

VAN RHEEDE'S
HORTUS MALABARICUS
ENGLISH EDITION

With Annotations and Modern Botanical Nomenclature

By
K.S. MANILAL

VOLUME - 10



UNIVERSITY OF KERALA



Hendrik Adriaan Van Rheedee (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. Rheedee 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 Rheedee.

VAN RHEEDE'S
HORTUS MALABARICUS
ENGLISH EDITION

VAN RHEEDE'S
HORTUS MALABARICUS

(MALABAR GARDEN)

ENGLISH EDITION

VOLUME 10



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 Rhee's
HORTUS MALABARICUS
(Malabar Garden)
ENGLISH EDITION
Volume - 10

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 TEN
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 1690.

TO THE MOST GENEROUS NOBLE MAN

D. HENRICO de UTENHOVE,

The Lord of Ameliswaert, in Munnikenland, etc. Assigned with ranks
of dignity of Trajectina Diocese; Military Tribune, also
Vice Governor of the State Sylva Ducen.

Long distances of time and place does not break real friendship. Of this I am witness: your constancy in loving friends does not allow me to doubt about your love to me. Our kinship of birth, much more on partnership in the administration of the college in our Republic, long standing friendship nourished by great religious faith, the common responsibilities we undertook, all this held both of us close together. I am now dwelling far away from there in remote region on earth warmed up by the hot sun. In these parts of the world I live, as sent from there. But even in these circumstances I hold your friendship as most sacred. Indeed even dwelling as I am in the antipodes I very often nourish my mind with the recollection of that friendship. Your image is always before my view. That is a means of tempering the weariness of long and tedious journey, the oppressive cares which I have suffered to be imposed on me for public good and of the Province. As a pledge of my singular and perpetual devotedness to you I send you the tenth part of Hortus Malabaricus.

For cultivating it I spent so much time and energy that persons with taste for elegant things to whom I am under an obligation because of their study of exquisite and delightful things of nature should receive the tenth volume. They will find the tenth volume contains rare specimens unknown and unseen in our part of the globe. I have made a request to our nephew, friend and colleague the most generous and noble D. Domino de Zuylen, etc., to call on you. I have no doubt that this small gift as a testimony of our natural love is not going to be unwelcome. Gifts, provided they are not of great value, are accepted sent by friends living abroad. I pray to God that He may preserve you and your home safe and sound for long time to come, and that He, after I perfectly discharge my official duty of an ambassador, may keep me also in good health. I may have the joy of embracing you in a safe and sound state. In the meantime be persuaded that I, wherever I am, shall be yours.

To Your Most Generous Name

Most attached

HENRICUS VAN RHEDE

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

Sjasmin

FIG. 1



HE branches of this plant are round, dark-green, hairy, woody, provided with a humid (moist) green pith in the middle.

Leaves arise on short, dark green, hairy peduncles, are oblongly cuspidate-heart shaped, serrate, slightly hairy, a little rough, on one side deeply green and shining, on the other of more dilute and light (colour), like those of *Belluren*; with a mid-rib provided with two lateral ribs; of no taste and smell.

Flowers arise in twos, threes, many may be clustered together from above the origin of leaves, on oblong, round, very hairy, green petioles, are five petalled, spread out in level, (horizontally) thickly fleshy, bordering on red-lead (colour), shining on the inside towards the centre and on the outer surface of the petals. The style, emerging from the middle of the thalamus, is fleshy, at definite intervals surrounded by short, slender, red stamens, the heads of which are yellow, at the top provided with a *Penicillus* (brush) of five red filaments, which are provided with red-purple heads; are clasped with a hairy calyx, made of five oblong, cuspidate leaves, which surround the flower tightly

and of five or seven more narrow, dark-green and less oblong ones; without any smell. The buds are conical and reddish.

