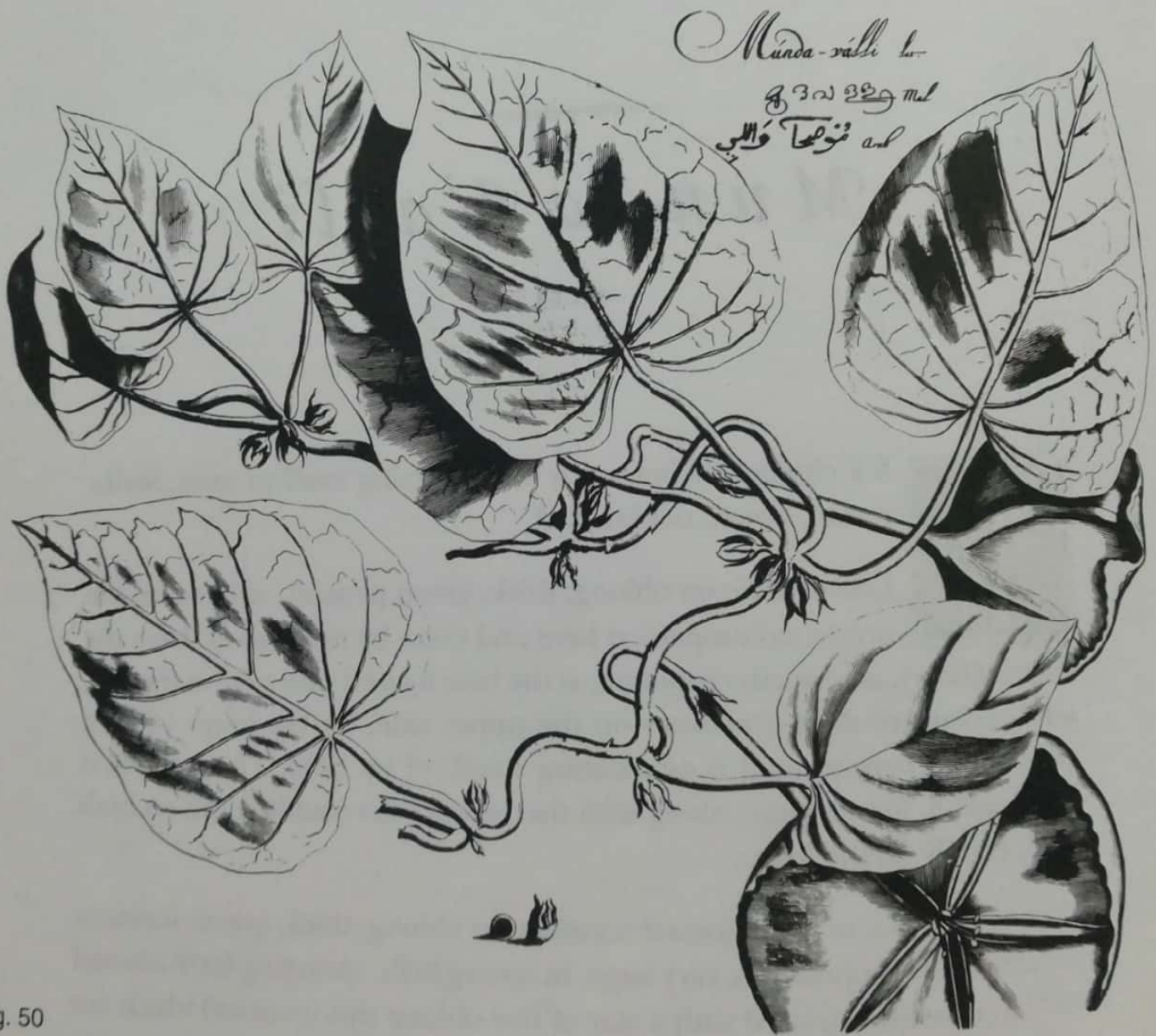


Fig. 50

Fruits are attached to short petioles at the origin of leaves, are oblong-round, cuspidate; when young green, with green flesh inside, succulent, inside with a narrow cavity; of pleasing smell, covered with a rather thick rind.

In medicine no use, at least use is unknown.

Ipomoea alba L., Sp. Pl. 161. 1753; Ooststr. in Fl. Males. 1, 4: 480. 1953; Verdc. in Fl. Trop. E. Africa, Convolvulac. 130. 1963; Gunn, Brittonia 24: 151. 1972; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 317. 1980; Manilal, Fl. Silent Valley 188. 1988; Sasidh. & Sivar., Fl. Thrissur 308. 1996; Sivar. & Philip, Fl. Nilambur 446. 1997. - *Convolvulus aculeatus* L., Sp. Pl. 155. 1753. *Ipomoea bona-nox* L., Sp. Pl. ed. 2, 229. 1762. *Convolvulus grandiflorus* L.f., Suppl. Pl. 136. 1782, nom. illeg. (incl. type of *Ipomoea alba* L. 1753), non Jacq. 1776. *Convolvulus maximus* L.f., Suppl. Pl. 137. 1782. *Ipomoea grandiflora* Roxb., Hort. Beng. 14. 1814, nom. illeg. (incl. type of *I. alba* L. 1753). *Ipomoea maxima* (L.f.) Don ex Sweet, Hort. Brit. ed. 2, 372. 1830. *Calonyction speciosum* Choisy, Mém. Soc. Phys. Hist. Nat. Genève 6: 441. 1834. *Calonyction roxburghii* G. Don, Gen. Hist. 4: 263. 1837, nom. illeg. (incl. type of *Ipomoea alba* L. 1753). *Calonyction rheedei* Colla, Mem. Nuova Sp. Calon. 15. 1840. *Ipomoea roxburghii* Steud., Nom. Bot. 1: 819. 1840, nom. illeg. (incl. type of *Ipomoea alba* L. 1753) [CONVOLVULACEAE].

Munda-valli Rheede, Hort. Malab. 11: 103, t. 50. 1692.

The name Moodavalli [Malayalam script on t. 50] is not used but its modified version "Mundavalli" is used; munda means small [short] and valli means climber. It is found in most regions of coastal Malabar.



Kattu Kelengu

FIG. 51.



It is a climber, enjoying sandy soil. The stalks are round, green, hairy, a bit woody and pale.

Leaves arise on oblong, round, hairy, green, partly date-red and dark-red petioles, thicker than the stalks, are heart shaped, anteriorely with a short tip, incised at the petiole, a bit hairy, rough on the upper side on account of the hirsuteness. The mid-rib with lateral ones stands out on the lower side.

Flowers arising on round, hairy petioles from above the origin of leaves, are cyathia shaped, marked from the orifice to the margins by a five cornered star, from white to light green, are from white to yellow, in the mouth of the neck dark red-purple, smooth, in the trail of the corners of the star, hairy on the outside of no colour, below the calyx in the nodes of the petiole, surrounded by two narrow leaflets, five white stamens spring forth from the bottom of the neck, furnished with white yellow, erect apices. The style is white, capped above with two, round, white buds (outgrowths). The base to which the stamens are attached, are furnished with round openings of trellis.

The calyx is five-foliate, the leaves themselves are cuspidate, erect; three of them are large and broad, two inner ones narrow.

Kattu-kelingu L.

കാട്ടുകലിംഗു മല

قَطَاوْنُ عَجَبِيْنِيَا

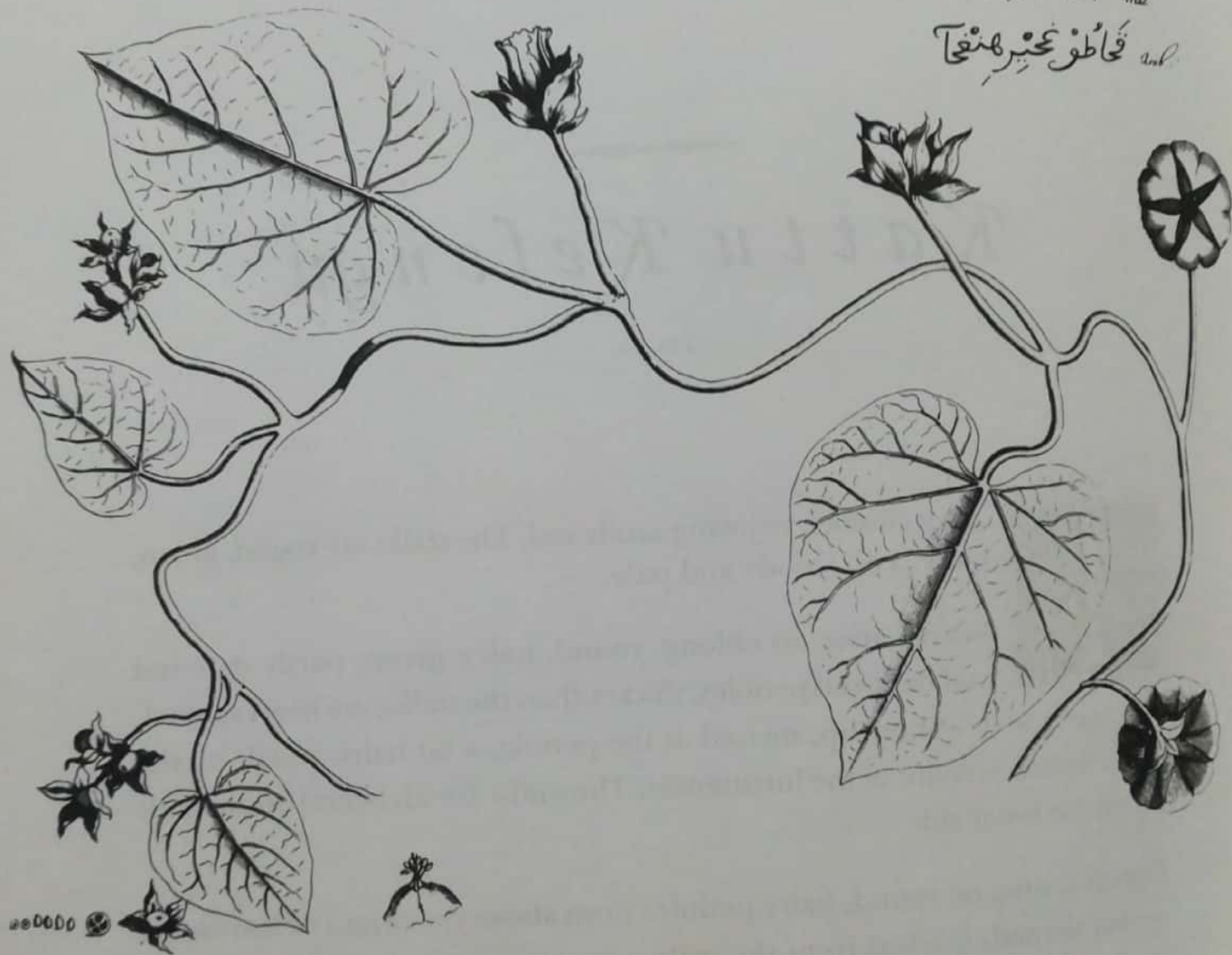


Fig. 51

When the flowers fall off, round globules follow, which when dry, are of ash-dark colour, containing four seeds, separated mutually by intermediary partition walls, are three cornered, with one round, two minor ones plain, of the same colour with the globules.

(Its Uses)

The leaves, crushed with *Codi-avanancu* and fresh butter, ripens and opens abscesses. Root levigated with rice-water resists erisypales (inflammatory disese, generally in the face, marked by a bright redness of the skin).

Hewittia malabarica (L.) Suresh, in Nicolson *et al*, Interp. Rheede's Hort. Malab. 88. 1988; Sasidh. & Sivar., Fl. Thrissur 307. 1996; Sivar. & Philip, Fl. Nilambur 445. 1997. - *Convolvulus malabaricus* L., Sp. Pl. 155. 1753. *Convolvulus scandens* Milne, Descr. Cat. 2. 1773. *Convolvulus sublobatus* L.f., Suppl. Pl. 135. 1782. *Convolvulus bicolor* Vahl, Symb. 3: 25. 1794, non Desr. 1792. *Ipomoea malabarica* (L.) Roem. & Schult., Syst. 4: 235. 1819. *Argyreia malabarica* (L.) Choisy, Mém. Soc. Phys. Hist. Nat. Genève 6: 420. 1834. *Shuteria bicolor* Choisy, Mem. Soc. Phys. Hist. Nat. Genève 6: 486. 1834 (incl.? type of *Convolvulus sublobatus* L.f. 1782). *Hewittia bicolor* Wight & Arn., Madras J. Sci. 1(5): 22. 1837. *Hewittia sublobata* (L.f.) Kuntze, Rev. Gen. Pl. 2: 441. 1891; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 312. 1980. *Hewittia scandens* (Milne) Mabb. in Manilal, Bot. Hist. Hort. Malab. 84. 1980 [CONVOLVULACEAE].

Kattu-kalengu Rheede, Hort. Malab. 11: 105, t. 51. 1692.

The name Kattukizhengu [Malayalam script on t. 51] is not used, except in a broad sense for plants with tubers (kizhengu) that occur in the wild (kattu). Kattu means wild and kelangu is tuber, meaning a "wild tuber". No Malayalam name is currently known for this plant now. It is very common on the coastal plains of Malabar.



Ballel

FIG. 52.



ALLEL; Brahmins call it *Takasivalli*, is a creeper, creeping over water with tendrils, and from their junctions sending out white-green roots, they, investing the peduncles of the stalks, are formed of many hairy, white fibres, of watery taste. The stalks are slender, tender, aqueous, green, bent at junctions, from where roots arise, also leaves and flowers.

Leaves which arise on long, round, and green petioles, are lance-shaped, with the posterior part extended into lateral peduncles, at their margins, somewhat sinuate, thick in texture, of dark greenness on the upper side, on the lower light greenness. The mid-rib with the lateral ones stand out greatly on the upper part, less on the lower.

Flowers are monopetalous, marked by a five cornered star, in the star and its corners (tips) white, on the inside purple-red, on the outside purple-light-red. The style coming out from the mouth of the calyx is white, at the apex capped with a white, flowery outgrowth; with it spring forth five stamens, furnished with oblong, white, flowery apices, inserted to the lower side of the

neck, in the bottom parts where they are thicker, reddish, and hairy with white hairs. Flower buds are oblong-cuspidate, green- light yellow. Fruits are round and bulging out as if by three round sides, striated into a short and narrow tip, when tender are more oblong and more cuspidate, when mature gets more swollen towards the sides, of green, white colour, clasped by five green and acuminate leaves of the calyx in the greatest part, chiefly however to the swellings.

Dallol L.
mal.
Takiralli
mal.
and



Fig. 52

Three seeds are contained in them, separated from themselves mutually by white partition walls, are three cornered, with one outer side, round, two inner ones plain, obtusely meeting together; contain in themselves a green

bean, in the anterior part split in the middle like a claw into two lobes through a middle partition wall; on the convex side furnished with a navel or a green eye, which is bent towards the plain side, or if it receives itself into a lap (bosom), this bean when open, from the green eye, as from a common peduncle, two plain foliaceous lobes are seen each one of which spreads into a curled linen (cloth).

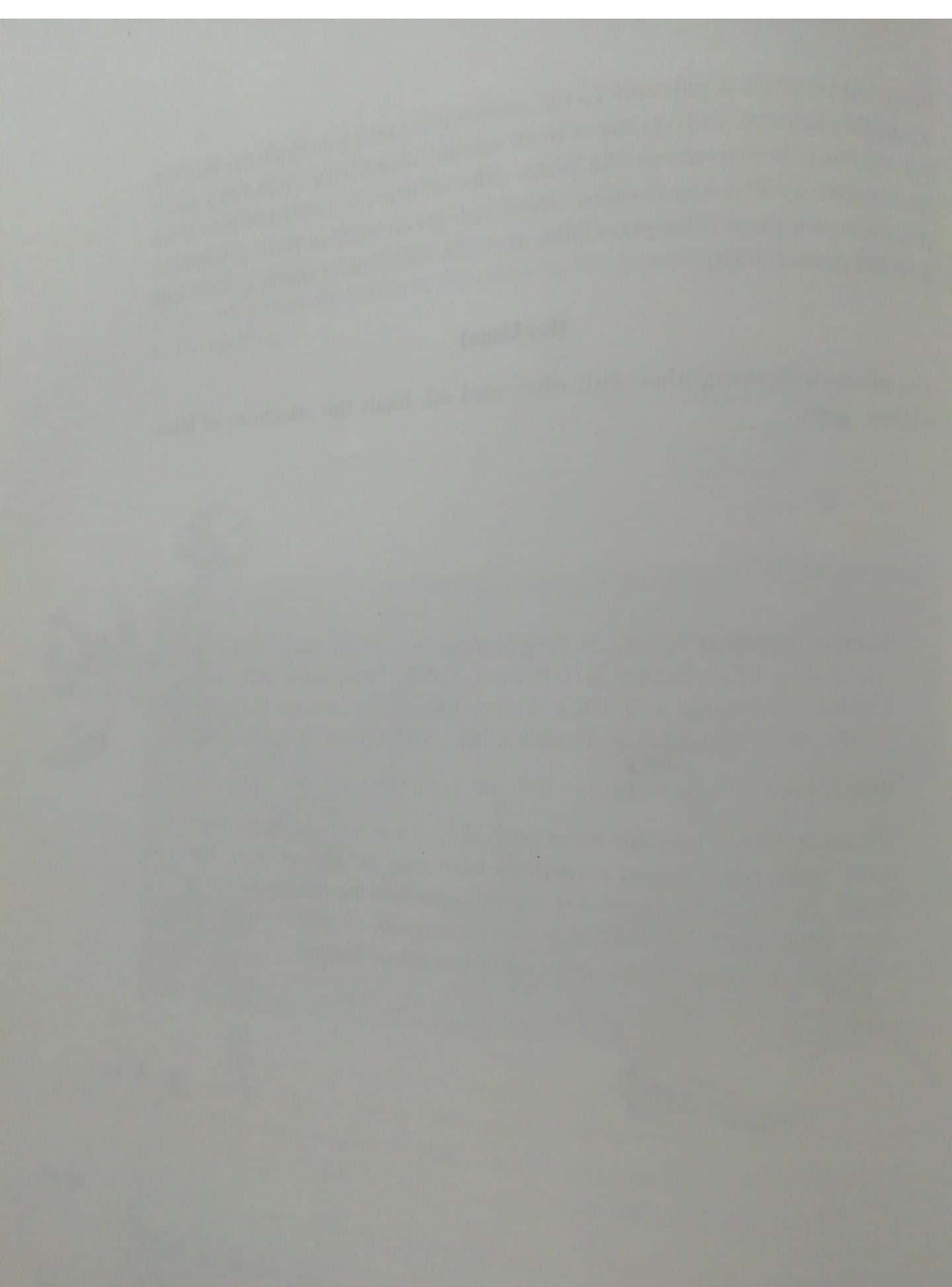
(Its Uses)

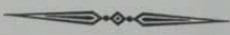
The plant cooked together with whey and oil, heals the affections of loins, relieves pain.

Ipomoea aquatica Forssk., Fl. Aegypt.-Arab. 44. 1775; Merr., Philipp. J. Sci. 59: 452. 1936; Ooststr. in Fl. Males. I, 4: 473. 1953; Verdc. in Fl. Trop. E. Africa, Convolvulac. 120. 1963; Austin in Dassan., Rev. Handb. Fl. Ceylon I: 318. 1980; Manilal & Sivar., Fl. Calicut 182. 1982 [CONVOLVULACEAE].

Ballel Rheede, Hort. Malab. II: 107-108, t. 52. 1692.

The name Ballel [Malayalam script on t. 52] is not in use now. Ballel (from valle] means being bulged in (perhaps from palla, bulged stomach). The allusion may be to the prominent nodes bulged with the crowded stalks of leaves and flowers. No Malayalam name is currently in use for this plant. It is common in stagnant freshwater ponds throughout Malabar.





Tiru Tali

FIG. 53.