Green globules follow the flowers: beset with very short hairs, striated to the top with five sutures. In there are more or less fifteen seeds, mutually separated



Fig. 1

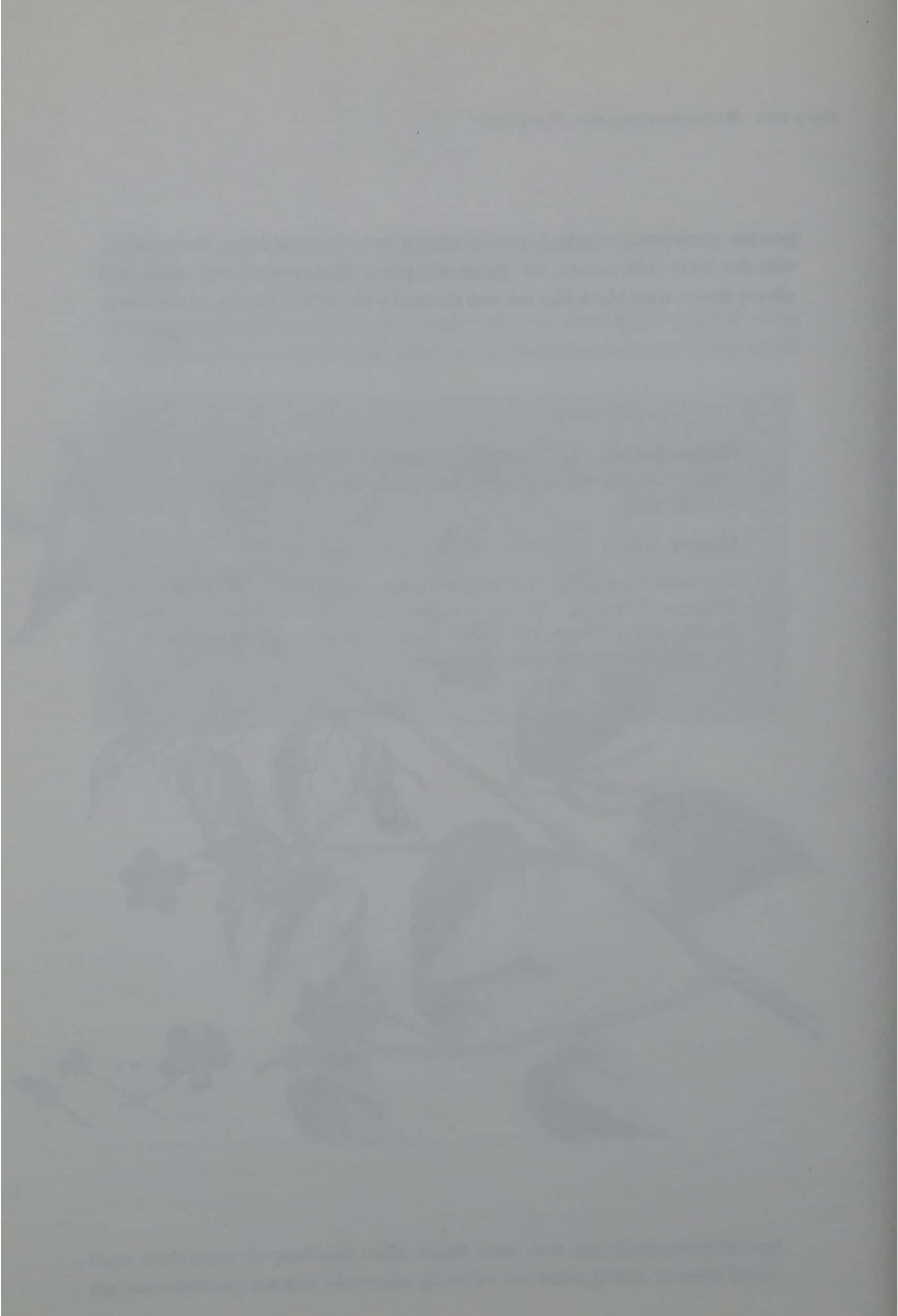
from each other by partition walls, which arise (run out) from parts among the intermediary sutures where the globules are more green, in each locule

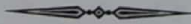
two are contained, of which one is placed below; are oblong, three sided, with the outer side convex, the inner side plane, first covered with white and silvery down; then black like ink and clothed with rather oblong, white down.