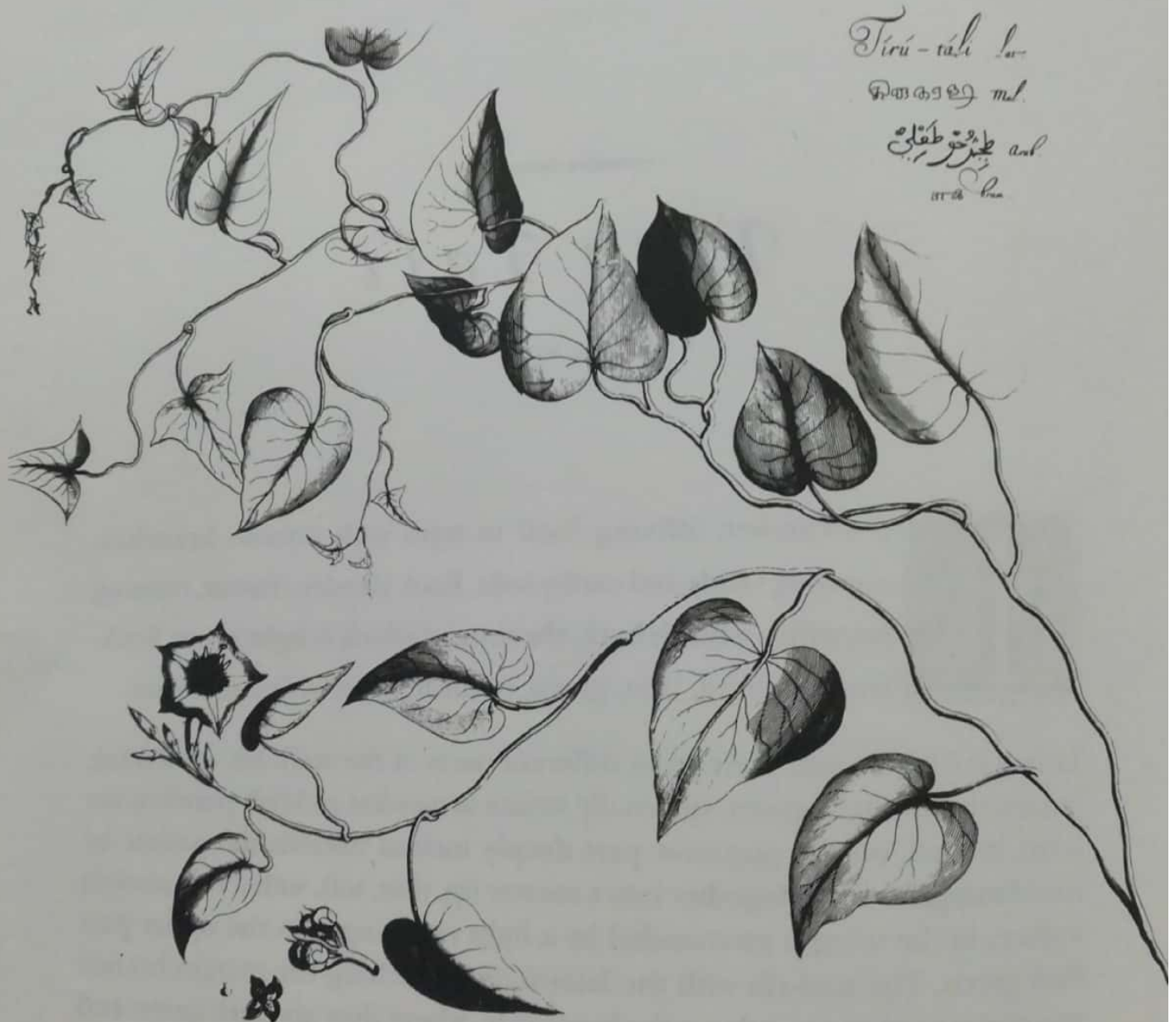


S a climber, affixing itself to trees with sinuous branches, enjoying sandy and earthy soils. Root slender, fibrous, running far, with a whitish bark, the taste of which is light sweet. Stalk-lets are round, thin, green, reddish, beset with loose hairs.

Leaves arise here and there from different parts of the stalk-let, on thicker, longer, tender, light green, internally striate somewhat reddish petioles, are heart shaped, on the posterior part deeply incised towards the petiole by round margins, drawn together into a narrow tip, thin, soft, with a very smooth surface, in the margin surrounded by a light red fringe, on the upper part dark green. The mid-rib with the lateral ones reaching the margin branch into arms stand out greatly on the lower side, where they are dark-green and shining.

Flowers arise from the origin of leaves, on long, knotted, light green petioles which are more thick than the stalk-lets from which they arise, more or less seven or eight clustered together, are monopetalous, white and purple; their neck is oblong-narrow, in it they are purple-red; outside purple whitish and

shining; from the lower mouth of the neck, marked by a star, the corners of which reach to the margins and there they vanish; of no smell. In them are five white thin stamens inserted to the neck, furnished by yellow and erect apices. The style is white and slender, capped with two small outgrowths at



Tiru-tali
 மருதலி
 and
 18-26

Fig. 53

the top, having its origin from the green globule, the rudiment of the fruit, situated in the bottom of the calyx; it, tightly catching the neck of the flowers, is green, five-foliate, round-cuspidate. Flower buds are green and cuspidate.

Fruits are round berries, somewhat plain, first green, then yellow or red, striated with four vein-lets or lines, in which the rind, which is hard and thin, open (dehisce) into four parts. In them are four seeds, separated from each other by means of membranes, for the rest, is three-cornered, with one side round, two lateral ones plain, of dark chest-nut colour, from the eye at the top they give out white thin threads.

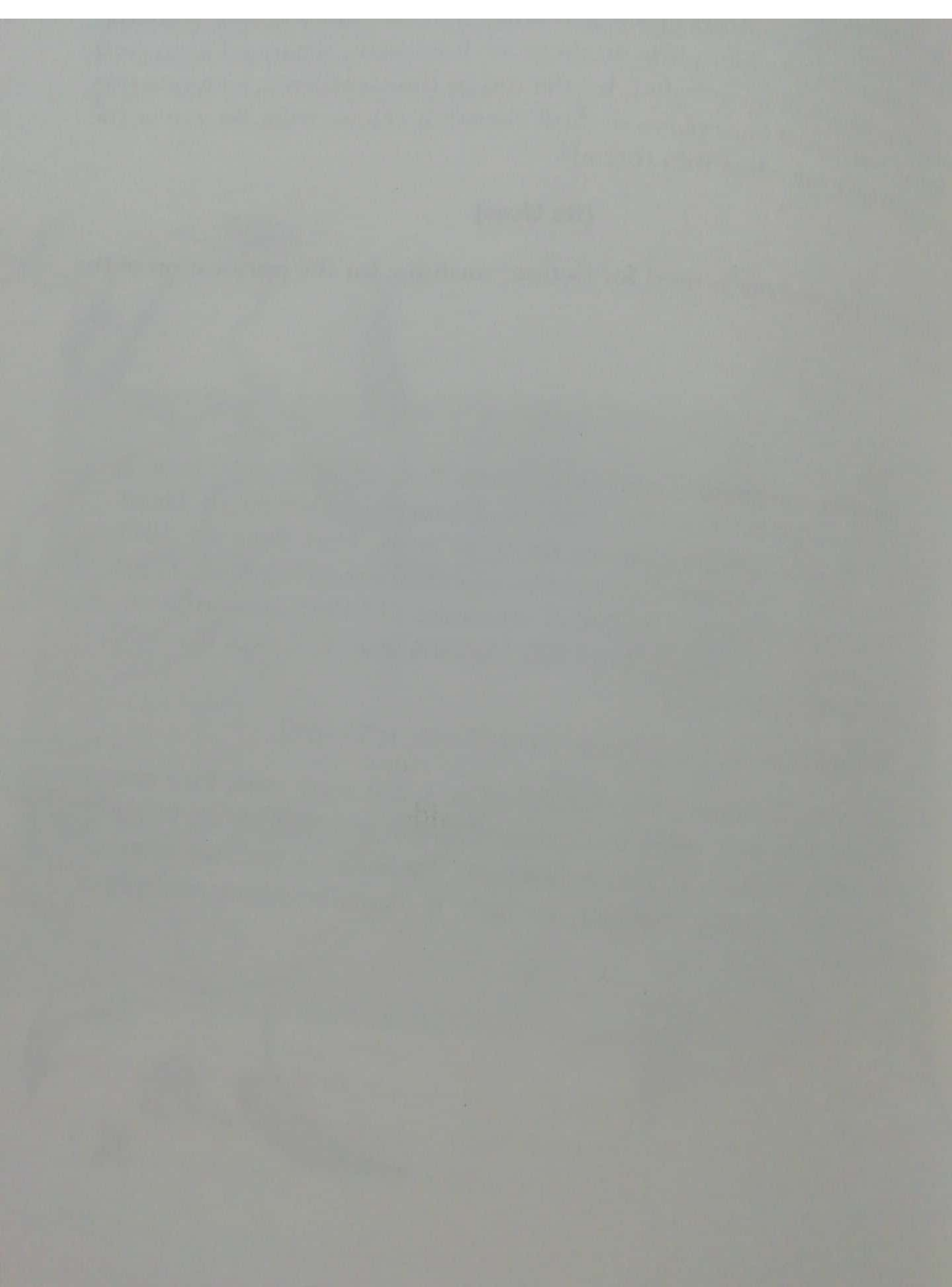
(Its Uses)

The juice pressed out is used for (lotion) washing, for the purification of the body.

Ipomoea marginata (Desr.) Verdc., Kew Bull. 42: 658. 1987; Sivar. & Philip, Fl. Nilambur 455. 1997. - *Convolvulus marginatus* Desr. in Lam., Encycl. 3: 558. 1792. *Ipomoea sepiaria* Koenig ex Roxb., Hort. Beng. 14. 1814, nom. illeg. (incl. type of *Convolvulus marginatus* Desr. 1792); Roxb., Fl. Ind. 2: 90. 1824; Verdc. in Fl. Trop. Afr., Convolvulac. 117. 1963; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 338. 1980; Manilal & Sivar., Fl. Calicut 181. 1982; [CONVOLVULACEAE].

Tiru-tali Rheede, Hort. Malab. 11: 109-110, t. 53. 1692.

The name Thiruthali [Malayalam script on t. 53] is still used; thiru means blessed (whatever refers to Gods and Kings); and thaali refers to plants containing mucilage, used as a shampoo. The allusion is to its use as a very (important) valuable shampoo for bath. It occurs in uplands throughout Malabar.





B e n - t i r u - t a l i

FIG. 54.



S a climber growing in sandy soils. Stalks are slender, round, green, glabrous. Leaves are oblong-round, thick, soft, smooth, of weak and pleasing smell; of slightly sharp taste. The mid-rib stands out on both sides, the lateral ones, become swollen

on the upper surface, on the lower conspicuous with their trails.

Flowers are monopetalous, bell-shaped, star-like with five corners (tips), with an oblong neck, very white. In them are five, erect, white stamens tipped by reclining and white apices, lower down hairy with white hairs, served to the neck. The style is more oblong, provided with a white bud (knob); springing forth from a green-yellow globule, placed in the calyx; it is five foliate, three of them are large and oblong-round, two narrow and cuspidate.

Fruits are oblong, bearing at the top an oblong light green filament placed among four erect, rough, rigid, and green leaves taking the place of calyx (fulfilling the function of), their rind is thick and light green, inside very glabrous and white; in the middle is very soft, wooly, white, containing down.

(Its Uses)

From the juice of this plant, a sitting bath is prepared against that endemic disease called *Pitao*; the same with fruit and the bark of *Cadel-avanacu*, loosen the bowels.

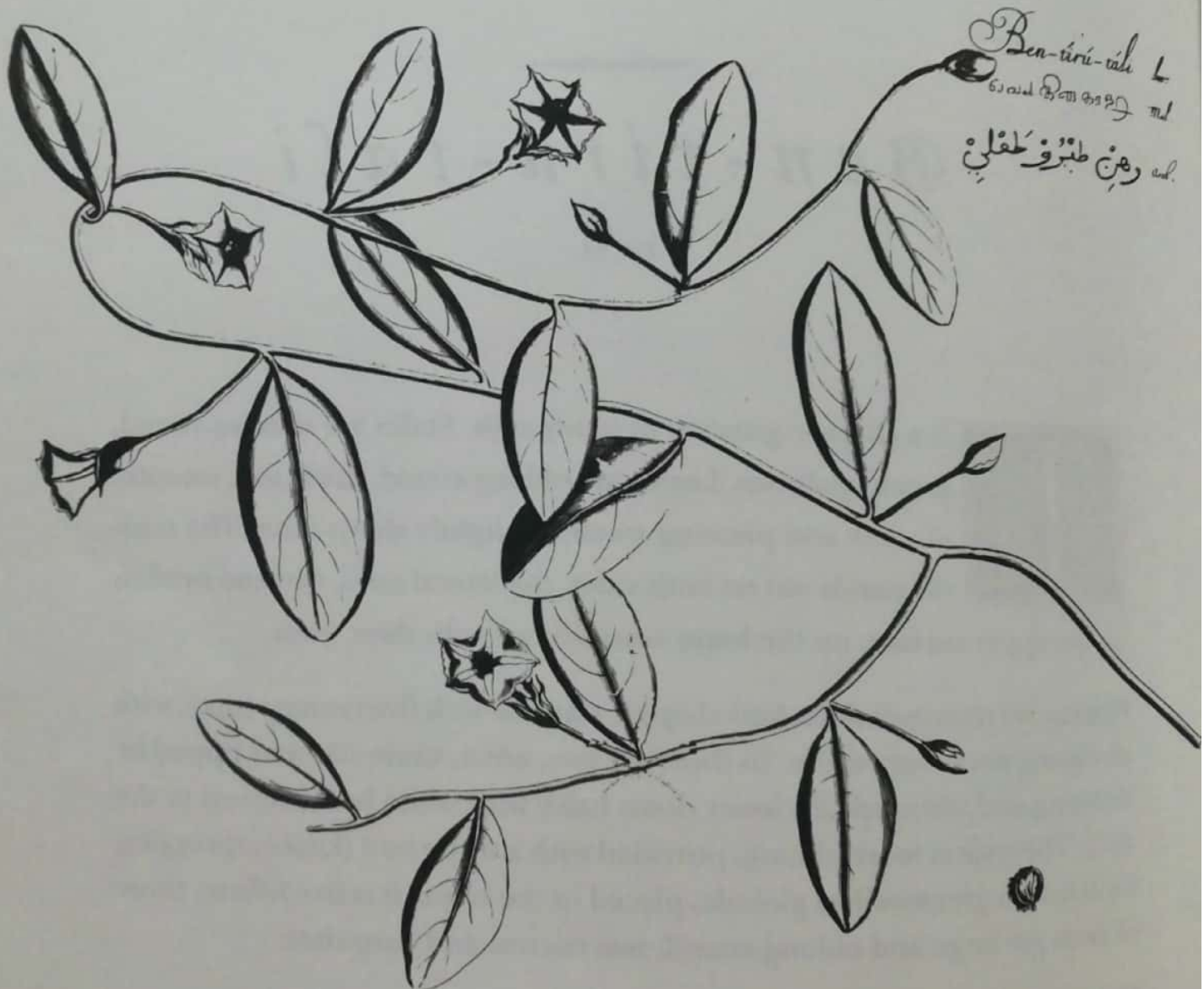
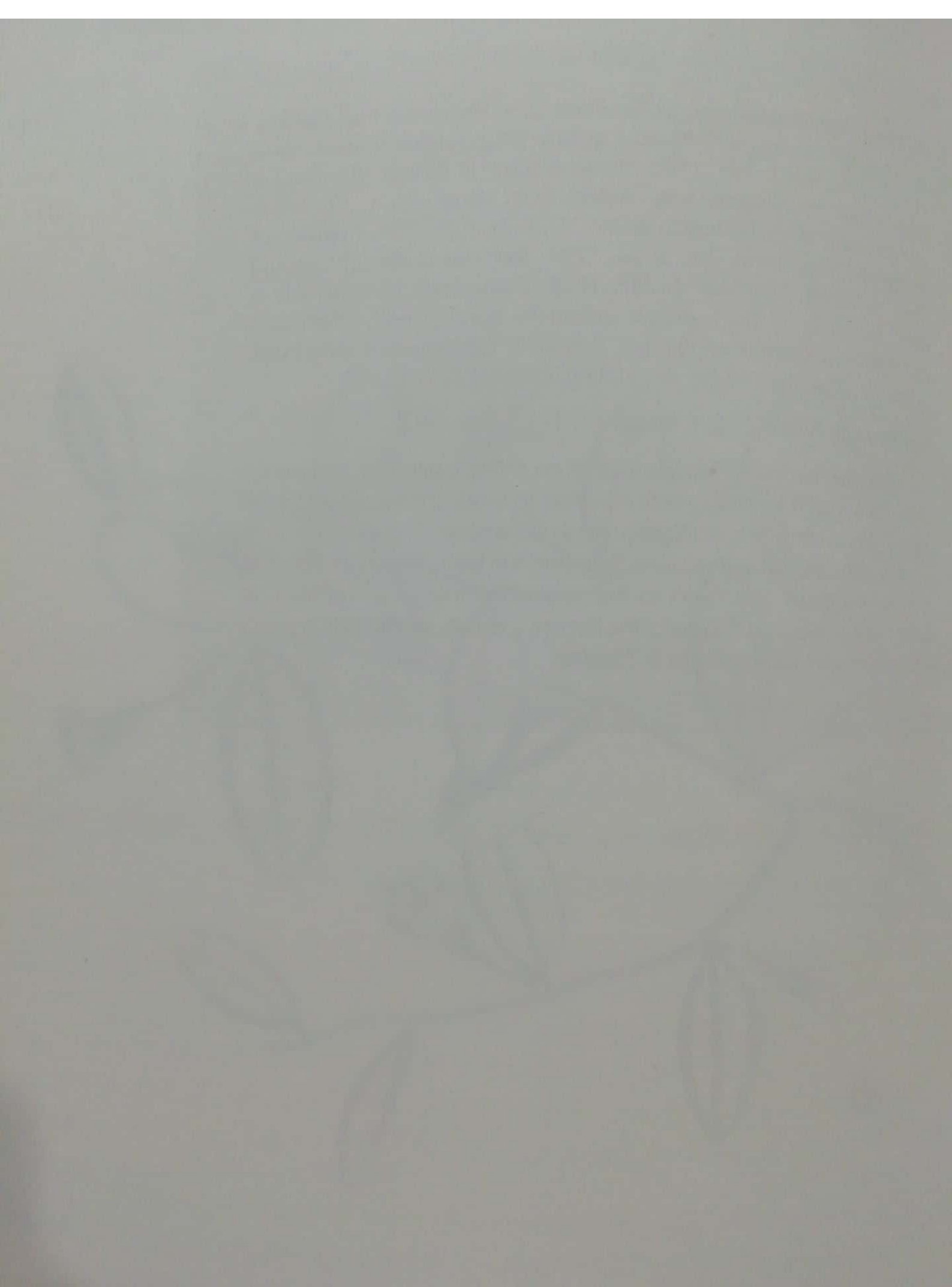


Fig. 54

Aniseia martinicensis (Jacq.) Choisy, Mem. Soc. Phys. Hist. Nat. Geneve 6: 483. 1838; Ooststr. in Fl. Males. I, 4: 435. 1953; Austin in Dassan., Rev. Handb. Fl. Ceylon I: 291. 1980; Manilal & Sivar., Fl. Calicut 185. 1982. - *Convolvulus martinicensis* Jacq., Select. Stirp. Amer. 26, t. 17. 1763. *Convolvulus uniflorus* N. Burm., Fl. Ind. 47, t. 21, f. 2. 1768. *Convolvulus emarginatus* Vahl, Symb. Bot. 3: 24. 1794. *Ipomoea uniflora* (N. Burm.) Roem. & Schult., Syst. Veg. 4: 247. 1819. *Convolvulus rheedei* Wall. in Roxb., Fl. Ind. 2: 70. 1824. *Aniseia uniflora* (N. Burm.) Choisy, Mém. Soc. Phys. Hist. Nat. Genève 6: 483, t. 2, f. 9. 1838. *Convolvulus bentira* Ham. ex Dillwyn, Rev. Hort. Malab. 61. 1839 [CONVOLVULACEAE].

Ben-tiru-tali Rheede) Hort. Malab. 11: 111, t. 54. 1692.

The name Venthiruthali [Malayalam script on t. 54] is still used; ven means white; thiru means blessed (whatever refers to Gods and Kings); and thaali refers to plants containing mucilage, used as a shampoo. The allusion is to its use as a very (important) valuable shampoo for bath. Thiruthali refers to *Ipomoea marginata*. Ven refers to the very white flowers of this plant, as against the white-purple flowers of the former. It occurs sporadically in paddy field borders and marshy places in Malabar.





Tala - Neli

FIG. 55.