Hibiscus hirtus L., Sp. Pl. 694. 1753; Borssum Waalkes, Blumea 14: 75. 1966. -*Hibiscus rosa-malabarica* Ker-Gawl., Bot. Reg. 4: t. 337.1819 [MALVACEAE].

Sjasmin Rheede, Hort. Malab. 10: 1-2, t. 1. 1690.

This name is not in use. No Malayalam script appears on t. 1. The meaning of Sjasmin is not clear. The name suggests jasmine but this seems unlikely since it is said to have no odor. No Malayalam name is currently available. It is cultivated in Malabar for its red flowers.





Uren

FIG. 2



HERE are many species of *Uren*; this is called *Tupu-Kadu* in the language of the Brahmins, grows in sandy soil, is of three or four feet in height. The root is woody, spreading itself wide, is with a light yellow bark. The stems and branches are with a green bark and are beset with rather long, whitish hairs.

The leaves, the petioles of which are round, rather long, hairy, slightly rough, arise on new shoots, which are covered with tender leaves; and are at random cut into three or five lobes, the tender ones not in the same manner, crenate in the margin, beset with hairs on the surface and a bit rough, a bit thick in texture, of dark green colour, of slightly sharp taste. The mid-rib, with the lateral ones stand out on the lower side, striating the upper side.

Flowers arise in short petioles, and indeed above the origin of leaves, are five petalled, of rose colour, of deeper colour towards the claws, transparent because of tenderness, striated in length with veins. The style is thick, round, lightly rosy, and a bit bent, is divided into short, whitish filaments and surrounded here and there with bud-like heads below the tip, emerging with

a thick base from the claws of the leaves. The calyx is five foliate, light green, surrounded by five more narrow, dark green leaves. At the bottom resides the green head, rudiment of fruit, provided at the top with a white bud (head)