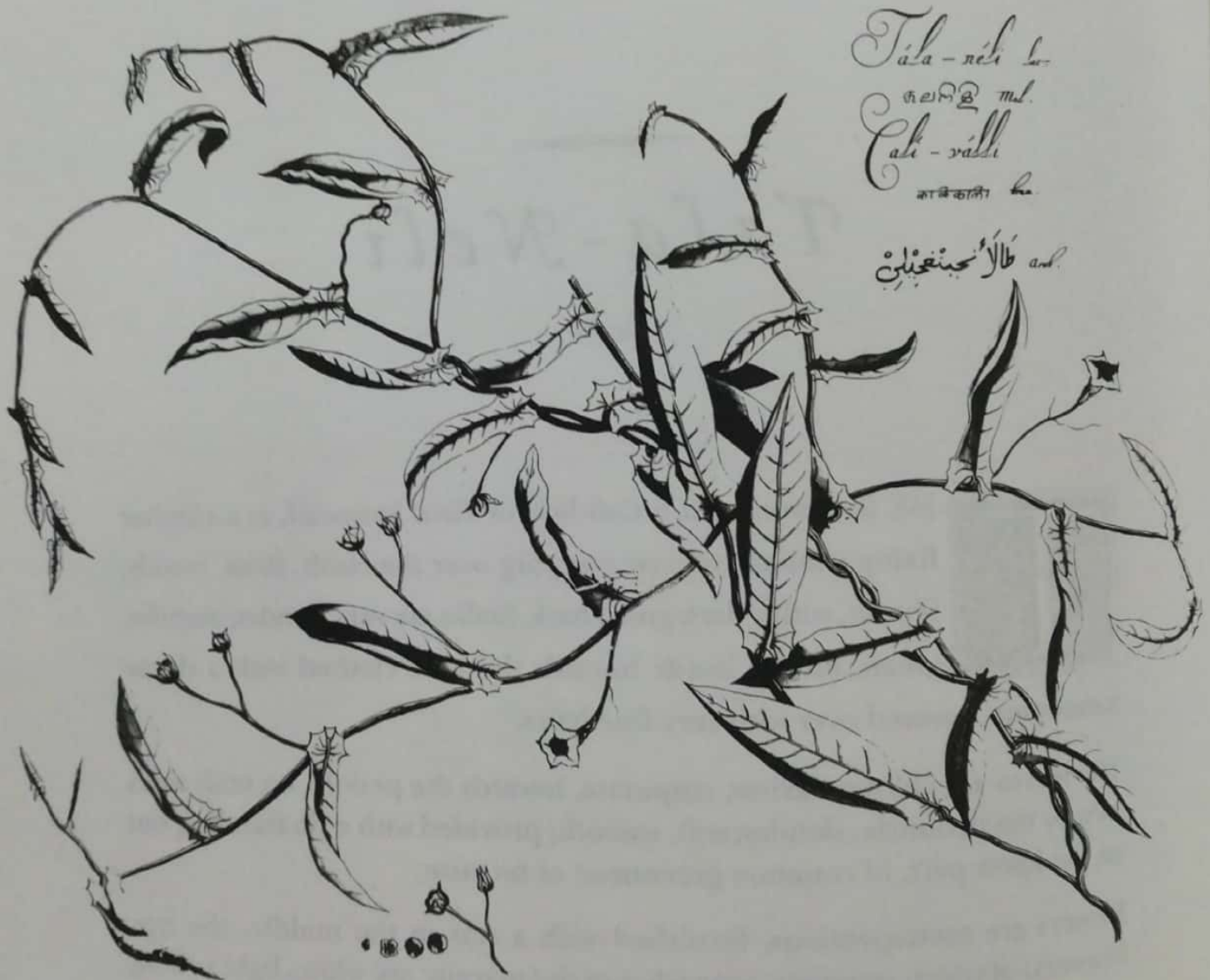
THE Brahmins call it *Cali-Valli* or *Rain Mamorad*, is a climber fixing itself to trees or creeping over the earth. Root woody, fibrous, with a dark green bark. Stalks are very slender, angular, green, on the inside towards the bark clothed with a dense membrane, covered over with very fine hairs.

The leaves are oblong-narrow, cuspidate, towards the petiole, on both sides torn by the peduncle, slender, soft, smooth; provided with a rib standing out on the lower part, of common greenness; of no taste.

Flowers are monopetalous, furnished with a star in the middle, the tips (corners) of which stand out somewhat in the margin; are white, light yellow, in the neck tinged in a circle with a deep rose mark. In them are five slender, white stamens, furnished with white, erect apices. The style is slender; its head is very green, as if bifid into two feathers. Calyx is five foliate and cuspidate, catching the flower lightly.

The fruits are plain round globules, from plain to light green, striated, from sutures, separated into four seed-locules through (by means of) intermediary

membranes, deeply elapsd by a calyx of five oblong and cuspidate leaves, of red and date red and somewhat reddish colour. In them are seen four seeds, in each locule one, triangular, with one side round and two plain, first white, then date-red.



Tala-neli L.

തലനളി mal.

Celastrus villoso-lanceolatus L.

കാലികാരി

طالاً مجنونا and.

Fig. 55

(Its Uses)

A decoction of this plant, mixed with *Samstravari*, *Glycyrrhiza* and oil of *Sergelim* gives an ointment, with which head is smeared against continuous head ache and fluidity (falling) of hairs.

Merremia tridentata (L.) H. Hall.; Bot. Jahrb. 16: 552. 1893; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 351. 1980; Manilal & Sivar., Fl. Calicut 186. 1982; Manilal, Fl. Silent Valley 189. 1988; Sivar. & Philip, Fl. Nilambur 458. 1997. - *Convolvulus tridentatus* L., Sp. Pl. 157. 1753. *Ipomoea angustifolia* Jacq., Ic. Pl. Rar. 2: 10. 1795; t. 317. 1789. *Convolvulus hastatus* Desr. in Lam., Encycl. 3: 542. 1792, non Forssk. 1775. *Convolvulus filicaulis* Vahl, Symb. Bot. 3: 24. 1794. *Ipomoea tridentata* (L.) Roth, Arch. Bot. 1(2): 38. 1798. *Convolvulus simplex* Pers., Syn. Pl. 1: 178. 1805. *Convolvulus sonneratii* Sm. in Rees, Cycl. 9: sp. no.26. 1808, nom. illeg. (based on same type as *Convolvulus simplex* Pers. 1805). *Ipomoea denticulata* R. Br., Prodr. 485. 1810. *Ipomoea filicaulis* (Vahl) Bl., Bijdr. 721. 1826. *Merremia hastata* H. Hall., Bot. Jahrb. 16: 552. 1893, nom. illeg. (ind. type of *Convolvulus filicaulis* Vahl 1794). *Merremia tridentata* subsp. *angustifolia* (Jacq.) Ooststr., Blumea 3: 323. 1939; Verdc. in Fl. Trop. E. Afr., Convolvulac. 51. 1963; *Merremia tridentata* subsp. *hastata* Ooststr., Blumea 3: 317. 1939; Ooststr. in Fl. Males. 1, 4: 445. 1953; Fosb., Taxon 24: 541. 1975 [CONVOLVULACEAE].

Tala-neli Rheede, Hort. Malab. 11: 113, t. 55. 1692.

The name Thalaneeli [Malayalam script on t. 55] is still used. Thala means head; and neeli means to grow long; the allusion is to its power to help the hair on the head to grow long. It occurs throughout Malabar.



Adamboe

FIG. 56.



HERE are three species of it, *Adamboe*, *Schovanna Adamboe* and *Bel Adamboe*; the first in the language of the Brahmin is called *Pougia-Valli*, is a climber, whose root is fibrous, white. The stalks are round, slender, beset with minute hairs; creeping over the ground, giving out root-les by which it is fixed.

The leaves, the petioles of which are striated and hairy, imitate a heart, thin, soft in texture, smooth in the surface. The mid rib with the lateral ones stands out on the lower side.

Flowers arise many clustered together in one petiole, are monopetalous, incised into five parts, corrugated, star shaped, in the neck purple, deep red, towards the outside from purple to whitish; without smell. In them are five white stamens, furnished with oblong, erect, white and floury apices; in the lower orifice of the neck, to which they are inserted, more thick, beset with white downy hairs. Among them appears a slender, white style capped at the top with a thick, flowery outgrowth, springing forth from a yellow head, the rudiment of the fruit. Calyx is five foliate, the fruit is somewhat plain-round,

enclosed tightly by the leaves of the calyx, projecting at the top with a small tail, with three or four sides, round and somewhat plain-round, enclosed tightly by the leaves of the calyx, reddish, when they open of strong smell, emulating that of *pepper* and green *Ginger*.



Fig. 56

In them are three or four seeds filling the fruit, three sided, mutually turn reddish in the margins, of silvery hairs; the pulp is green and of no taste.

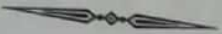
(Its Uses)

Crushed and taken in milk, is an antidote against the bite of snake called *Cobra Capella*; fruits crushed and taken in with water, give the same (effect).

Ipomoea campanulata L., Sp. Pl. 160. 1753; Austin et al., Brittonia 30: 196. 1978; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 327. 1980; Sasidh. & Sivar., Fl. Thrissur 308. 1996; Sivar. & Philip, Fl. Nilambur 448. 1997. - *Convolvulus campanulatus* (L.) Spreng., Syst. Veg. 1: 608. 1824. *Adamboe bicolor* Raf., Fl. Tellur. 4: 73. 1838, nom. illeg. (incl. *Ipomoea campanulata* L. 1753). *Ipomoea campanulata* var. *illustris* C.B. Cl. in J. Hook., Fl. Brit. India 4: 211. 1883. *Ipomoea illustris* (C. B. Cl.) Prain, Beng. Pl. 2: 735. 1908; Ooststr. in Fl. Males. I, 4: 485. 1953. *Stictocardia campanulata* (L.) Merr., Philipp. J. Sci. 9: 133. 1914 [CONVOLVULACEAE].

Adamboe Rheede, Hort. Malab. II: 115, t. 56. 1692.

The name Adambu [Malayalam script on t. 56] is still used, sometimes also called Valiyadambu (i.e., large Adambu); valiya means large and adambu means that its stalks grow adhering (adpressed), close to the ground. It is rare in coastal plains of Malabar but is more common in the uplands, especially in moist, shaded places.



Schovanna-Adamboe

FIG. 57.



IN the language of the Brahmins *Bangada-Valli*, is a climber, very similar to the first one, except that the leaves are bifid, flowers a bit smaller, so also the fruits: seeds are wholly hairy or downy with hairs; when they mature date red, with smoothness like that of velvet; underneath the hairs covered with hard and long rind (shell).

(Its Uses)

Boiled in water gives a fomentation by which arthritic pains are relieved. The leaves prepared into a drink in goat's milk, is given for piles.



Bell-Adamboe

FIG. 58.



IS a climber growing in rocky soils, fixing itself to the soil with white rootlets. Root red, inside somewhat woody, white, running in length, tortuous, clothed with fibres; its bark is of slight sweet and slight sharp taste, of earthy smell. The stalks are round, green, flexible, a bit woody, with a white pith.

The leaves, whose petioles are striated with a furrow, arise at the origin of rootlets, are in the shape of a broad, obtuse heart, soft, smooth, of dark greenness on the upper side, of light greenness on the lower, provided with thick ribs, of no taste and smell.

Flowers are bell shaped and stellate, very similar to the flowers of *Adamobe*, but wholly white. In them are five erect stamens, furnished with oblong, white, erect apices. The style is capped with a white knob, round and granular. Calyx is five foliate, three of them more oblong and light green, two are smaller and dark-green. In the calyx are seen seed globules, the top of which is crowned with an oblong, slender filament, where they are dark blue, white towards the calyx.

In them are three or four triangular, oblong seeds, in the upper part drawn to a tip, of dark ash colour, within the pulp concealing the single, small, round kernel, of bean taste and smell.

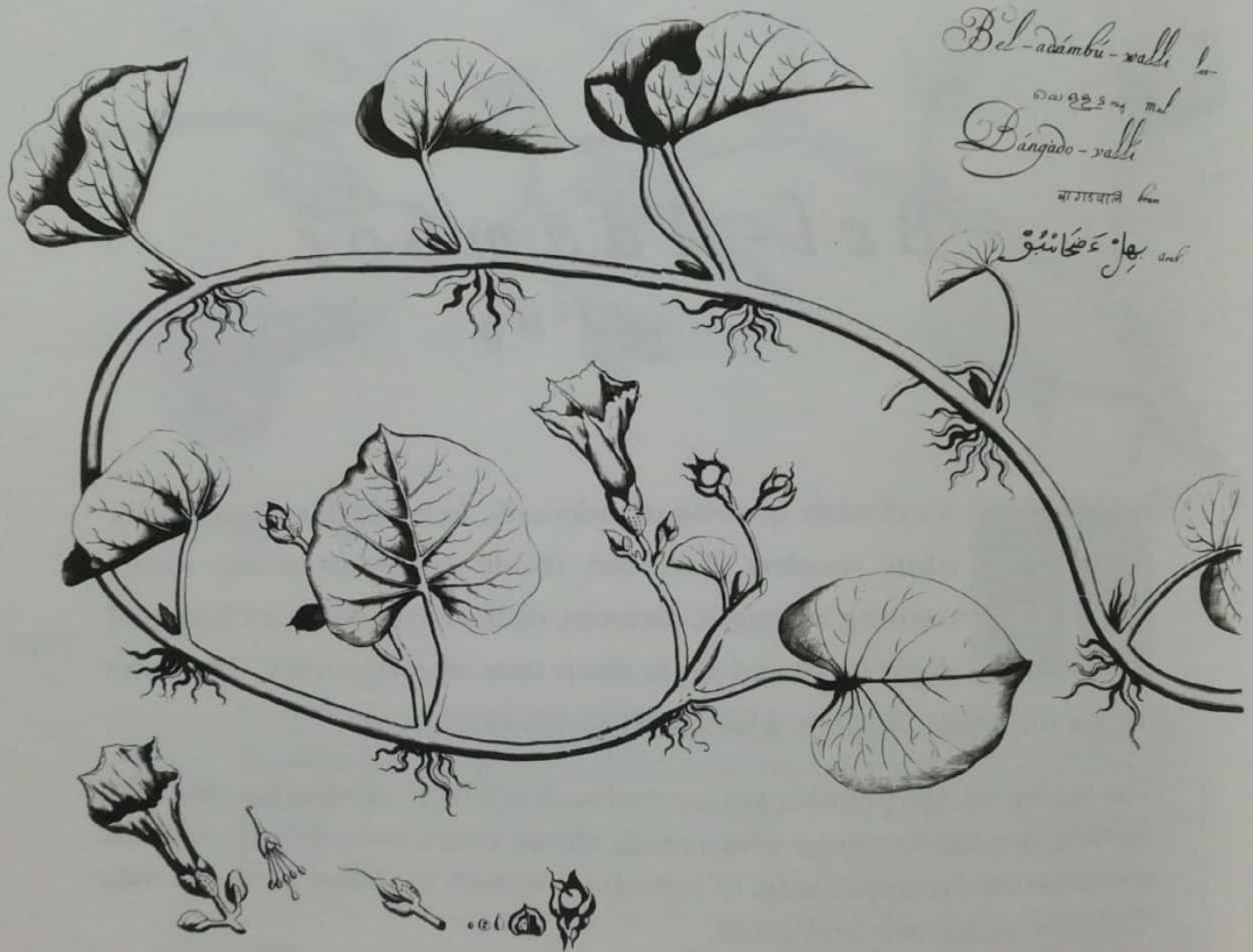


Fig. 58

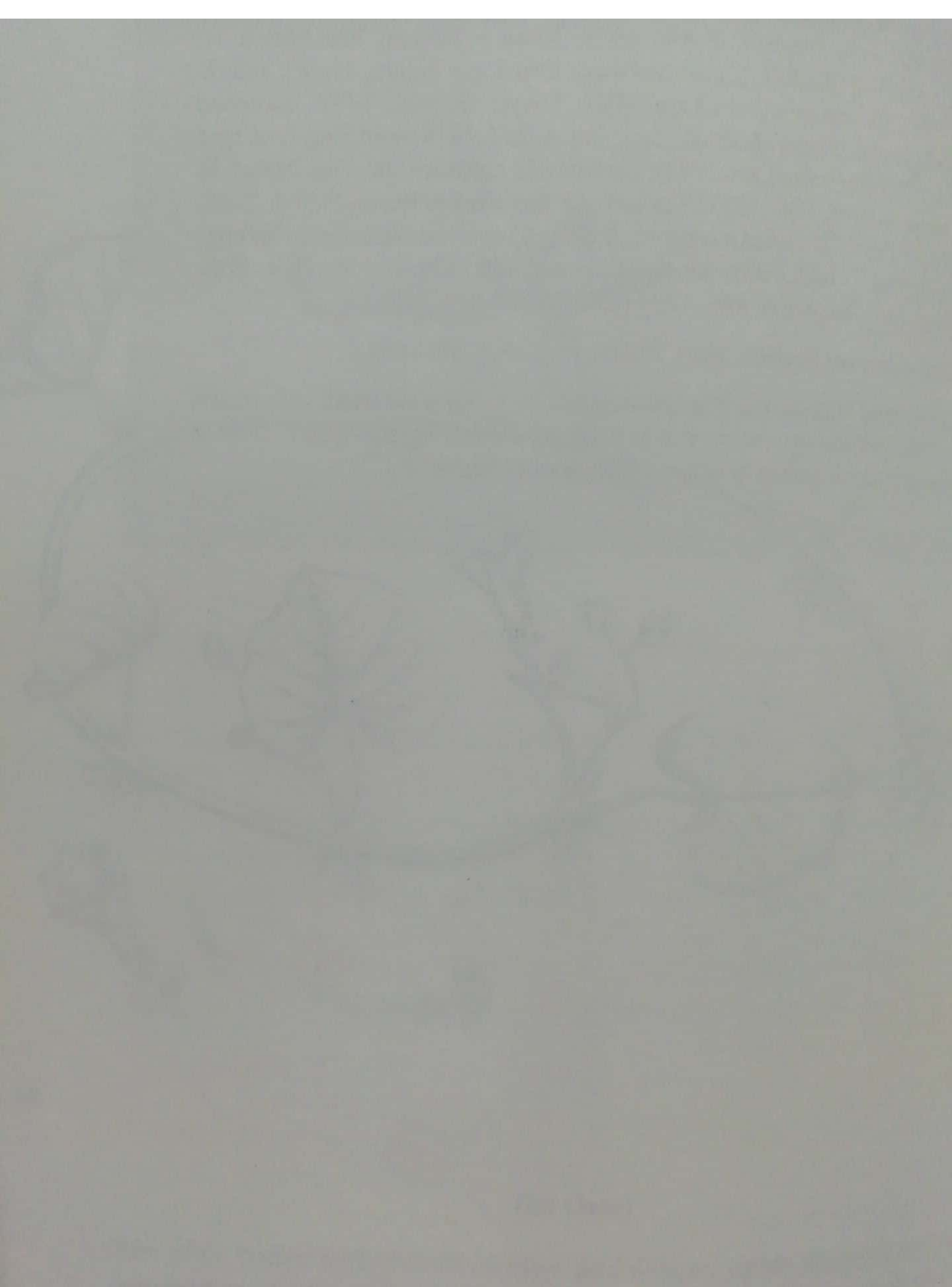
(Its Uses)

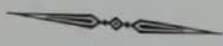
The juice boiled with the oil of *Maro* and *Ginger*, yields an ointment, to be smeared on the head, by which the bite of mad dog is rendered ineffective.

Ipomoea asarifolia (Desr.) Roem. & Schult., Syst. Veg. 4: 251. 1819; Ooststr. in Fl. Males. I, 4: 477. 1953; Austin in Dassan., Rev. Handb. Fl. Ceylon I: 319. 1980. - *Convolvulus asarifolius* Desr. in Lam., Encycl. 3: 562. 1789. *Ipomoea repens* Lam., Tabl. Encycl. I: 467. 1793. *Ipomoea beladamboe* Roem. & Schult., Syst. Veg. 4: 233. 1819, nom. illeg. (incl. type of *Ipomoea repens* Lam. 1793). *Convolvulus rugosus* Rottl., Ges. Naturf. Fr. Neue Schr. 4: 196. 1803. *Convolvulus flagelliformis* Roxb., Fl. Ind. 2: 68. 1824, (non *Convolvulus repens* L. 1753). *Convolvulus beladambu* Spreng., Syst. Veg. I: 608. 1824. *Ipomoea rugosa* (Rottl.) Choisy, Mém. Soc. Phys. Hist. Nat. Genève 6: 446. 1834 [CONVOLVULACEAE].

Bel-adambu Rheede, Hort. Malab. II: 119, t. 58. 1692.

The name Velladambu [Malayalam script on t. 58] is still used; vella means white; and adambu means that its stalks grow adhering (adpressed), close to the ground. It occurs in uplands throughout Malabar.





Pulli-Schovadi

FIG. 59.



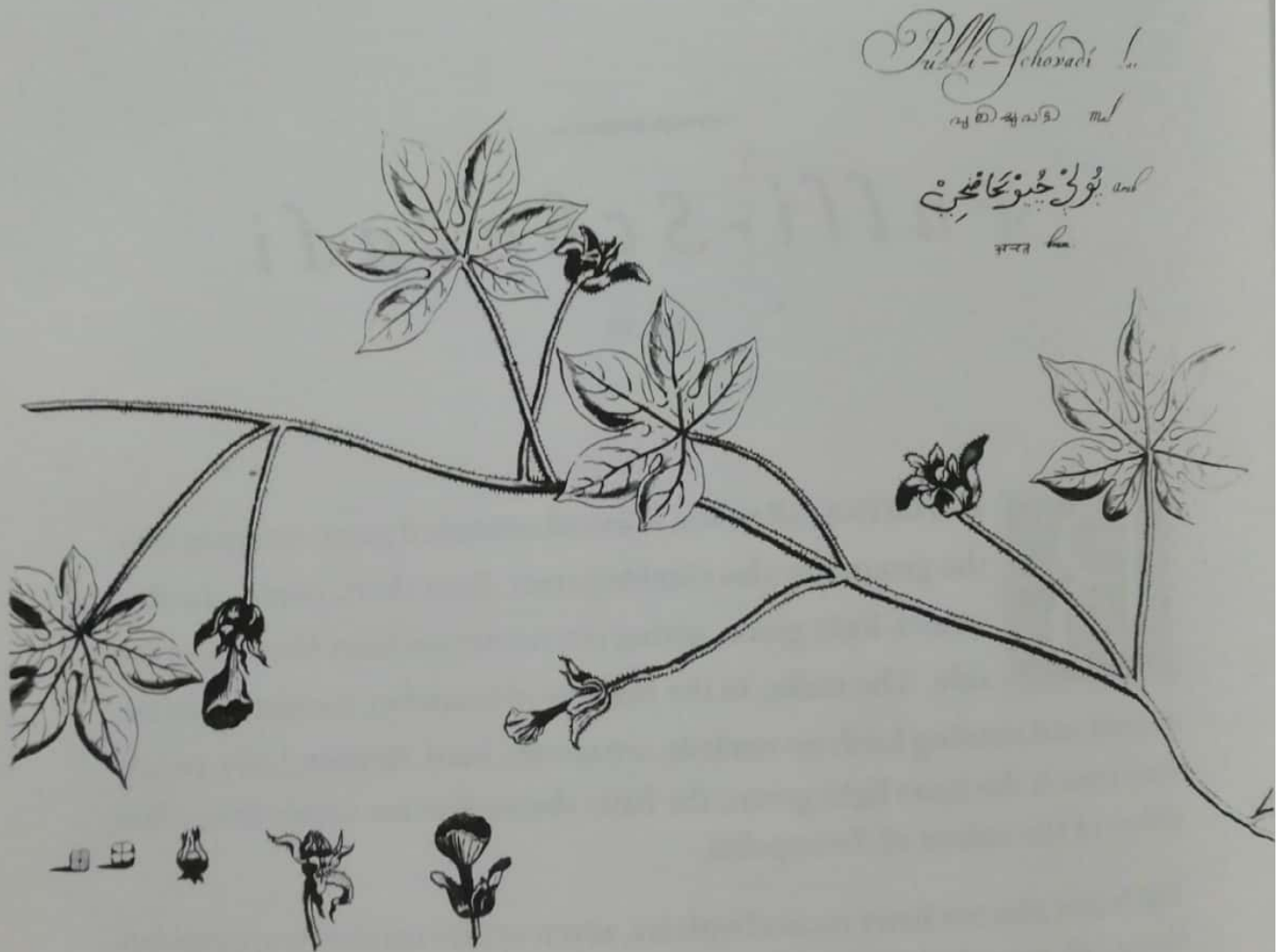
RAHMINS call it *Arty*, is a weak-stemmed plant, creeping over the ground or also climbing trees. Root short, round, slender, watery, light green, giving out numerous hairy fibres from the side. The stalks, in the manner of branches, running over the ground and sending forth no tendrils, are tender, hard, flexible, hairy, rough, underneath the hairs light green; the hairs themselves are rather long slight yellow of the colour of *Xerampelini*.

The leaves also are hairy incised with six, seven or also many round cuspidate leaves, all provided with mid-rib and lateral rib, are thick, light green; of woody smell and taste.

Flowers, whose petioles are long, light green, hairy and rough, arise around the origin of leaves, from thick, foliaceous, light green and cyathia like calyces, are bell-shaped, with a narrow neck, of white and shining colour, curled and corrugated towards the upper part, striated with very fine veins in length, covered with loose hairs. In them are seen five slender, straight white stamens furnished with white erect apices. The style is white and long, furnished at

the top with white outgrowth. The leaves of the calyx are narrow, hirsute, green, white lower down.

Four seeds are contained in the buds, which buds are divided into four sides by the slender nerves of the bud; the seeds themselves are oblong, three-cornered, a bit hairy, first whitish, then dark.



Pili-Schoraci !
 மல மரத்தின் காய்

بُولِي خِيُونَاخِين
 بول

Fig. 59

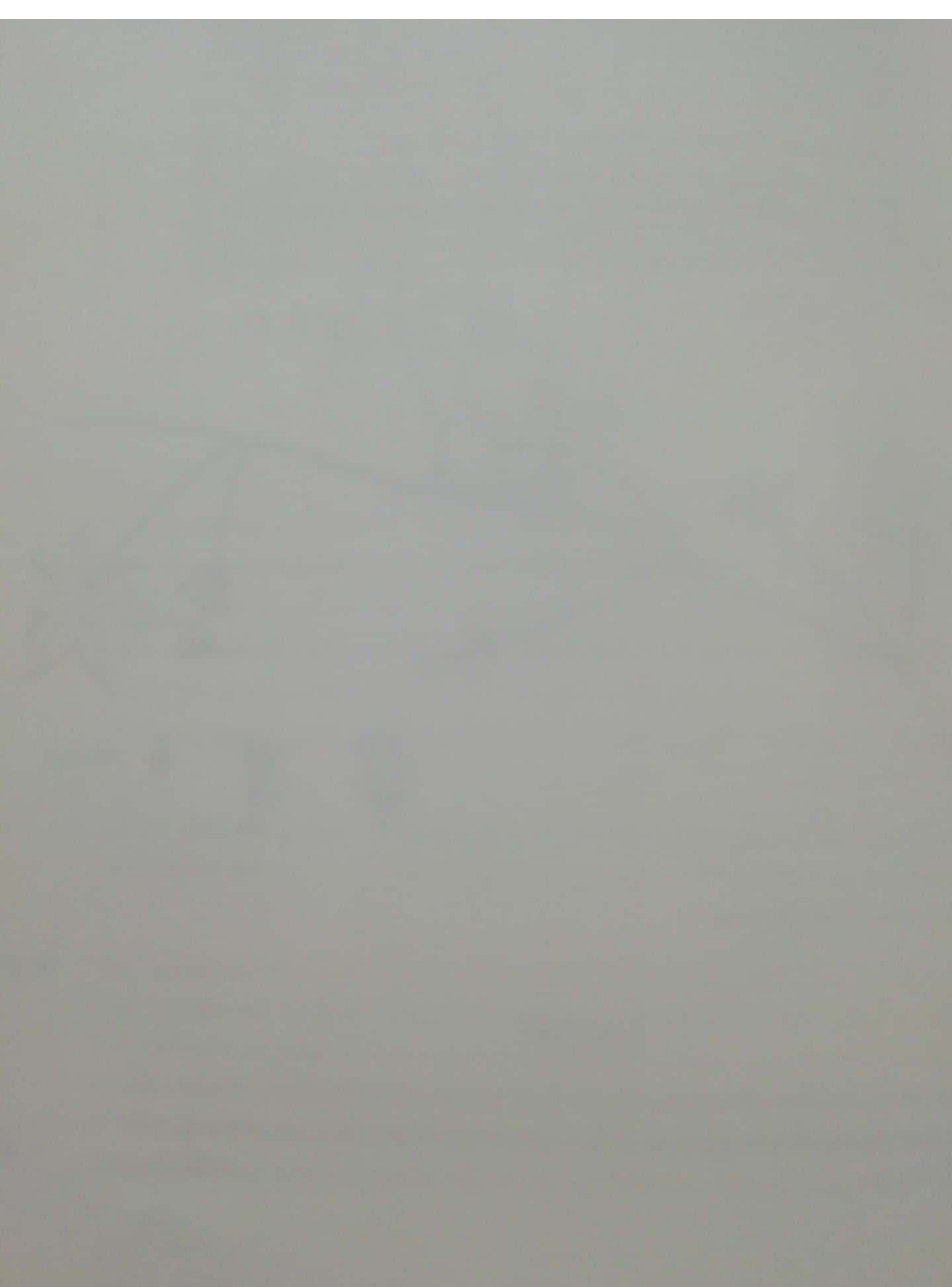
(Its Uses)

The leaves crushed with *pepper* and placed over the affected part, removes all virulence contracted from the bite of mad dog; crushed with butter, open up boils.

Ipomoea pes-tigridis L., Sp. Pl. 162. 1753; Ooststr. in Fl. Males. I, 4: 467. 1953; Austin in Dassan., Rev. Handb. Fl. Ceylon I: 336. 1980; Manilal & Sivar., Fl. Calicut 184. 1982; Sasidh. & Sivar., Fl. Thrissur 310. 1996; Sivar. & Philip, Fl. Nilambur 453. 1997. - *Convolvulus pes-tigridis* (L.) Spreng., Syst. Veg. I: 502. 1824 [CONVOLVULACEAE].

Pulli-schovadi Rheede, Hort. Malab. II: 121, t. 59. 1692.

The name Pulichuvadi [Malayalam script on t. 59] is still used; puli means tiger and chuvadu means step or foot print. It occurs throughout Malabar.





Tsjuria - Cranti

FIG. 60.



Is a weak-stemmed plant, whose root is white, fibrous and hairy. The stalks are slender, distorted, light-green, shining, watery, bent at the junctions, giving out from the lower part of the junctions, thin, foliaceous, green stalks. They themselves are foliaceous, on one side somewhat furrowed, invested with leaves at a certain interval from the origin, in the middle of the furrowed part, as if covered with a nerve-let.

The leaves are very narrow, oblong, linear, thick, on the upper-side dark-green and provided with a thin, pronounced nerve-let, on the lower side light green and shining.

Flowers arise in oblong, tortuous, green stalk-lets, which with the foliaceous stalk-lets stand out from the junctions of the stalks and on the upper part bulge out at the nodes and often at the nodes are split into two peduncles, towards the border of the flower they become swollen with a thicker node. The flowers themselves evoke a five cornered star, with an oblong, narrow neck, wholly purple-red, on the inside in the leaves of the purple, scarlet,

most beautiful colour, devoid of any smell. In them are five red, shining, stamens, furnished with red, obliquely decumbent apices, sprinkled with a white, floury dew, inserted to the lower part of the neck. The style is white, lower down is green and thicker, furnished with white flour like grains.

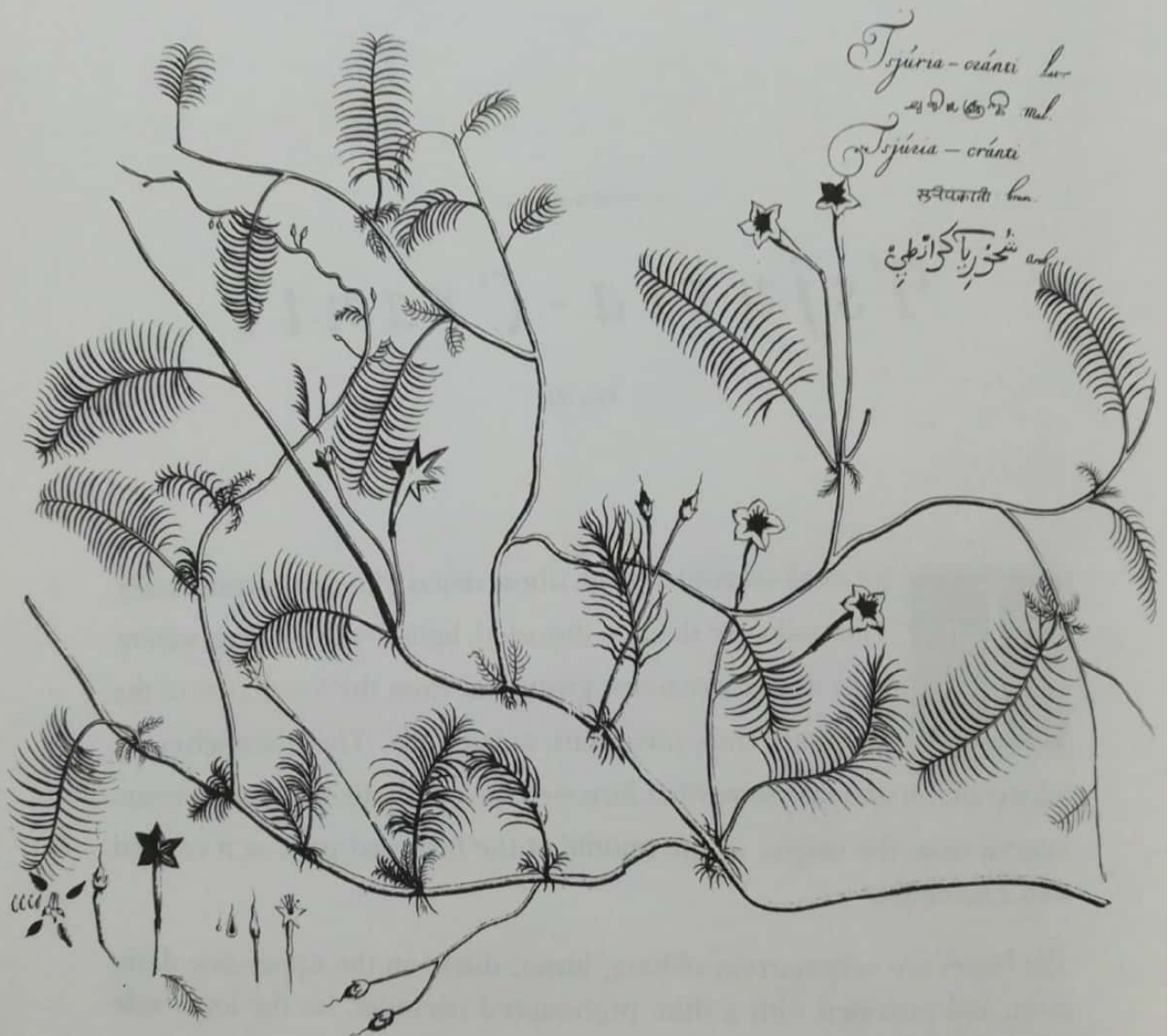


Fig. 60

The seed-capsules are oblong-round, anteriorly drawn into an obtuse tip, striated with three or four sutures, first light green, then red, bearing at the top one oblong tip, first green, then hard and dark red; separated into three or four valvules by means of membranous partition walls. The seeds are first white, when dry are black, are oblong and somewhat angular.

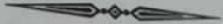
(Its Uses)

Natives attribute to this plant the efficacy of love-potion (a drink to excite love). Juice pressed out from the leaves is an errhynum (sternuatory) driving away cephalgia (head ache or gout in the head).

Ipomoea quamoclit L., Sp. Pl. 159. 1753; Ooststr. in Fl. Males. 1, 4: 482. 1953; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 338. 1980; Manilal & Sivar., Fl. Calicut 184. 1982; Sasidh. & Sivar., Fl. Thrissur 310. 1996; Sivar. & Philip, Fl. Nilambur 454. 1997. - *Convolvulus pennatus* Desr. in Lam., Encycl. 3: 567. 1792. *Quamoclit vulgaris* Choisy, Mem. Soc. Phys. Hist. Nat. Genève 6: 434. 1834. *Quamoclit pinnata* Bojer, Hort. Maurit. 224. 1837 [CONVOLVULACEAE].

Tsjuria-cranti Rheede, Hort. Malab. 11: 123, t. 60. 1692.

The name Churiyakranthi [Malayalam script on t. 60] is not used now. It is the colloquial form of Soorya kranti; Soorya means sun; and kranti means halo. It is known now as Eswara mulla in some areas (Easwaran means God; and mulla is Jasmine flower), excepting which no Malayalam name is currently known for this. It is cultivated as a garden plant in Malabar.



Samudra-Stjogam

FIG. 61.



S a weak-stemmed plant growing in sandy soils. The stalks are round, hairy, ash-white, light green, smooth, underneath the hairy coating rich-green, inside woody and furnished with pith.

Leaves are seen in very oblong, round, thick hairy, ash-white, light green, smooth petioles, striated on the inside with a furrow, and are large, oblong, drawn into a tip, in the shape of a heart, towards the petiole incised with a notch, at the petiole rather thick, very soft, inside glabrous, of rich greenness; on the lower side dense, ash-silvery cushion-like, you may call it a downy rag pressed out in a press, while young with the inner sides tightly closed the upper side.

Flowers are attached to the tip of the petioles clustered or fascicled together, are monopetalous, bell-shaped, stellate, on the inside dark-red-purple, shining, at the margins light reddish on the outside, in the neck as also in the calyx covered with a white, fluffy down, lower down towards the calyx surrounded and covered by cuspidate, white, downy leaves. In them are five oblong, white stamens, furnished with rather large, oblong, white furrowed

apices. The style is provided with two jointed and granulated outgrowths. The calyx is narrow, the leaves of which are cuspidate and rolled up. Flower buds are oblong, cuspidate.