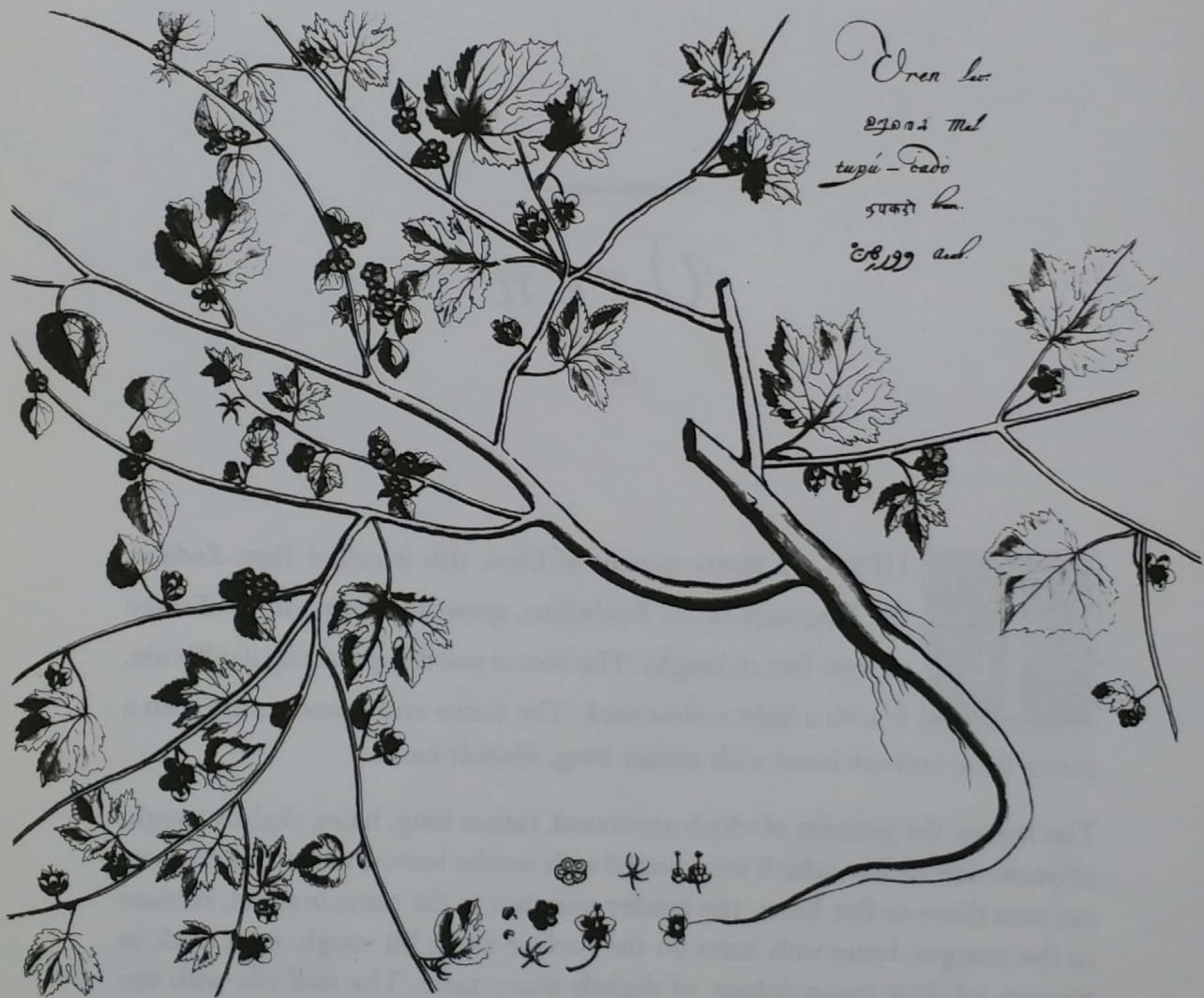


Fig. 2

into which five furrows run, giving out a white filament, which passes through the style as if through a theca.

The fruits are smooth, round heads, separated into five round sides by means of intermediary furrows (markings), covered with rather long spines, which later become rigid and pointed. In each side is contained a single three sided seed, with two sides plane and one round; when ripe turns black.

(Its Uses)

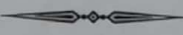
The root is used in the making of oil.

Urena lobata L., Sp. Pl. 692.1753.

Urena lobata subsp. *sinuata* (L.) Borssum Waalkes, Blumea 14: 142. 1966; Manilal & Sivar., Fl. Calicut 46. 1982; Sasidh. & Sivar., Fl. Thrissur 63. 1996; Sivar. & Philip, Fl. Nilambur 96. 1997. - *Urena sinuata* L., Sp. Pl. 692. 1753 [MALVACEAE].

Uren Rheede, Hort. Malab. 10: 3-4, t. 2. 1690.

The name Ooren [Malayalam script on t. 2] is still used. Ooren means that which loosens (?). It occurs throughout Malabar.



Valli-itti-canni

FIG. 3



Is a plant growing on plants of more or less two cubits in height. The root by which it fixes (attaches) itself to the tree is like a round knot, is with a thick, deep-red, rough bark, white and woody inside, of sharp taste. The stems, which arise many from the root, with their branches, are with dark bark, new ones with green bark.

The leaves which are attached to the stems and branches by means of very short or no petioles, in twos, here and there (at random) at nodes; or also solitary outside the nodes, are oblong, the bottom part round and with round margins and there, girded with a white nerve, anteriorly drawn out into a point (tip), thick, dense and solid in texture. The mid-rib stands out on both sides, is very thick, on the lower side of red and shining colour.