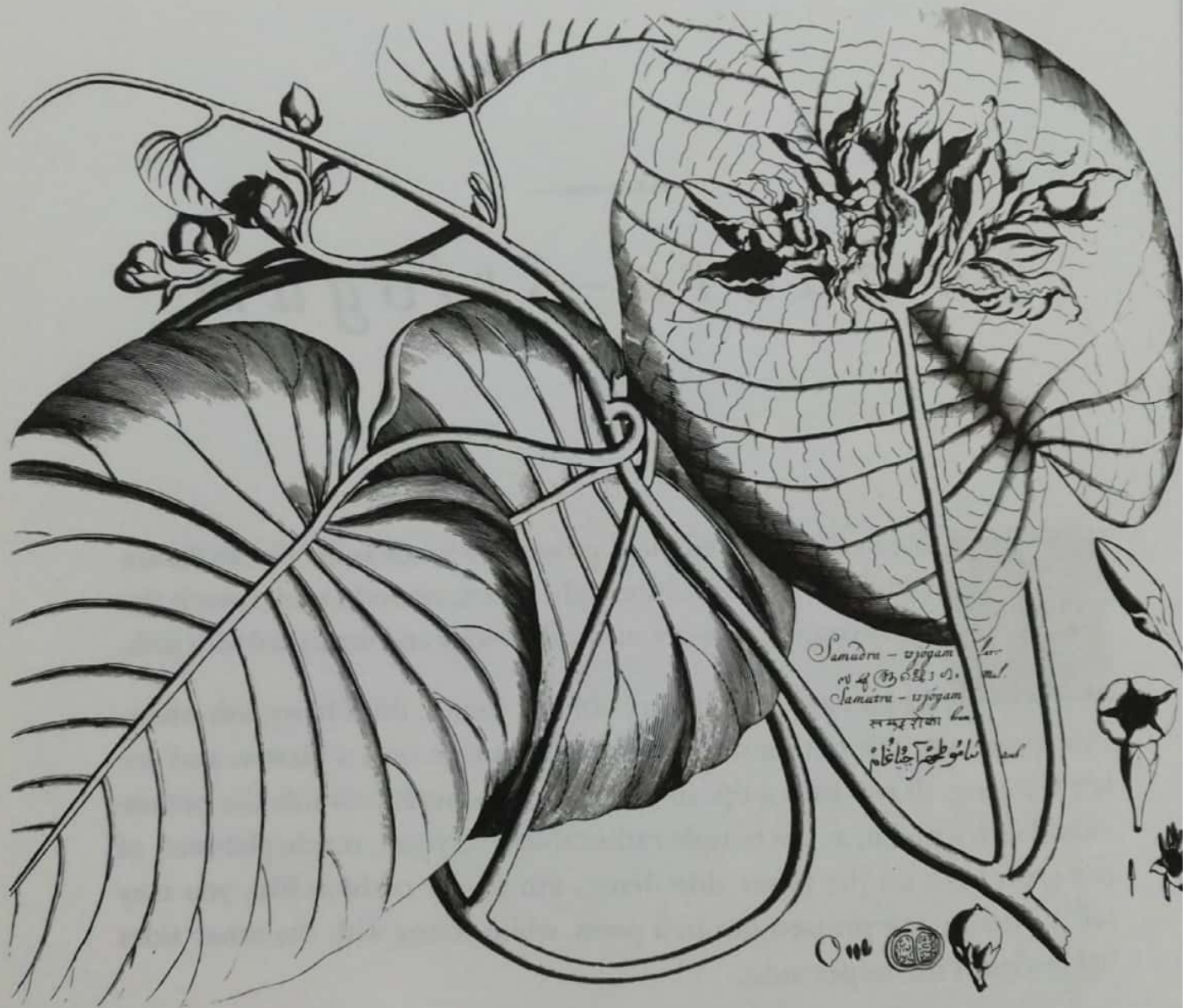


Fig. 61

Fruits are rather round, some bulging out with two, others with three sides, bearing a tip at the top; when unripe have a dark green rind, which when cut drops (oozes out) a copious and burning milk, when mature of orange colour,

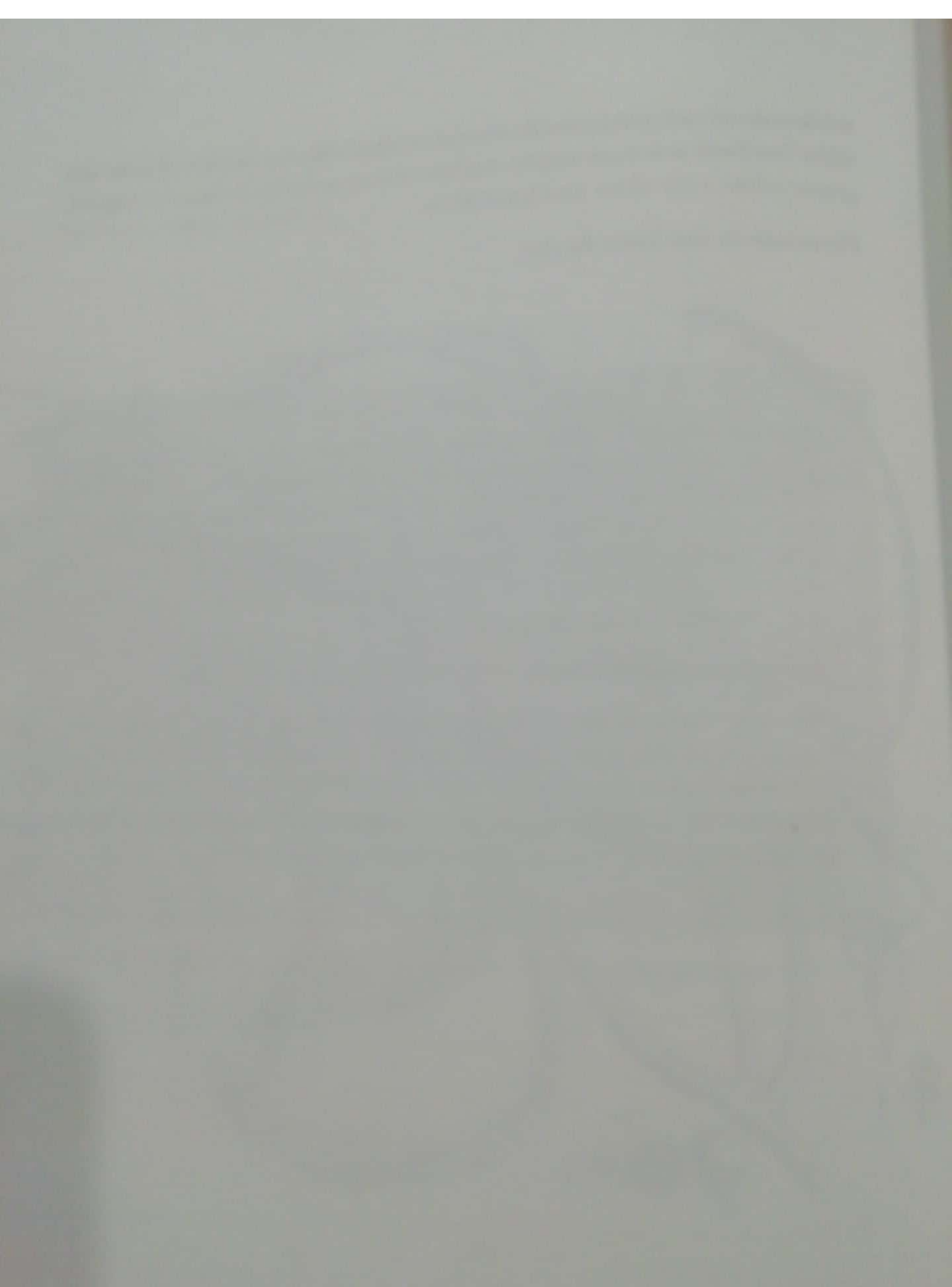
bordering on the yellow, inside furnished with a fleshy, sweet, soft pith, not milky. In them are three seeds, separated into separate locules, triangular, green-yellow, with white and hard flesh.

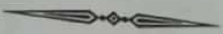
Physicians do not know its use.

Argyreia nervosa (N. Burm.) Bojer, Hort. Maurit. 224. 1837; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 287. 1980; Manilal & Sivar., Fl. Calicut 179. 1982; Manilal, Fl. Silent Valley 187. 1988. - *Convolvulus nervosus* N. Burm., Fl. Ind. 48, t. 20, f. 1. 1768. *Convolvulus speciosus* L.f., Suppl. 137. 1782. *Ipomoea speciosa* (L.f.) Pers., Syn. Pl. 1: 183. 1805. *Lettsomia nervosa* (N. Burm.) Roxb., Fl. Ind. 2: 78. 1824. *Argyreia speciosa* (L.f.) Sweet, Hort. Brit. 289. 1827 [CONVOLVULACEAE].

Samudra-ts jogam Rheede, Hort. Malab. 11: 125, t. 61. 1692.

The name Samudrajogam [Malayalam script on t. 61] is still used; Samudram means ocean; and jogam (yogam) means a combination or an assembly. The allusion is not very clear but may denote its combination of terrestrial habitat and the seemingly aquatic morphological characters. It is also known as Samudrapachha. It occurs in uplands throughout Malabar.





Cattu-valli

FIG. 62.



LS a weak-stemmed plant climbing on trees; stalks are round, green, woody, older ones are ash-grey, leaves evoke the shape of a broad and obtuse heart, are thick, of rich and shining colour on the upper, on the lower of light green and ash-grey, provided with both mid-rib and lateral ribs; those which are nearer to the tip of the stalk become gradually smaller and narrower than the lower ones. Lacks flowers and fruit.

(Its Uses)

From the leaves a bath is prepared against bulymum (a continuous abnormal hunger) and nausea; from the root crushed with *Curcuma* (Turmeric) and whey, an ointment is made relieving pains of joints.

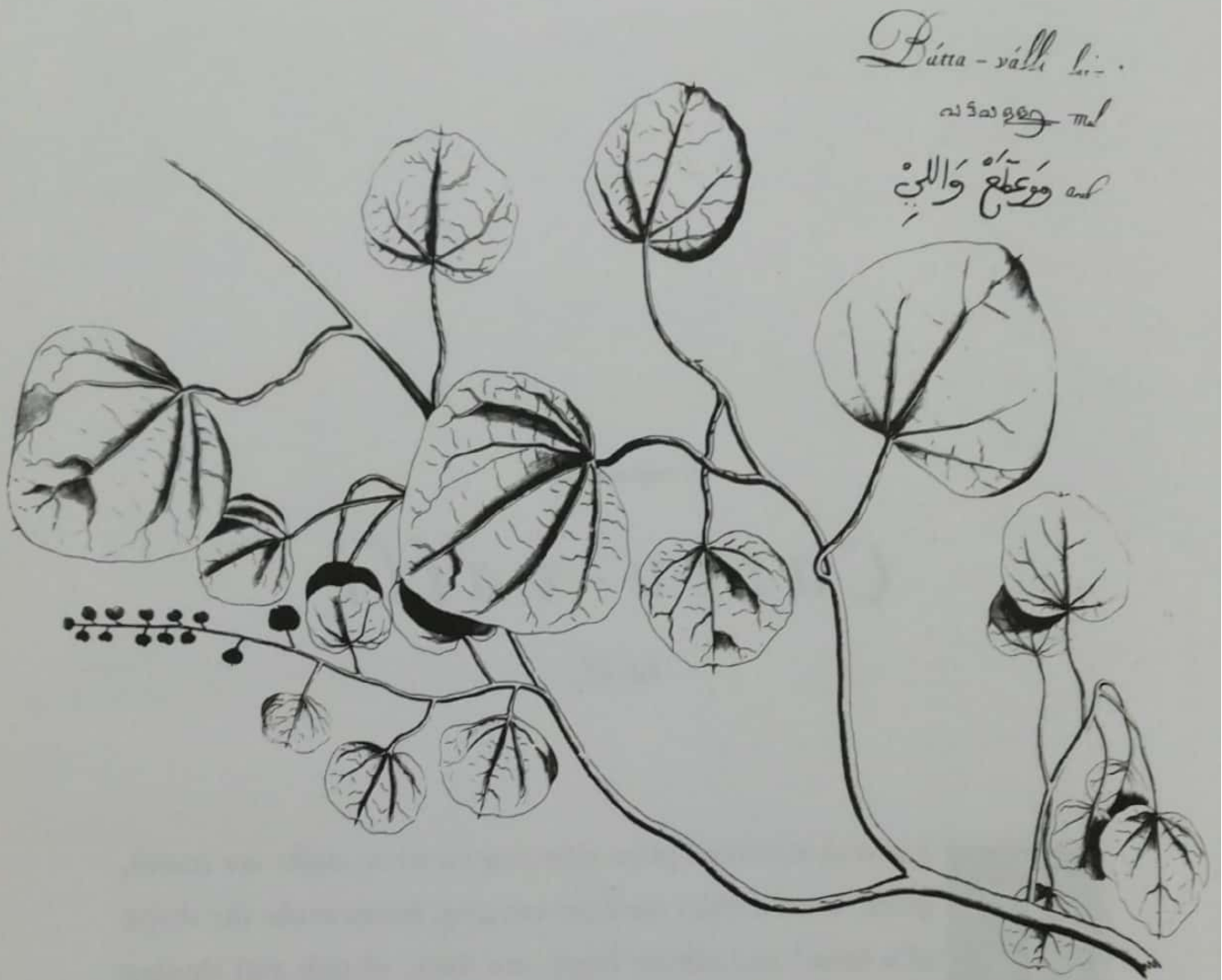
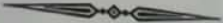


Fig. 62

Diploclisia glaucescens (Bl.) Diels in Engl., Pflanzenr. 46: 225. 1901; Forman, Kew Bull. 22: 362. 1968; Manilal & Sivar., Fl. Calicut 28. 1982; Manilal, Fl. Silent Valley 6. 1988; Sasidh. & Sivar., Fl. Thrissur 36. 1996; Sivar. & Philip, Fl. Nilambur 48. 1997. - *Cocculus glaucescens* Bl., Bijdr. 25. 1825 [MENISPERMACEAE].

Cattu-valli, Batta-valli Rheede, Hort. Malab. 11: 127, t. 62. 1692.

The name Vattavalli [Malayalam script on t. 62] is still used; vatta means round (referring to leaf-shape) and valli means climber. It occurs in sacred groves (forests protected on religious grounds) throughout Malabar.



Mareta-Inali

FIG. 63.



S a weak-stemmed plant, fixing itself to the trees. Stalks are round, woody, jointed, ashen, pallid.

Leaves arise many clustered together on oblong stalk-lets, are oblong-round and narrow, anteriorly cuspidate, very thick and fleshy, covered over by very many filaments, rigid hard, in the margins curly with wrinkles (curls) with plain and glabrous surface, of dark greenness on the upper side, on the lower side of light (clear) greenness, inside with green-watery and light-milky flesh. The rib is very pronounced on the lower sides in the trail of which the leaves are striated with furrow; of bitter taste. It is deprived of flowers. Oblong round fruits arise in the nodes of stalks; carrying woody nodes, are wrinkled and rough.

(Its Uses)

The juice heals cholera.

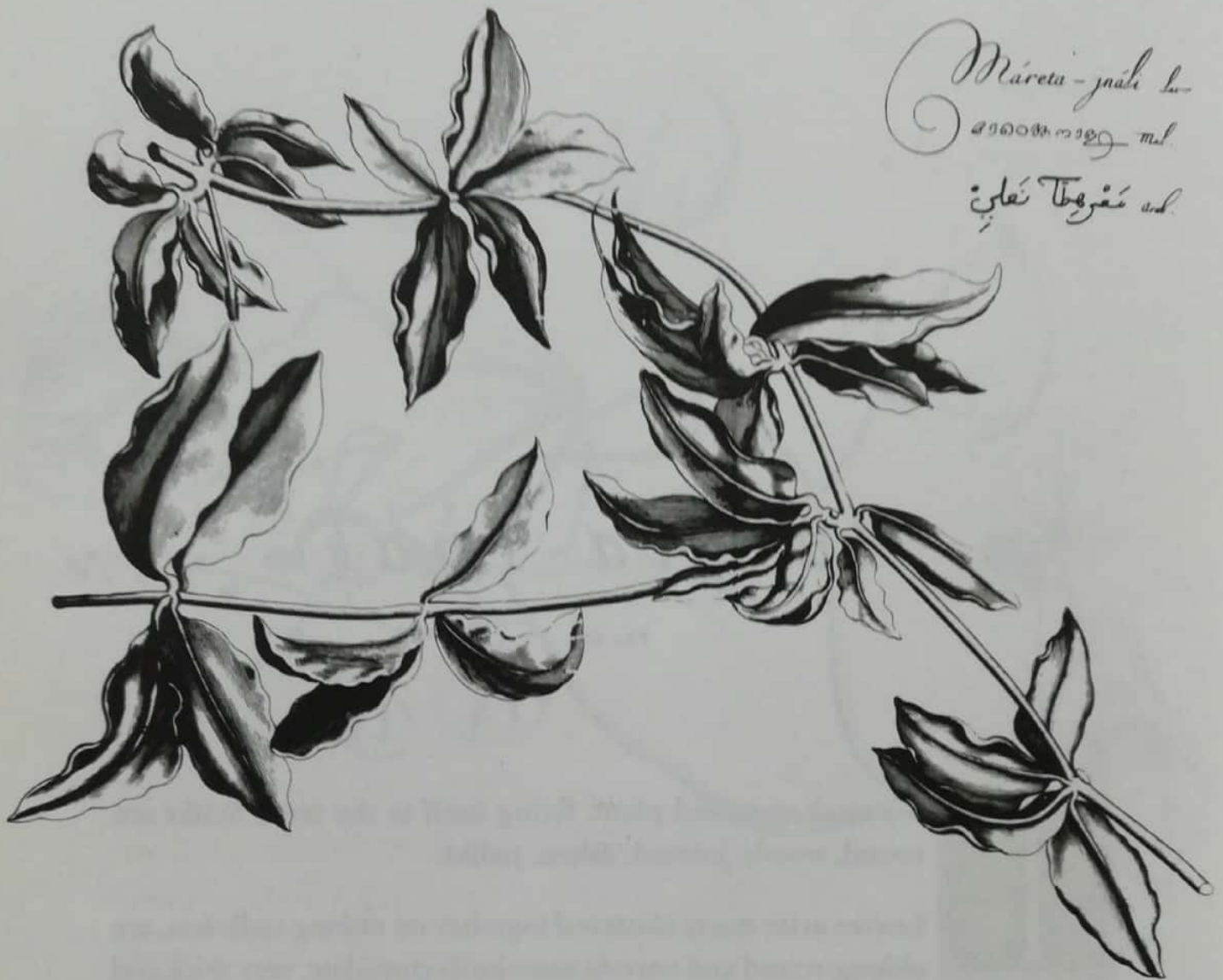


Fig. 63

Hoya ovalifolia Wight & Arn. in Wight, Contrib. Bot. India 37, 1834; Huber in Dassan., Rev. Handb. Fl. Ceylon 4: 110, 1983; Sasidh. & Sivar., Fl. Thrissur 293, 1996; Sivar. & Philip, Fl. Nilambur 427, 1997 [ASCLEPIADACEAE].

Mareta-inali Rheede, Hort. Malab. 11: 129, t. 63, 1692.

The name Marethenjali [Malayalam script on t. 63] is not used now; marethe means "on-the-tree"; and njali means to hang. No Malayalam name is currently known. It has not been seen or collected recently from this region.



Vistnu-Clandi

FIG. 64.



HERE are two species of this plant, *Vistnu-Clandi* and *Sendera-Clandi*. The former plant is small with the stalk-lets spread over the earth. Root is slender and straight, sending itself down into the earth, clothed with thin fibres, with a red bark, white on the inside; of slight sweet taste. From it very many, very slender, round hairy, downy and green stalk-lets go out, more or less a cubit long, spread not above but in breadth.

Leaves are very small and oblong-round, thick, soft, smooth, downy on both sides, beset with long and thick hairs, of common greenness, of slightly sweet taste. The ribs stand out somewhat on the lower part.

Flowers, the petioles of which are slender, downy, hairy, green, long, which is covered with minute, cuspidate leaflets at a digit space from the flower, arise from above the origin of leaves, are monopetalous, marked with a five cornered star, on the outer surface in between the corners of the star, of light blue colour, purple-reddish at the centre whitish, on the outside in the corners of the star from purple-white. In them are five stamens furnished with short

apices, with which also burst forth five white filaments. The calyx is green, hairy, divided into five leaflets. The buds are provided at the top with white hairs. The flowers themselves are tightly closed in the evening so that they

Distú-jlandi L.

കിളിമുളി *mal.*

بیشیزو کے لائنیں *and*

കുഴപ്പകൾ *ban.*

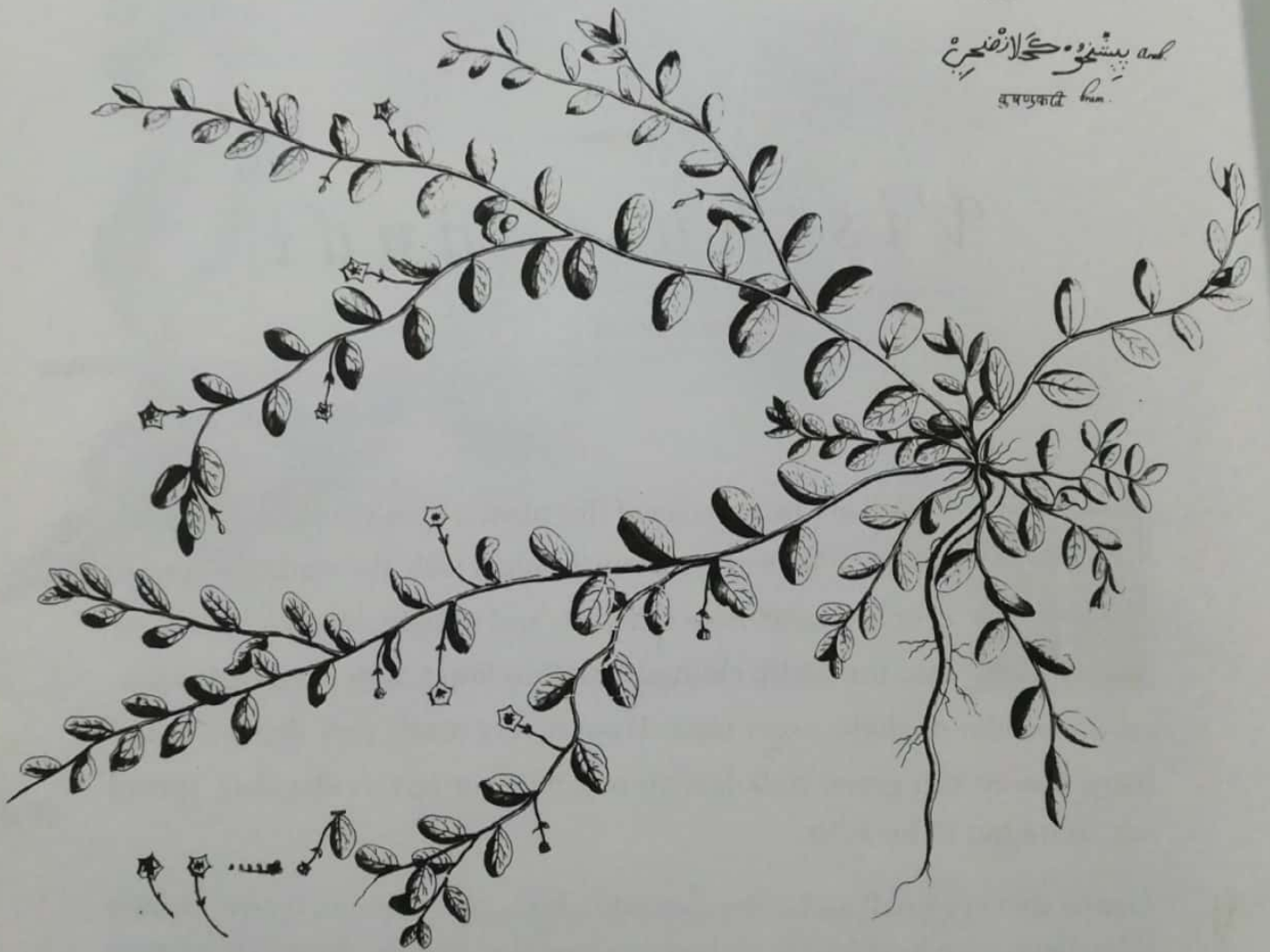


Fig. 64

almost escape sight; during the summer you may see them closed from the second hour in the afternoon.

Seed capsules are small and round, first light green, then yellow. Seeds, according to the number of corners are seen four, three or also two mutually

separated without any partition wall, are three sided, one round, two plain, compressed, yellow or red, mature ones dark red. The whole plant is of lively and not unpleasant smell, especially when placed over water; is seen mostly in the rainy season, in summer only in shady places.

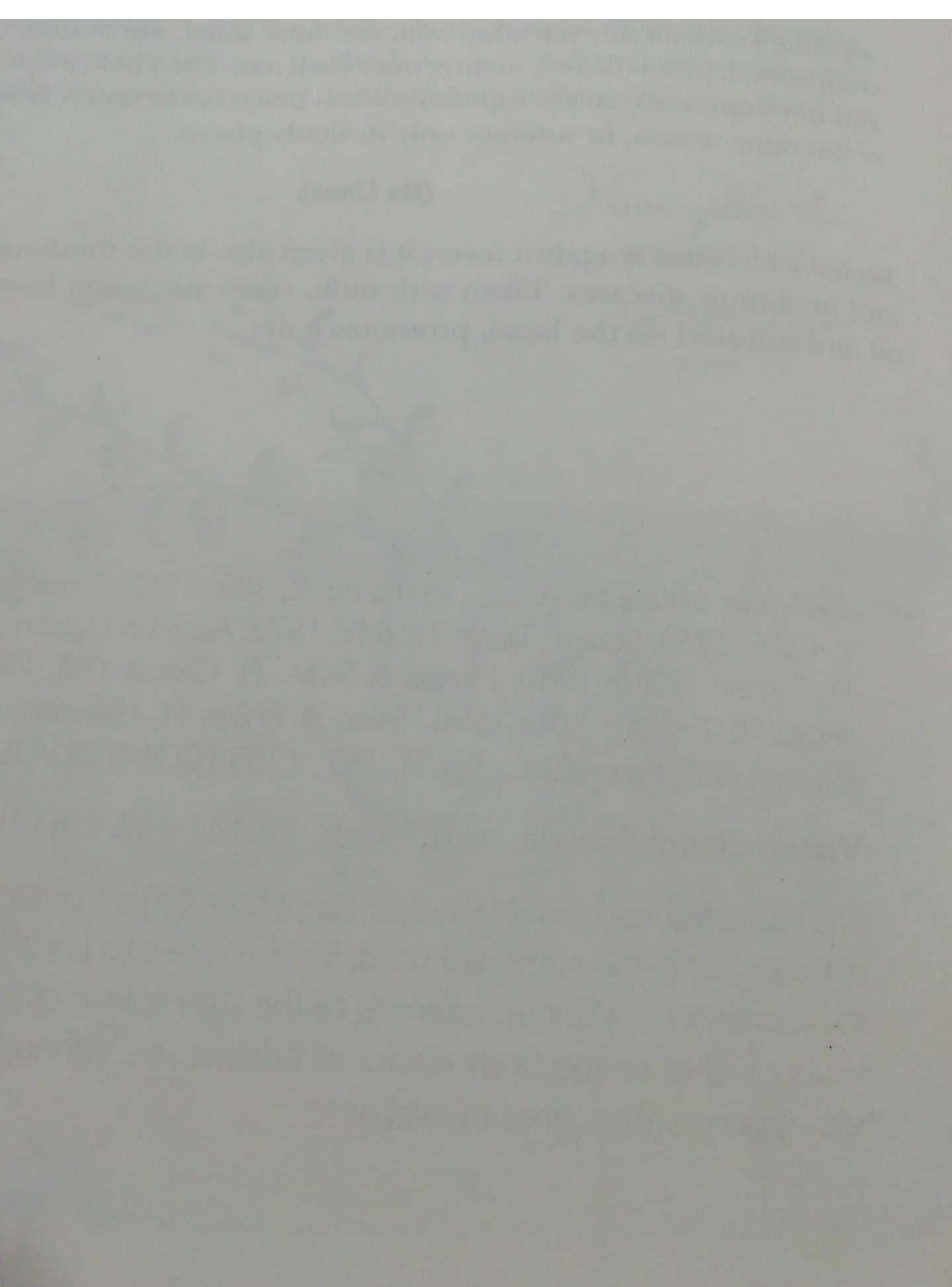
(Its Uses)

Boiled with *cumin* is against fever; it is given also in the thinning of the body and in chronic diseases. Taken with milk, cures also warm fever. Cooked in oil and smeared on the head, promotes hairs.

Evolvulus alsinoides (L.) L., Sp. Pl. ed. 2, 382. 1762; Ooststr. in Fl. Males. I, 4:395. 1953; Stearn, Taxon 21: 649. 1972; Austin in Dassan., Rev. Handb. Fl. Ceylon I: 309. 1980; Manilal & Sivar., Fl. Calicut 188. 1982; Sasidh. & Sivar., Fl. Thrissur 306. 1996; Sivar. & Philip, Fl. Nilambur 444. 1997. - *Convolvulus alsinoides* L., Sp. Pl. 157. 1753 [CONVOLVULACEAE].

Vistnu-clandi Rheede, Hort. Malab. 11: 131-132, t. 64. 1692.

The name Kishnakranti [Malayalam script on t. 64] is a colloquial modification of Vishnuklanti, the name still used; Vishnu refers to Lord Vishnu (Krishna is an incarnation of Vishnu), referring to the blue colour of the flowers (which is supposed to be the body colour of Krishna and Vishnu); and klanti means halo. It occurs throughout Malabar.





Sendera Clandi

FIG. 65.



SECOND species of *Clandi*. Root slender, fibrous with a red, white, bark. Stalk-lets five, angular, glabrous not hairy, dark green.

Leaves are glabrous on both sides, are oblong-round, more long than those of the first species, towards the upper part with sides more bent, semi circular or also incised with two three cornered half moons, at the petiole standing out with two bicuspidate or tri-cuspidate peduncles.

Flowers without smell, are larger than those of the first species, monopetalous, evoking a five-cornered star, are white yellow, at the centre purple red. In them are five, erect, white stamens, furnished with apices.

Seed capsules are cuspidate, enclosed for the most part by the leaves of the calyx, giving out from the top a slender filament. In them are seen at random four seeds, are three cornered, with two plain, one round, are striated by ribs, bulging in the middle, have the colour of the seeds of *Nasturtium*, mostly found in the rainy season; during the summer only in the shady places.

(Its Uses)

Taken in a decoction is against fever. With *sugar* checks the burning of liver. Powdered and with water smeared on the head, mitigates all pains; crushed and drunk with the urine of cow relieves all arthritic pains, especially in the feet.

Sindora - Linn.

മരുന്നി മ

and جاز فلفل كلاله

नदनकति

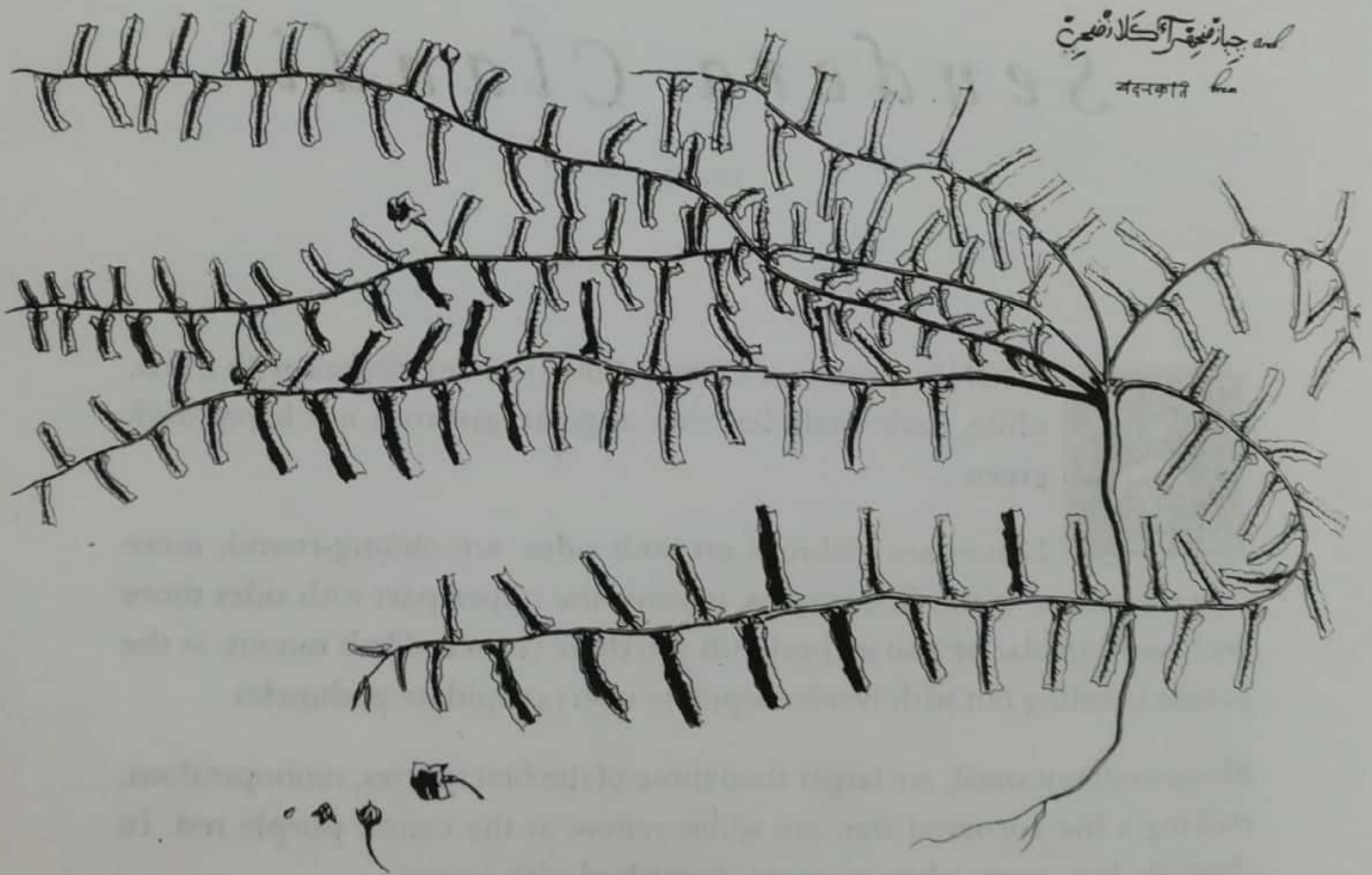


Fig. 65

Merremia tridentata (L.) H. Hall.; Bot. Jahrb. 16: 552. 1893; Austin in Dassan., Rev. Handb. Fl. Ceylon 1: 351. 1980; Manilal & Sivar., Fl. Calicut 186. 1982; Manilal, Fl. Silent Valley 189. 1988; Sivar. & Philip, Fl. Nilambur 458. 1997. - *Convolvulus tridentatus* L., Sp. Pl. 157. 1753. *Ipomoea angustifolia* Jacq., Ic. Pl. Rar. 2: 10. 1795; t. 317. 1789. *Convolvulus hastatus* Desr. in Lam., Encycl. 3: 542. 1792, non Forssk. 1775. *Convolvulus filicaulis* Vahl, Symb. Bot. 3: 24. 1794. *Ipomoea tridentata* (L.) Roth, Arch. Bot. 1(2): 38. 1798. *Convolvulus simplex* Pers., Syn. Pl. 1: 178. 1805. *Convolvulus sonneratii* Sm. in Rees, Cycl. 9: sp. no. 26. 1808, nom. illeg. (based on same type as *Convolvulus simplex* Pers. 1805). *Ipomoea denticulata* R. Br., Prodr. 485. 1810. *Ipomoea filicaulis* (Vahl) Bl., Bijdr. 721. 1826. *Merremia hastata* H. Hall., Bot. Jahrb. 16: 552. 1893, nom. illeg. (ind. type of *Convolvulus filicaulis* Vahl 1794). *Merremia tridentata* subsp. *angustifolia* (Jacq.) Ooststr., Blumea 3: 323. 1939; Verdc. in Fl. Trop. E. Afr., Convolvulac. 51. 1963; *Merremia tridentata* subsp. *hastata* Ooststr., Blumea 3: 317. 1939; Ooststr. in Fl. Males. I, 4: 445. 1953; Fosb., Taxon 24: 541. 1975 [CONVOLVULACEAE].

Sendera-clanti Rheede, Hort. Malab. 11: 133, t. 65. 1692.

The name Chandrakranti [Malayalam script on t. 65] is not in use now; Chandran is moon; and kranti (or klanti) is halo. No Malayalam name is currently used for this. It occurs throughout Malabar.

INDEX - 1
VOL. & FIG. NUMBERS WITH MALAYALAM NAME,
SCIENTIFIC NAME AND FAMILY NAME

Volume /Fig./Year	Malayalam Name	Scientific Name	Family
11: 1-6, t.1-2. 1692	Kapa-tsjakka	<i>Ananas comosus</i> (L.) Merr.	BROMELIACEAE
11: 7, t. 3. 1692	Catevala	<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE
11: 7, t. 3. 1692	Kadanaku	<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE
11: 9-11, t. 4-6. 1692	Elettari	<i>Elettaria cardamomum</i> (L.) Maton	ZINGIBERACEAE
11: 13-14, t. 7.1692	Kua	<i>Curcuma zedoaria</i> (Christm.) Rosc.	ZINGIBERACEAE
11: 15-16, t. 8. 1692	Tsjana-kua	<i>Costus speciosus</i> (Koenig) Sm.	ZINGIBERACEAE
11: 17-18, t. 9.1692	Malan-kua	<i>Kaempferia rotunda</i> L.	ZINGIBERACEAE
11: 19, t. 10. 1690	Manja-kua	<i>Boesenbergia rotunda</i> (L.) Mansf.	ZINGIBERACEAE
11: 21, t. 11. 1692	Manjella-kua	<i>Curcuma longa</i> L.	ZINGIBERACEAE
11: 23-25, t. 12. 1692	Inschi	<i>Zingiber officinale</i> Rosc.	ZINGIBERACEAE
11: 27, t.13.1692	Katou-inschi-kua	<i>Zingiber zerumbet</i> (L.) Sm.	ZINGIBERACEAE
11: 29, t. 14. 1692	Mala-inschi-kua	<i>Alpinia nigra</i> (Gaertn.) Burt	ZINGIBERACEAE
11: 31, t. 15. 1692	Parua-kelangu	<i>Aponogeton natans</i> (L.) Engl. & Krause	APONOGETONACEAE
11: 33-34, t. 16. 1692	Nir-tsjembu	<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE
11: 33-34, t.17. 1692	Nelenschena minor	<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE
11: 35-36, t. 18. 1692	Schena	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols.	ARACEAE
11: 37, t.19. 1692	Mulenschena	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols. var. <i>paeoniifolius</i> Sivadasan	ARACEAE
11: 39, t. 20. 1692	Nelenchena major	<i>Typhonium flagelliforme</i> (Lodd.) Bl.	ARACEAE
11: 41, t. 21.1692	Katu-schena	<i>Tacca leontopetaloides</i> (L.) Kuntze	TACCACEAE
11: 43-44, t. 22. 1692	Weli-ila	<i>Colocasia esculenta</i> (L.) Schott	ARACEAE
11: 45, t. 23. 1692	Karin-pola	<i>Lagenandra ovata</i> (L.) Thwaites	ARACEAE
11: 47, t. 24. 1692	Pongati	<i>Sphenoclea zeylanica</i> Gaertn.	SPHENOCLEACEAE
11: 49, t. 25. 1692	Kurka	<i>Coleus rotundifolius</i> (Poir.) A. Chev. & Perrot	LAMIACEAE

11: 51-52, t. 26. 1692	Ambel	<i>Nymphaea pubescens</i> Willd.	NYMPHAEACEAE
11: 53, t. 27. 1692	Cit-ambel	<i>Nymphaea nouchali</i> N. Burm.	NYMPHAEACEAE
11: 55-56, t. 28. 1692	Nedel-ambel	<i>Nymphoides indica</i> (L.) Kuntze	MENYANTHACEAE
11: 57, t. 29. 1692	Tsjeroea-citambel	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	MENYANTHACEAE
11: 59-60, t. 30. 1692	Tamara	<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE
11: 61, t. 31. 1692	Bem-tamara	<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE
11: 63-64, t. 32. 1692	Kodda-pail	<i>Pistia stratiotes</i> L.	ARACEAE
11: 65, t. 33. 1692	Panover-tsjeraua	<i>Trapa bispinosa</i> Roxb.	TRAPACEAE
11: 67, t. 34. 1692	Naru-kila	<i>Phrynium rheedei</i> Suresh & Nicols.	MARANTACEAE
11: 69-70, t. 35. 1692	Bela-pola	<i>Geodorum densiflorum</i> (Lam.) Schlechter	ORCHIDACEAE
11: 71, t. 36. 1692	Ela-pola	<i>Eulophia spectabilis</i> (Dennst.) Suresh	ORCHIDACEAE
11: 73-74, t. 37. 1692	Belam-canda- schularmani	<i>Belamcanda chinensis</i> (L.) DC.	IRIDACEAE
11: 75-76, t. 38. 1692	Belutta-pola-taly	<i>Crinum defixum</i> Ker-Gawl.	AMARYLLIDACEAE
11: 77-78, t. 39. 1692	Sjovanna-pola-tali	<i>Crinum latifolium</i> L.	AMARYLLIDACEAE
11: 79, t. 40. 1692	Catulli-pola	<i>Pancratium triflorum</i> Roxb.	AMARYLLIDACEAE
11: 81, t. 41. 1692	Katsjula-kelengu	<i>Kaempferia galanga</i> L.	ZINGIBERACEAE
11: 83, t. 42. 1692	Cadenaco	<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE
11: 83, t. 42. 1692	Katu-kapel	<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE
11: 85-87, t. 43. 1692	Katu-bala	<i>Canna indica</i> L.	CANNACEAE
11: 91-92, t. 44. 1692	Carim-gola	<i>Monochoria vaginalis</i> (N. Burm.) Presl	PONTEDERIACEAE
11: 93, t. 45. 1692	Culi-tamara	<i>Limnophyton obtusifolium</i> (L.) Miq.	ALISMACEAE
11: 95, t. 46. 1692	Ottel-ambel	<i>Ottelia alismoides</i> (L.) Pers.	HYDROCHARITACEAE
11: 97, t. 47. 1692	Tsjern-cumulu	<i>Aeginetia indica</i> L.	OROBANCHACEAE
11: 99, t. 48. 1692	Vaembu	<i>Acorus calamus</i> L.	ARACEAE
11: 101-102, t. 49. 1692	Pal-modecca	<i>Ipomoea mauritiana</i> Jacq.	CONVOLVULACEAE
11: 103, t. 50. 1692	Munda-valli	<i>Ipomoea alba</i> L.	CONVOLVULACEAE
11: 105, t. 51. 1692	Kattu-kalengu	<i>Hewittia malabarica</i> (L.) Suresh	CONVOLVULACEAE
11: 107-108, t. 52. 1692	Ballel	<i>Ipomoea aquatica</i> Forssk.	CONVOLVULACEAE
11: 109-110, t. 53. 1692	Tiru-tali	<i>Ipomoea marginata</i> (Desr.) Verdc.	CONVOLVULACEAE