Flowers arise here and there on the shoots, nine or ten clustered together, two by two in arrangement, are made up of an oblong round neck, somewhat bent, more narrow towards the calyx, of deep rose colour, for the rest greenish up to the head and as if girded by a green collar, striated in length by five veins, which when loosened and divided, the head and a part of the neck

open themselves into five leaflets, which when opened there appear five red stamens with their long, white or yellow apices (heads), and with these the red, slender style, tipped (capped) at the top.



Fig. 3

Fruits which are attached many together to a common green, and first yellowish petiole, are round and pillar-like in shape, with a plain and broader tip, first dark-green, more dark-green towards the tip, when mature turning red, which tip is provided with a round, red broad navel, is with an eye in the

middle. Within the thick rind is contained a rather large, oblong-round, green seed, smeared with a viscous mucus and covered with the lower rind of the fruit.

(Its Uses)

The rind of the fruits crushed with washings of rice, makes swollen legs thin.

Dendrophthoe falcata (L.f.) Ettingsh., Denkschr. K. Akad. Wissensch., Math.-Naturwiss. Cl. 32: 52. 1872; Danser, Bull. Jard. Bot. Buitenzorg ser. 3, 10: 308. 1929; Manilal & Sivar., Fl. Calicut 252. 1982; Manilal, Fl. Silent Valley 239. 1988; Sasidh. & Sivar., Fl. Thrissur 385. 1996; Sivar. & Philip, Fl. Nilambur 591. 1997. - *Loranthus falcatus* L.f., Suppl. Pl. 211. 1782. *Loranthus longiflorus* Desr. in Lam., Encycl. 3: 598. 1792 [LORANTHACEAE].

Valli-itti-canni Rheede, Hort. Malab. 10: 5[not 7!], t. 4. 1690.

The name Velutha ithikkanni [Malayalam script on t. 4] is not used; velutha means white and ithikkanni means a parasite perched on host [trees], generally referring to *Loranthaceae*. The plant is now called simply as Ithikkanni or Chuvannaithikkanni; chuvanna meaning red (alluding to the red flowers). It occurs throughout Malabar.

The name in Malayalam script, Velutha ithikanni, is perhaps written erroneously for valiya (large) ithikanni. This is a comparatively large parasite.

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

(part 1)

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



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



Belutta-itti-canni

FIG. 4



HIS also grows on trees; differs from the first in flowers and leaves; for, the leaves are smaller and more narrow, still narrower towards the petiole, anteriorly cuspidate, dense in texture, with a more level surface, of dark-green colour; the few ribs obscurely run down the lower part.

Flowers are attached here and there to the nodes of shoots by means of short reddish peduncles, are composed of a green neck, later turning red towards the bottom, with a more narrow, oblong head, which is first green, then turns white more and more, finally becomes wholly white, which having been split into five filaments or narrow leaflets, give out five red stamens, provided with long, erect, green-yellow apices and with the slender style knobbed at the top, turns red; the flowers split themselves first on the inside towards the neck and appear as windowed with the head and the bottom part of the neck not yet open; from a light touch on the head (thalamus) they unfold and spread out into leaves with a force, and they curve forcefully towards the outside in a ring-like manner and thus they belong to the mimosas.

The fruits and oblong-round berries, first green, and then when mature turning purple-red, equipped with an oblong, purple-red point (tip) at the top, and there they are viscous, contain in themselves an oblong-round, white seed, anteriorly giving out an oblong, dark-green eye, smeared on the outside with viscid mucus.