11: 111, t. 54. 1692	Ben-tiru-tali	<i>Aniseia martinicensis</i> (Jacq.) Choisy	CONVOLVULACEAE
11: 113, t. 55. 1692	Tala-neli	<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE
11: 115, t. 56. 1692	Adamboe	<i>Ipomoea campanulata</i> L.	CONVOLVULACEAE
11: 117, t. 57. 1692	Schovanna- adamboe	<i>Ipomoea pes-caprae</i> (L.) R. Br.	CONVOLVULACEAE
11: 119, t. 58. 1692	Bel-adambu	<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	CONVOLVULACEAE
11: 121, t. 59. 1692	Pulli-schovadi	<i>Ipomoea pes-tigridis</i> L.	CONVOLVULACEAE
11: 123, t. 60. 1692	Tsjuria-cranti	<i>Ipomoea quamoclit</i> L.	CONVOLVULACEAE
11: 125, t. 61. 1692	Samudra- tsjogam	<i>Argyreia nervosa</i> (N. Burm.) Bojer	CONVOLVULACEAE
11: 127, t. 62. 1692	Batta-valli	<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE
11: 127, t. 62. 1692	Cattu-valli	<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE
11: 129, t. 63. 1692	Mareta-inali	<i>Hoya ovalifolia</i> Wight & Arn.	ASCLEPIADACEAE
11: 131-132, t. 64. 1692	Vistnu-clandi	<i>Evolvulus alsinoides</i> (L.) L.	CONVOLVULACEAE
11: 133, t. 65. 1692	Sendera-clanti	<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE

INDEX - 2
VOL. & FIG. NUMBERS WITH MALAYALAM NAME,
KONKANI, PORTUGUESE AND DUTCH / BELGIAN NAMES

Volume/Fig./Year	Malayalam Name	Konkani Name	Portuguese Name	Dutch/Belgian Name
11: 1-6, t.1-2. 1692	Kapa-tsjakka	Ananas	Ananas	*
11: 7, t. 3. 1692	Catevala	*	*	*
11: 7, t. 3. 1692	Kadanaku	*	*	*
11: 9-11, t. 4-6. 1692	Elettari	*	*	*
11: 13-14, t. 7. 1692	Kua	Acua	*	*
11: 15-16, t. 8. 1692	Tsjana-kua	Ponvo	*	*
11: 17-18, t. 9. 1692	Malan-kua	Ben Tsjapo	*	*
11: 19, t. 10. 1690	Manja-kua	Davikua	Raiz do Zafrao	*
11: 21, t. 11. 1692	Manjella-kua	Alady	*	Turmeric
11: 23-25, t. 12. 1692	Inschi	Ale	*	Ginger
11: 27, t.13. 1692	Katou-inschi-kua	Kolinyane	*	Wilde Ginger
11: 29, t. 14. 1692	Mala-inschi-kua	Giri Kolinjane	*	*
11: 31, t. 15. 1692	Parua-kelangu	*	*	*
11: 33-34, t. 16. 1692	Nir-tsjembu	*	*	*
11: 33-34, t.17. 1692	Nelenschena minor	*	*	*
11: 35-36, t. 18. 1692	Schena	Surno	*	*
11: 37, t.19. 1692	Mulenschena	Caleri-Surno	*	*
11: 39, t. 20. 1692	Nelenchena major	Cayeri-Surno	*	*
11: 41, t. 21. 1692	Katu-schena	Cajuro-Surno	*	*
11: 43-44, t. 22. 1692	Weli-ila	*	*	*
11: 45, t. 23. 1692	Karin-pola	*	*	*
11: 47, t. 24. 1692	Pongati	*	*	*
11: 49, t. 25. 1692	Kurka	*	*	*
11: 51-52, t. 26. 1692	Ambel	Saluca	*	*
11: 53, t. 27. 1692	Cit-ambel	Casturi Camalla	*	*
11: 55-56, t. 28. 1692	Nedel-ambel	Commodu	*	*
11: 57, t. 29. 1692	Tsjeroea-citambel	*	*	*
11: 59-60, t. 30. 1692	Tamara	Pada Mactu	*	*
11: 61, t. 31. 1692	Bern-tamara	*	*	*

11: 63-64, t. 32. 1692	Kodda-pail	*	*	*
11: 65, t. 33. 1692	Panover-tsjeraua	*	*	*
11: 67, t. 34. 1692	Naru-kila	*	*	*
11: 69-70, t. 35. 1692	Bela-pola	*	*	*
11: 71, t. 36. 1692	Ela-pola	*	*	*
11: 73-74, t. 37. 1692	Belam-canda- schularmani	Arty	*	*
11: 75-76, t. 38. 1692	Belutta-pola-taly	*	*	*
11: 77-78, t. 39. 1692	Sjovanna-pola-tali	Gola Kondo	*	*
11: 79, t. 40. 1692	Catulli-pola	*	*	*
11: 81, t. 41. 1692	Katsjula-kelengu	Capura Catari	*	*
11: 83, t. 42. 1692	Cadenaco	*	*	*
11: 83, t. 42. 1692	Katu-kapel	*	*	*
11: 85-87, t. 43. 1692	Katu-bala	Rana Queri	*	*
11: 91-92, t. 44. 1692	Carim-gola	*	*	*
11: 93, t. 45. 1692	Culi-tamara	*	*	*
11: 95, t. 46. 1692	Ottel-ambel	Odeca-aloen	*	*
11: 97, t. 47. 1692	Tsjem-cumulu	*	*	*
11: 99, t. 48. 1692	Vaambu	Bembi	*	*
11: 101-102, t. 49. 1692	Pal-modecca	Cuvali	*	*
11: 103, t. 50. 1692	Munda-valli	*	*	*
11: 105, t. 51. 1692	Kattu-kalengu	*	*	*
11: 107-108, t. 52. 1692	Ballel	Takasivalli	*	*
11: 109-110, t. 53. 1692	Tiru-tali	*	*	*
11: 111, t. 54. 1692	Ben-tiru-tali	*	*	*
11: 113, t. 55. 1692	Tala-neli	Cali Valli	*	*
11: 115, t. 56. 1692	Adamboe	Pougia-Valli	*	*
11: 117, t. 57. 1692	Schovanna-adamboe	Bangada-Valli	*	*
11: 119, t. 58. 1692	Bel-adambu	*	*	*
11: 121, t. 59. 1692	Pulli-schovadi	Arty	*	*
11: 123, t. 60. 1692	Tsjuria-cranti	*	*	*
11: 125, t. 61. 1692	Samudra-tsjogam	*	*	*
11: 127, t. 62. 1692	Batta-valli	*	*	*
11: 127, t. 62. 1692	Cattu-valli	*	*	*
11: 129, t. 63. 1692	Mareta-inali	*	*	*
11: 131-132, t. 64. 1692	Vistnu-clandi	*	*	*
11: 133, t. 65. 1692	Sendera-clanti	*	*	*

INDEX - 3
SCIENTIFIC NAMES WITH FAMILY NAME,
MALAYALAM NAME AND VOL. & FIG. NUMBERS

Scientific Name Name	Family	Malayalam Name	Volume / Fig. / Year
<i>Acorus calamus</i> L.	ARACEAE	Vaambu	11: 99, t. 48. 1692
<i>Aeginetia indica</i> L.	OROBANCHACEAE	Tsjem-cumulu	11: 97, t. 47. 1692
<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE	Catevala	11: 7, t. 3. 1692
<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE	Kadanaku	11: 7, t. 3. 1692
<i>Alpinia nigra</i> (Gaertn.) Burt	ZINGIBERACEAE	Mala-inschi-kua	11: 29, t. 14. 1692
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols.	ARACEAE	Schena	11: 35-36, t. 18. 1692
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols. var. <i>paeoniifolius</i> Sivadasan	ARACEAE	Mulenschena	11: 37, t. 19. 1692
<i>Ananas comosus</i> (L.) Merr.	BROMELIACEAE	Kapa-tsjakka	11: 1-6, t. 1-2. 1692
<i>Aniseia martinicensis</i> (Jacq.) Choisy	CONVOLVULACEAE	Ben-tiru-tali	11: 111, t. 54. 1692
<i>Aponogeton natans</i> (L.) Engl. & Krause	APONOGETONACEAE	Parua-kelangu	11: 31, t. 15. 1692
<i>Argyreia nervosa</i> (N. Burm.) Bojer	CONVOLVULACEAE	Samudra-tsjogam	11: 125, t. 61. 1692
<i>Belamcanda chinensis</i> (L.) DC.	IRIDACEAE	Belam-canda- schularmani	11: 73-74, t. 37. 1692
<i>Boesenbergia rotunda</i> (L.) Mansf.	ZINGIBERACEAE	Manja-kua	11: 19, t. 10. 1690
<i>Canna indica</i> L.	CANNACEAE	Katu-bala	11: 85-87, t. 43. 1692
<i>Coleus rotundifolius</i> (Poir.) A. Chev. & Perrot	LAMIACEAE	Kurka	11: 49, t. 25. 1692
<i>Colocasia esculenta</i> (L.) Schott	ARACEAE	Weli-ila	11: 43-44, t. 22. 1692
<i>Costus speciosus</i> (Koenig) Sm.	ZINGIBERACEAE	Tsjana-kua	11: 15-16, t. 8. 1692

<i>Crinum defixum</i> Ker-Gawl.	AMARYLLIDACEAE	Belutta-pola-taly	11: 75-76, t. 38. 1692
<i>Crinum latifolium</i> L.	AMARYLLIDACEAE	Sjovanna-pola-tali	11: 77-78, t. 39. 1692
<i>Curcuma longa</i> L.	ZINGIBERACEAE	Manjella-kua	11: 21, t. 11. 1692
<i>Curcuma zedoaria</i> (Christm.) Rosc.	ZINGIBERACEAE	Kua	11: 13-14, t. 7. 1692
<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE	Batta-valli	11: 127, t. 62. 1692
<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE	Cattu-valli	11: 127, t. 62. 1692
<i>Elettaria cardamomum</i> (L.) Maton	ZINGIBERACEAE	Elettari	11: 9-11, t. 4-6. 1692
<i>Eulophia spectabilis</i> (Dennst.) Suresh	ORCHIDACEAE	Ela-pola	11: 71, t. 36. 1692
<i>Evolvulus alsinoides</i> (L.) L.	CONVOLVULACEAE	Vistnu-clandi	11: 131-132, t. 64. 1692
<i>Geodorum densiflorum</i> (Lam.) Schlechter	ORCHIDACEAE	Bela-pola	11: 69-70, t. 35. 1692
<i>Hewittia malabarica</i> (L.) Suresh	CONVOLVULACEAE	Kattu-kalengu	11: 105, t. 51. 1692
<i>Hoya ovalifolia</i> Wight & Arn.	ASCLEPIADACEAE	Mareta-inali	11: 129, t. 63. 1692
<i>Ipomoea alba</i> L.	CONVOLVULACEAE	Munda-valli	11: 103, t. 50. 1692
<i>Ipomoea aquatica</i> Forssk.	CONVOLVULACEAE	Ballel	11: 107-108, t. 52. 1692
<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	CONVOLVULACEAE	Bel-adambu	11: 119, t. 58. 1692
<i>Ipomoea campanulata</i> L.	CONVOLVULACEAE	Adamboe	11: 115, t. 56. 1692
<i>Ipomoea marginata</i> (Desr.) Verdc.	CONVOLVULACEAE	Tiru-tali	11: 109-110, t. 53. 1692
<i>Ipomoea mauritiana</i> Jacq.	CONVOLVULACEAE	Pal-modecca	11: 101-102, t. 49. 1692
<i>Ipomoea pes-caprae</i> (L.) R. Br.	CONVOLVULACEAE	Schovanna-adamboe	11: 117, t. 57. 1692
<i>Ipomoea pes-tigridis</i> L.	CONVOLVULACEAE	Pulli-schovadi	11: 121, t. 59. 1692
<i>Ipomoea quamoclit</i> L.	CONVOLVULACEAE	Tsjuria-cranti	11: 123, t. 60. 1692
<i>Kaempferia galanga</i> L.	ZINGIBERACEAE	Katsjula-kelengu	11: 81, t. 41. 1692
<i>Kaempferia rotunda</i> L.	ZINGIBERACEAE	Malan-kua	11: 17-18, t. 9. 1692
<i>Lagenandra ovata</i> (L.) Thwaites	ARACEAE	Karin-pola	11: 45, t. 23. 1692

<i>Limnophyton obtusifolium</i> (L.) Miq.	ALISMATACEAE	Culi-tamara	11: 93, t. 45. 1692
<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE	Sendera-clanti	11: 133, t. 65. 1692
<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE	Tala-neli	11: 113, t. 55. 1692
<i>Monochoria vaginalis</i> (N. Burm.) Presl	PONTEDERIACEAE	Carim-gola	11: 91-92, t. 44. 1692
<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE	Bem-tamara	11: 61, t. 31. 1692
<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE	Tamara	11: 59-60, t. 30. 1692
<i>Nymphaea nouchali</i> N. Burm.	NYMPHAEACEAE	Cit-ambel	11: 53, t. 27. 1692
<i>Nymphaea pubescens</i> Willd.	NYMPHAEACEAE	Ambel	11: 51-52, t. 26. 1692
<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	MENYANTHACEAE	Tsjeroea-citambel	11: 57, t. 29. 1692
<i>Nymphoides indica</i> (L.) Kuntze	MENYANTHACEAE	Nedel-ambel	11: 55-56, t. 28. 1692
<i>Ottelia alismoides</i> (L.) Pers.	HYDROCHARITACEAE	Ottel-ambel	11: 95, t. 46. 1692
<i>Pancratium triflorum</i> Roxb.	AMARYLLIDACEAE	Catulli-pola	11: 79, t. 40. 1692
<i>Phrynium rheedei</i> Suresh & Nicols.	MARANTACEAE	Naru-kila	11: 67, t. 34. 1692
<i>Pistia stratiotes</i> L.	ARACEAE	Kodda-pail	11: 63-64, t. 32. 1692
<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE	Cadenaco	11: 83, t. 42. 1692
<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE	Katu-kapel	11: 83, t. 42. 1692
<i>Sphenoclea zeylanica</i> Gaertn.	SPHENOCLEACEAE	Pongati	11: 47, t. 24. 1692
<i>Tacca leontopetaloides</i> (L.) Kuntze	TACCACEAE	Katu-schena	11: 41, t. 21. 1692
<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE	Nelenschena minor	11: 33-34, t. 17. 1692
<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE	Nir-tsjembu	11: 33-34, t. 16. 1692
<i>Trapa bispinosa</i> Roxb.	TRAPACEAE	Panover-tsjeraua	11: 65, t. 33. 1692
<i>Typhonium flagelliforme</i> (Lodd.) Bl.	ARACEAE	Nelenchena major	11: 39, t. 20. 1692
<i>Zingiber officinale</i> Rosc.	ZINGIBERACEAE	Inschi	11: 23-25, t. 12. 1692
<i>Zingiber zerumbet</i> (L.) Sm.	ZINGIBERACEAE	Katou-inschi-kua	11: 27, t. 13. 1692

INDEX - 4
MALAYALAM NAMES WITH SCIENTIFIC NAME,
FAMILY NAME AND VOL. & FIG. NUMBER

Malayalam Name	Scientific Name	Family	Volume / Fig./Year
Adamboe	<i>Ipomoea campanulata</i> L.	CONVOLVULACEAE	11: 115, t. 56. 1692
Ambel	<i>Nymphaea pubescens</i> Willd.	NYMPHAEACEAE	11: 51-52, t. 26. 1692
Ballel	<i>Ipomoea aquatica</i> Forssk.	CONVOLVULACEAE	11: 107-108, t. 52. 1692
Batta-valli	<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE	11: 127, t. 62. 1692
Bel-adambu	<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	CONVOLVULACEAE	11: 119, t. 58. 1692
Belam-canda- schularmani	<i>Belamcanda chinensis</i> (L.) DC.	IRIDACEAE	11: 73-74, t. 37. 1692
Bela-pola	<i>Geodorum densiflorum</i> (Lam.) Schlechter	ORCHIDACEAE	11: 69-70, t. 35. 1692
Belutta-pola-taly	<i>Crinum defixum</i> Ker-Gawl.	AMARYLLIDACEAE	11: 75-76, t. 38. 1692
Bem-tamara	<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE	11: 61, t. 31. 1692
Ben-tiru-tali	<i>Aniseia martinicensis</i> (Jacq.) Choisy	CONVOLVULACEAE	11: 111, t. 54. 1692
Cadenaco	<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE	11: 83, t. 42. 1692
Carim-gola	<i>Monochoria vaginalis</i> (N. Burm.) Presl	PONTEDERIACEAE	11: 91-92, t. 44. 1692
Catevala	<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE	11: 7, t. 3. 1692
Cattu-valli	<i>Diploclisia glaucescens</i> (Bl.) Diels	MENISPERMACEAE	11: 127, t. 62. 1692
Catulli-pola	<i>Pancratium triflorum</i> Roxb.	AMARYLLIDACEAE	11: 79, t. 40. 1692
Cit-ambel	<i>Nymphaea nouchali</i> N. Burm.	NYMPHAEACEAE	11: 53, t. 27. 1692
Culi-tamara	<i>Limnophyton obtusifolium</i> (L.) Miq.	ALISMACEAE	11: 93, t. 45. 1692
Ela-pola	<i>Eulophia spectabilis</i> (Dennst.) Suresh	ORCHIDACEAE	11: 71, t. 36. 1692
Elettari	<i>Elettaria cardamomum</i> (L.) Maton	ZINGIBERACEAE	11: 9-11, t. 4-6. 1692
Kadanaku	<i>Aloe vera</i> (L.) N. Burm.	LILIACEAE	11: 7, t. 3. 1692
Kapa-tsjakka	<i>Ananas comosus</i> (L.) Merr.	BROMELIACEAE	11: 1-6, t. 1-2. 1692
Karin-pola	<i>Lagenandra ovata</i> (L.) Thwaites	ARACEAE	11: 45, t. 23. 1692

Katou-inschi-kua	<i>Zingiber zerumbet</i> (L.) Sm.	ZINGIBERACEAE	11: 27, t.13. 1692
Katsjula-kelengu	<i>Kaempferia galanga</i> L.	ZINGIBERACEAE	11: 81, t. 41. 1692
Kattu-kalengu	<i>Hewittia malabarica</i> (L.) Suresh	CONVOLVULACEAE	11: 105, t. 51. 1692
Katu-bala	<i>Canna indica</i> L.	CANNACEAE	11: 85-87, t. 43. 1692
Katu-kapel	<i>Sansevieria ebracteata</i> (Cav.) Suresh	AGAVACEAE	11: 83, t. 42. 1692
Katu-schena	<i>Tacca leontopetaloides</i> (L.) Kuntze	TACCACEAE	11: 41, t. 21. 1692
Kodda-pail	<i>Pistia stratiotes</i> L.	ARACEAE	11: 63-64, t. 32. 1692
Kua	<i>Curcuma zedoaria</i> (Christm.) Rosc.	ZINGIBERACEAE	11: 13-14, t. 7. 1692
Kurka	<i>Coleus rotundifolius</i> (Poir.) A. Chev. & Perrot	LAMIACEAE	11: 49, t. 25. 1692
Inschi	<i>Zingiber officinale</i> Rosc.	ZINGIBERACEAE	11: 23-25, t. 12. 1692
Mala-inschi-kua	<i>Alpinia nigra</i> (Gaertn.) Burtl	ZINGIBERACEAE	11: 29, t. 14. 1692
Malan-kua	<i>Kaempferia rotunda</i> L.	ZINGIBERACEAE	11: 17-18, t. 9. 1692
Manja-kua	<i>Boesenbergia rotunda</i> (L.) Mansf.	ZINGIBERACEAE	11: 19, t. 10. 1690
Manjella-kua	<i>Curcuma longa</i> L.	ZINGIBERACEAE	11: 21, t. 11. 1692
Mareta-inali	<i>Hoya ovalifolia</i> Wight & Arn.	ASCLEPIADACEAE	11: 129, t. 63. 1692
Mulenschena	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols. var. <i>paeoniifolius</i> Sivadasan	ARACEAE	11: 37, t.19. 1692
Munda-valli	<i>Ipomoea alba</i> L.	CONVOLVULACEAE	11: 103, t. 50. 1692
Naru-kila	<i>Phrynium rheedei</i> Suresh & Nicols.	MARANTACEAE	11: 67, t. 34. 1692
Nedel-ambel	<i>Nymphoides indica</i> (L.) Kuntze	MENYANTHACEAE	11: 55-56, t. 28. 1692
Nelenchena major	<i>Typhonium flagelliforme</i> (Lodd.) Bl.	ARACEAE	11: 39, t. 20. 1692
Nelenschena minor	<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE	11: 33-34, t.17. 1692
Nir-tsjembu	<i>Theriophonum infaustum</i> N. E. Br.	ARACEAE	11: 33-34, t. 16. 1692
Ottel-ambel	<i>Ottelia alismoides</i> (L.) Pers.	HYDROCHARITACEAE	11: 95, t. 46. 1692
Pal-modecca	<i>Ipomoea mauritiana</i> Jacq.	CONVOLVULACEAE	11: 101-102, t. 49. 1692
Panover-tsjeraua	<i>Trapa bispinosa</i> Roxb.	TRAPACEAE	11: 65, t. 33. 1692
Parua-kelangu	<i>Aponogeton natans</i> (L.) Engl. & Krause	APONOGETONACEAE	11: 31, t. 15. 1692
Pongati	<i>Sphenoclea zeylanica</i> Gaertn.	SPHENOCLEACEAE	11: 47, t. 24. 1692
Pulli-schovadi	<i>Ipomoea pes-tigridis</i> L.	CONVOLVULACEAE	11: 121, t. 59. 1692

Samudra-tsjogam	<i>Argyreia nervosa</i> (N. Burm.) Bojer	CONVOLVULACEAE	11: 125, t. 61. 1692
Schena	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols.	ARACEAE	11: 35-36, t. 18. 1692
Schovanna- adamboe	<i>Ipomoea pes-caprae</i> (L.) R. Br.	CONVOLVULACEAE	11: 117, t. 57. 1692
Sendera-clanti	<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE	11: 133, t. 65. 1692
Sjovanna-pola-tali	<i>Crinum latifolium</i> L.	AMARYLLIDACEAE	11: 77-78, t. 39. 1692
Tala-neli	<i>Merremia tridentata</i> (L.) H. Hall.	CONVOLVULACEAE	11: 113, t. 55. 1692
Tamara	<i>Nelumbo nucifera</i> Gaertn.	NELUMBONACEAE	11: 59-60, t. 30. 1692
Tiru-tali	<i>Ipomoea marginata</i> (Desr.) Verdc.	CONVOLVULACEAE	11: 109-110, t. 53. 1692
Tsjana-kua	<i>Costus speciosus</i> (Koenig) Sm.	ZINGIBERACEAE	11: 15-16, t. 8. 1692
Tsjem-cumulu	<i>Aeginetia indica</i> L.	OROBANCHACEAE	11: 97, t. 47. 1692
Tsjeroea-citambel	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	MENYANTHACEAE	11: 57, t. 29. 1692
Tsjuria-cranti	<i>Ipomoea quamoclit</i> L.	CONVOLVULACEAE	11: 123, t. 60. 1692
Vaambu	<i>Acorus calamus</i> L.	ARACEAE	11: 99, t. 48. 1692
Vistnu-clandi	<i>Evolvulus alsinoides</i> (L.) L.	CONVOLVULACEAE	11: 131-132, t. 64. 1692
Weli-ila	<i>Colocasia esculenta</i> (L.) Schott	ARACEAE	11: 43-44, t. 22. 1692

INDEX - 5
FAMILY NAMES WITH SCIENTIFIC NAME,
MALAYALAM NAME AND VOL. & FIG. NUMBER

Family	Scientific Name	Malayalam Name	Volume / Fig./Year
AGAVACEAE	<i>Sansevieria ebracteata</i> (Cav.) Suresh	Cadenaco	11: 83, t. 42. 1692
AGAVACEAE	<i>Sansevieria ebracteata</i> (Cav.) Suresh	Katu-kapel	11: 83, t. 42. 1692
ALISMACEAE	<i>Limnophyton obtusifolium</i> (L.) Miq.	Culi-tamara	11: 93, t. 45. 1692
AMARYLLIDACEAE	<i>Crinum defixum</i> Ker-Gawl.	Belutta-pola-taly	11: 75-76, t. 38. 1692
AMARYLLIDACEAE	<i>Crinum latifolium</i> L.	Sjovanna-pola-tali	11: 77-78, t. 39. 1692
AMARYLLIDACEAE	<i>Pancratium triflorum</i> Roxb.	Catulli-pola	11: 79, t. 40. 1692
APONOGETONACEAE	<i>Aponogeton natans</i> (L.) Engl. & Krause	Parua-kelangu	11: 31, t. 15. 1692
ARACEAE	<i>Acorus calamus</i> L.	Vaembu	11: 99, t. 48. 1692
ARACEAE	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols.	Schena	11: 35-36, t. 18. 1692
ARACEAE	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicols. var. <i>paeoniifolius</i> Sivadasan	Mulenschena	11: 37, t. 19. 1692
ARACEAE	<i>Colocasia esculenta</i> (L.) Schott	Weli-ila	11: 43-44, t. 22. 1692
ARACEAE	<i>Lagenandra ovata</i> (L.) Thwaites	Karin-pola	11: 45, t. 23. 1692
ARACEAE	<i>Pistia stratiotes</i> L.	Kodda-pail	11: 63-64, t. 32. 1692
ARACEAE	<i>Theriophonum infaustum</i> N. E. Br.	Nelenschena minor	11: 33-34, t. 17. 1692
ARACEAE	<i>Theriophonum infaustum</i> N. E. Br.	Nir-tsjembu	11: 33-34, t. 16. 1692
ARACEAE	<i>Typhonium flagelliforme</i> (Lodd.) Bl.	Nelenchena major	11: 39, t. 20. 1692
ASCLEPIADACEAE	<i>Hoya ovalifolia</i> Wight & Arn.	Mareta-inali	11: 129, t. 63. 1692
BROMELIACEAE	<i>Ananas comosus</i> (L.) Merr.	Kapa-tsjaakka	11: 1-6, t. 1-2. 1692
CANNACEAE	<i>Canna indica</i> L.	Katu-bala	11: 85-87, t. 43. 1692
CONVOLVULACEAE	<i>Aniseia martinicensis</i> (Jacq.) Choisy	Ben-tiru-tali	11: 111, t. 54. 1692
CONVOLVULACEAE	<i>Argyreia nervosa</i> (N. Burm.) Bojer	Samudra-tsjojam	11: 125, t. 61. 1692
CONVOLVULACEAE	<i>Evolvulus alsinoides</i> (L.) L.	Vistnu-clandi	11: 131-132, t. 64. 1692
CONVOLVULACEAE	<i>Hewittia malabarica</i> (L.) Suresh	Kattu-kalengu	11: 105, t. 51. 1692
CONVOLVULACEAE	<i>Ipomoea alba</i> L.	Munda-valli	11: 103, t. 50. 1692
CONVOLVULACEAE	<i>Ipomoea aquatica</i> Forssk.	Ballel	11: 107-108, t. 52. 1692

CONVOLVULACEAE	<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	Bel-adambu	11: 119, t. 58. 1692
CONVOLVULACEAE	<i>Ipomoea campanulata</i> L.	Adamboe	11: 115, t. 56. 1692
CONVOLVULACEAE	<i>Ipomoea marginata</i> (Desr.) Verdc.	Tiru-tali	11: 109-110, t. 53. 1692
CONVOLVULACEAE	<i>Ipomoea mauritiana</i> Jacq.	Pal-modecca	11: 101-102, t. 49. 1692
CONVOLVULACEAE	<i>Ipomoea pes-caprae</i> (L.) R. Br.	Schovanna- adamboe	11: 117, t. 57. 1692
CONVOLVULACEAE	<i>Ipomoea pes-tigridis</i> L.	Pulli-schovadi	11: 121, t. 59. 1692
CONVOLVULACEAE	<i>Ipomoea quamoclit</i> L.	Tsjuria-cranti	11: 123, t. 60. 1692
CONVOLVULACEAE	<i>Merremia tridentata</i> (L.) H. Hall.	Sendera-clanti	11: 133, t. 65. 1692
CONVOLVULACEAE	<i>Merremia tridentata</i> (L.) H. Hall.	Tala-neli	11: 113, t. 55. 1692
HYDROCHARITACEAE	<i>Ottelia alismoides</i> (L.) Pers.	Ottel-ambel	11: 95, t. 46. 1692
IRIDACEAE	<i>Belamcanda chinensis</i> (L.) DC.	Belam-canda- schularmani	11: 73-74, t. 37. 1692
LAMIACEAE	<i>Coleus rotundifolius</i> (Poir.) A. Chev. & Perrot	Kurka	11: 49, t. 25. 1692
LILIACEAE	<i>Aloe vera</i> (L.) N. Burm.	Catevala	11: 7, t. 3. 1692
LILIACEAE	<i>Aloe vera</i> (L.) N. Burm.	Kadanaku	11: 7, t. 3. 1692
MARANTACEAE	<i>Phrynium rheedei</i> Suresh & Nicols.	Naru-kila	11: 67, t. 34. 1692
MENISPERMACEAE	<i>Diploclisia glaucescens</i> (Bl.) Diels	Batta-valli	11: 127, t. 62. 1692
MENISPERMACEAE	<i>Diploclisia glaucescens</i> (Bl.) Diels	Cattu-valli	11: 127, t. 62. 1692
MENYANTHACEAE	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	Tsjeroea- citambel	11: 57, t. 29. 1692
MENYANTHACEAE	<i>Nymphoides indica</i> (L.) Kuntze	Nedel-ambel	11: 55-56, t. 28. 1692
NELUMBONACEAE	<i>Nelumbo nucifera</i> Gaertn.	Bem-tamara	11: 61, t. 31. 1692
NELUMBONACEAE	<i>Nelumbo nucifera</i> Gaertn.	Tamara	11: 59-60, t. 30. 1692
NYMPHAEACEAE	<i>Nymphaea nouchali</i> N. Burm.	Cit-ambel	11: 53, t. 27. 1692
NYMPHAEACEAE	<i>Nymphaea pubescens</i> Willd.	Ambel	11: 51-52, t. 26. 1692
ORCHIDACEAE	<i>Eulophia spectabilis</i> (Dennst.) Suresh	Ela-pola	11: 71, t. 36. 1692
ORCHIDACEAE	<i>Geodorum densiflorum</i> (Lam.) Schlechter	Bela-pola	11: 69-70, t. 35. 1692
OROBANCHACEAE	<i>Aeginetia indica</i> L.	Tsjem-cumulu	11: 97, t. 47. 1692
PONTEDERIACEAE	<i>Monochoria vaginalis</i> (N. Burm.) Presl	Carim-gola	11: 91-92, t. 44. 1692
SPHENOCLEACEAE	<i>Sphenoclea zeylanica</i> Gaertn.	Pongati	11: 47, t. 24. 1692
TACCACEAE	<i>Tacca leontopetaloides</i> (L.) Kuntze	Katu-schena	11: 41, t. 21. 1692
TRAPACEAE	<i>Trapa bispinosa</i> Roxb.	Panover-tsjeraua	11: 65, t. 33. 1692
ZINGIBERACEAE	<i>Alpinia nigra</i> (Gaertn.) Burtl	Mala-inschi-kua	11: 29, t. 14. 1692

ZINGIBERACEAE	<i>Boesenbergia rotunda</i> (L.) Mansf.	Manja-kua	11: 19, t. 10. 1690
ZINGIBERACEAE	<i>Costus speciosus</i> (Koenig) Sm.	Tsjana-kua	11: 15-16, t. 8. 1692
ZINGIBERACEAE	<i>Curcuma longa</i> L.	Manjella-kua	11: 21, t. 11. 1692
ZINGIBERACEAE	<i>Curcuma zedoaria</i> (Christm.) Rosc.	Kua	11: 13-14, t. 7. 1692
ZINGIBERACEAE	<i>Elettaria cardamomum</i> (L.) Maton	Elettari	11: 9-11, t. 4-6. 1692
ZINGIBERACEAE	<i>Kaempferia galanga</i> L.	Katsjula-kelengu	11: 81, t. 41. 1692
ZINGIBERACEAE	<i>Kaempferia rotunda</i> L.	Malan-kua	11: 17-18, t. 9. 1692
ZINGIBERACEAE	<i>Zingiber officinale</i> Rosc.	Inschi	11: 23-25, t. 12. 1692
ZINGIBERACEAE	<i>Zingiber zerumbet</i> (L.) Sm.	Katou-inschi-kua	11: 27, t. 13. 1692

INDEX - 6
KONKANI NAMES WITH MALAYALAM,
PORTUGUESE, DUTCH / BELGIAN NAMES
AND VOL. & FIG. NUMBER

Konkani Name	Malayalam Name	Portuguese Name	Dutch/Belgian Name	Volume/ Fig./Year
*	Batta-valli	*	*	11: 127, t. 62. 1692
*	Bel-adambu	*	*	11: 119, t. 58. 1692
*	Bela-pola	*	*	11: 69-70, t. 35. 1692
*	Belutta-pola-taly	*	*	11: 75-76, t. 38. 1692
*	Bem-tamara	*	*	11: 61, t. 31. 1692
*	Ben-tiru-tali	*	*	11: 111, t. 54. 1692
*	Cadenaco	*	*	11: 83, t. 42. 1692
*	Carim-gola	*	*	11: 91-92, t. 44. 1692
*	Catevala	*	*	11: 7, t. 3. 1692
*	Cattu-valli	*	*	11: 127, t. 62. 1692
*	Catulli-pola	*	*	11: 79, t. 40. 1692
*	Culi-tamara	*	*	11: 93, t. 45. 1692
*	Ela-pola	*	*	11: 71, t. 36. 1692
*	Elettari	*	*	11: 9-11, t. 4-6. 1692
*	Kadanaku	*	*	11: 7, t. 3. 1692
*	Karin-pola	*	*	11: 45, t. 23. 1692
*	Kattu-kalengu	*	*	11: 105, t. 51. 1692
*	Katu-kapel	*	*	11: 83, t. 42. 1692
*	Kodda-pail	*	*	11: 63-64, t. 32. 1692
*	Kurka	*	*	11: 49, t. 25. 1692
*	Mareta-inali	*	*	11: 129, t. 63. 1692
*	Munda-valli	*	*	11: 103, t. 50. 1692
*	Naru-kila	*	*	11: 67, t. 34. 1692
*	Nelenschena minor	*	*	11: 33-34, t. 17. 1692
*	Nir-tsjembu	*	*	11: 33-34, t. 16. 1692
*	Panover-tsjerava	*	*	11: 65, t. 33. 1692
*	Parua-kelangu	*	*	11: 31, t. 15. 1692
*	Pongati	*	*	11: 47, t. 24. 1692
*	Samudra-tsjoam	*	*	11: 125, t. 61. 1692
*	Sendera-clanti	*	*	11: 133, t. 65. 1692

*	Tiru-tali	*	*	11: 109-110, t. 53.1692
*	Tsjem-cumulu	*	*	11: 97, t. 47. 1692
*	Tsjeroea-citambel	*	*	11: 57, t. 29.1692
*	Tsjuria-cranti	*	*	11: 123, t. 60. 1692
*	Vistnu-clandi	*	*	11: 131-132, t. 64. 1692
*	Weli-ila	*	*	11: 43-44, t. 22. 1692
Acua	Kua	*	*	11: 13-14, t. 7.1692
Alady	Manjella-kua	*	Turmeric	11: 21, t. 11. 1692
Ale	Inschi	*	Ginger	11: 23-25, t. 12. 1692
Ananas	Kapa-tsjakka	Ananas	*	11: 1-6, t.1-2. 1692
Arty	Belam-canda-schularmani	*	*	11: 73-74, t. 37.1692
Arty	Pulli-schovadi	*	*	11: 121, t. 59. 1692
Bangada-Valli	Schovanna-adamboe	*	*	11: 117, t. 57.1692
Bembi	Vaambu	*	*	11: 99, t. 48. 1692
Ben Tsjapo	Malan-kua	*	*	11: 17-18, t. 9.1692
Cajuro-Surno	Katu-schena	*	*	11: 41, t. 21.1692
Caleri-Surno	Mulenschena	*	*	11: 37, t.19. 1692
Cali Valli	Tala-neli	*	*	11: 113, t. 55. 1692
Capura Catari	Katsjula-kelengu	*	*	11: 81, t. 41. 1692
Casturi Camalla	Cit-ambel	*	*	11: 53, t. 27. 1692
Cayeri-Surno	Nelenchena major	*	*	11: 39, t. 20. 1692
Commodu	Nedel-ambel	*	*	11: 55-56, t. 28. 1692
Cuvali	Pal-modecca	*	*	11: 101-102, t. 49.1692
Davikua	Manja-kua	Raiz do Zafrao	*	11: 19, t. 10. 1690
Giri Kolinjane	Mala-inschi-kua	*	*	11: 29, t. 14. 1692
Gola Kondo	Sjovanna-pola-tali	*	*	11: 77- 78, t. 39.1692
Kolinyane	Katou-inschi-kua	*	Wilde Ginger	11: 27, t.13.1692
Odeca-aloen	Ottel-ambel	*	*	11: 95, t. 46. 1692
Pada Mactu	Tamara	*	*	11: 59-60, t. 30. 1692
Ponvo	Tsjana-kua	*	*	11: 15-16, t. 8. 1692
Pougia-Valli	Adamboe	*	*	11: 115, t. 56. 1692
Rana Queri	Katu-bala	*	*	11: 85-87, t. 43. 1692
Saluca	Ambel	*	*	11: 51-52, t. 26. 1692
Surno	Schena	*	*	11: 35-36, t. 18. 1692
Takasivalli	Ballel	*	*	11: 107-108, t. 52.1692

INDEX - 7
PORTUGUESE NAMES WITH DUTCH / BELGIAN,
KONKANI, MALAYALAM NAMES
AND VOL. & FIG. NUMBER

Portuguese Name	Dutch/Belgian Name	Konkani Name	Malayalam Name	Volume/ Fig./Year
Ananas	*	Ananas	Kapa-tsjakka	11: 1-6, t.1-2. 1692
Raiz do Zafrão	*	Davikua	Manja-kua	11: 19, t. 10. 1690

INDEX - 8
DUTCH / BELGIAN NAMES WITH PORTUGUESE,
KONKANI, MALAYALAM NAMES
AND VOL. & FIG. NUMBER

Dutch/Belgian Name	Portuguese Name	Konkani Name	Malayalam Name	Volume/ Fig./Year
Ginger	*	Ale	Inschi	11: 23-25, t. 12. 1692
Turmeric	*	Alady	Manjella-kua	11: 21, t. 11. 1692
Wilde Ginger	*	Kolinyane	Katou-inschi-kua	11: 27, t.13.1692



K.S. Manilal, Emeritus Professor, Malabar Botanical Garden, Calicut, Kerala prepared the English Edition of *Hortus Malabaricus* with Annotations and Modern Botanical Nomenclature. He has been studying the various aspects of Van Rhee's *Hortus Malabaricus* for the past 35 years. After obtaining Ph.D. degree from the University of Saugar, Prof. Manilal joined the faculty of the University of Kerala in 1964. Later he worked in several Universities and academic institutions such as the University of London, the University of N.Wales (UK), National Museum of Natural History, Washington DC (USA), Royal Botanic Gardens, Kew, Rijksherbarium, Leiden University, the Netherlands. He retired as senior Professor of Botany from the University of Calicut. He has published over 200 research papers and 11 books which include *Botany and History of Hortus Malabaricus* (1980), *An Interpretation of Van Rhee's Hortus Malabaricus* (jointly) (1988).

Price: (For 12 volumes)
Rs. 20,000 (in India)
US \$ 950 (outside India)

VAN RHEEDE'S
HORTUS MALABARICUS
ENGLISH EDITION
VOLUME - 11



Hortus Malabaricus – English Edition (12 volumes) is the translation of the oldest comprehensive printed book on the natural plant wealth of Asia and of the tropics, compiled and published in Latin by Van Rheede during 1678-1693. It contains descriptions and illustrations of 742 plants. It is a rare record of the medicinal plant wealth and traditional medical practices of ancient India. The medicinal properties of the plants, the respective diseases for which they were used for treatment and the modes of treatment as known to the ancient renowned traditional physicians of Malabar (the present state of Kerala) are described in the book. The book also provides much insight into the cultural, social, political, historical and linguistic conditions prevailing in India as well as Kerala at the time and was instrumental in deciding the political history of India and the Netherlands in the 17th century. This English translation of *Hortus Malabaricus* with annotations and modern botanical nomenclature, throws open a vast treasure house of knowledge to scientists, medical practitioners, researchers and historians for further study and practice, 325 years after its original publication in Latin.

ISBN 81-86397-57-4



UNIVERSITY OF KERALA
THIRUVANANTHAPURAM