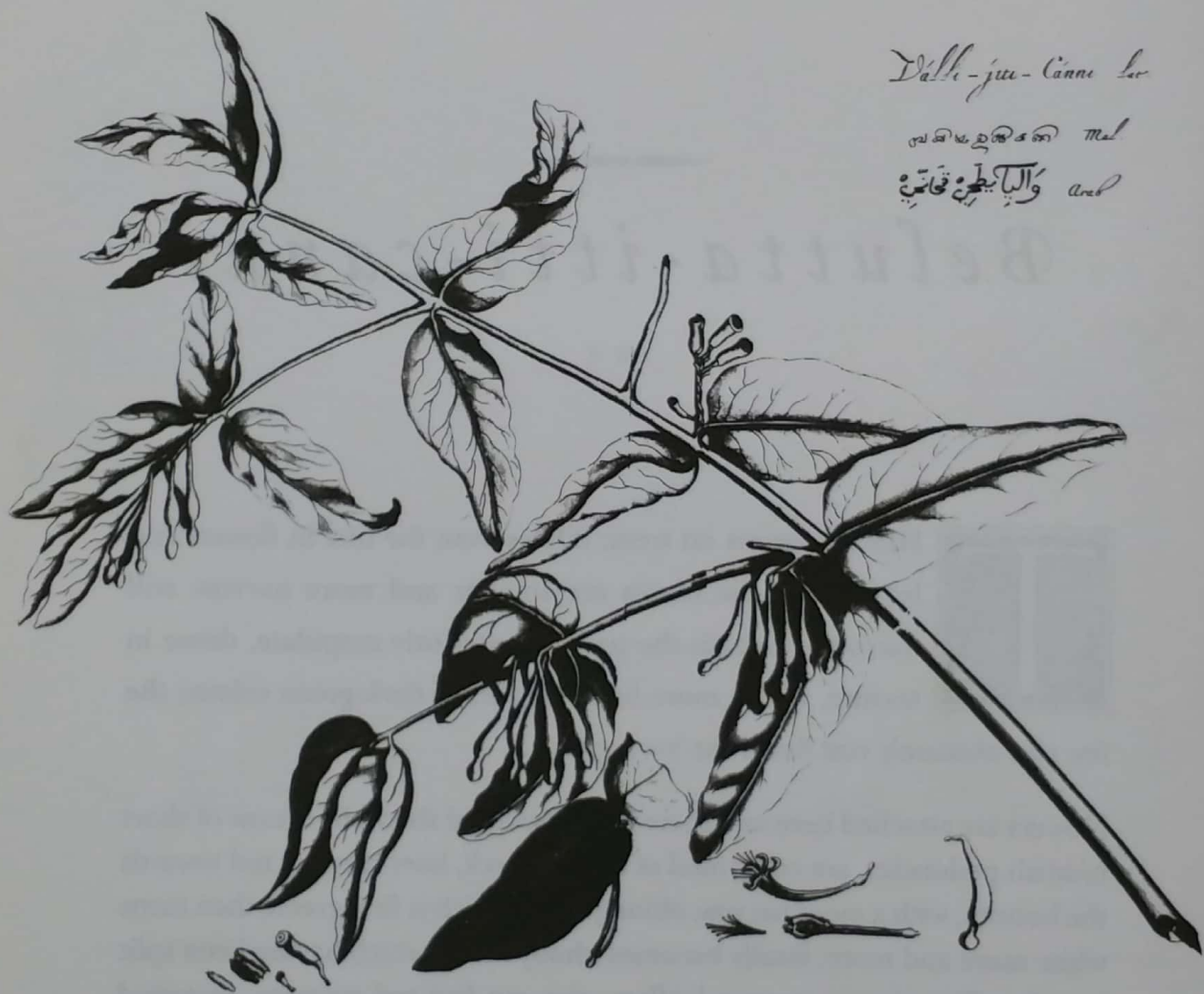


Fig. 4

(Its Uses)

This plant, crushed and boiled in rice-water, cures spells (catches), if the natives are to be believed.

Helicanthes elasticus (Descr.) Danser in Verh. Kon. Akad. Wetensch. Afd. Natuurk. Tweede Sect 2. 29: 55. 1933; Manilal & Sivar., Fl. Calicut 253. 1982; Manilal, Fl. Silent Valley 239. 1988; Sasidh. & Sivar., Fl. Thrissur 385. 1996. - *Loranthus elasticus* Desr. in Lam., Encycl. 3: 599. 1792. *Dendrophthoe elastica* (Descr.) Danser, Bull. Jard. Bot. Buitenzorg ser. 3, 10: 308. 1929 [LORANTHACEAE].

Velluta-itti-canni Rheede, Hort. Malab. 10: 7[not 5!], t. 3. 1690.

The name Valia ithikkanni [Malayalam script on t. 3] is sometimes used but not widely; valia means large (velutta means white, with reference to flowers which finally become wholly white), Ithikkanni means a parasite. It occurs throughout Malabar.

The name in Malayalam script, valia ithikanni is perhaps written erroneously. In Roman script the name written in the text is V(b)elutha ithikanni, while alongside the illustration it is written as valia ithikanni. It appears that the names in t.2 and t. 3 became interchanged. Both these plants, however, are now called simply as ithikanni.

The first part of the history of the
the second part of the history of the
the third part of the history of the
the fourth part of the history of the
the fifth part of the history of the
the sixth part of the history of the
the seventh part of the history of the
the eighth part of the history of the
the ninth part of the history of the
the tenth part of the history of the
the eleventh part of the history of the
the twelfth part of the history of the
the thirteenth part of the history of the
the fourteenth part of the history of the
the fifteenth part of the history of the
the sixteenth part of the history of the
the seventeenth part of the history of the
the eighteenth part of the history of the
the nineteenth part of the history of the
the twentieth part of the history of the
the twenty-first part of the history of the
the twenty-second part of the history of the
the twenty-third part of the history of the
the twenty-fourth part of the history of the
the twenty-fifth part of the history of the
the twenty-sixth part of the history of the
the twenty-seventh part of the history of the
the twenty-eighth part of the history of the
the twenty-ninth part of the history of the
the thirtieth part of the history of the
the thirty-first part of the history of the
the thirty-second part of the history of the
the thirty-third part of the history of the
the thirty-fourth part of the history of the
the thirty-fifth part of the history of the
the thirty-sixth part of the history of the
the thirty-seventh part of the history of the
the thirty-eighth part of the history of the
the thirty-ninth part of the history of the
the fortieth part of the history of the
the forty-first part of the history of the
the forty-second part of the history of the
the forty-third part of the history of the
the forty-fourth part of the history of the
the forty-fifth part of the history of the
the forty-sixth part of the history of the
the forty-seventh part of the history of the
the forty-eighth part of the history of the
the forty-ninth part of the history of the
the fiftieth part of the history of the
the fifty-first part of the history of the
the fifty-second part of the history of the
the fifty-third part of the history of the
the fifty-fourth part of the history of the
the fifty-fifth part of the history of the
the fifty-sixth part of the history of the
the fifty-seventh part of the history of the
the fifty-eighth part of the history of the
the fifty-ninth part of the history of the
the sixtieth part of the history of the
the sixty-first part of the history of the
the sixty-second part of the history of the
the sixty-third part of the history of the
the sixty-fourth part of the history of the
the sixty-fifth part of the history of the
the sixty-sixth part of the history of the
the sixty-seventh part of the history of the
the sixty-eighth part of the history of the
the sixty-ninth part of the history of the
the seventieth part of the history of the
the seventy-first part of the history of the
the seventy-second part of the history of the
the seventy-third part of the history of the
the seventy-fourth part of the history of the
the seventy-fifth part of the history of the
the seventy-sixth part of the history of the
the seventy-seventh part of the history of the
the seventy-eighth part of the history of the
the seventy-ninth part of the history of the
the eightieth part of the history of the
the eighty-first part of the history of the
the eighty-second part of the history of the
the eighty-third part of the history of the
the eighty-fourth part of the history of the
the eighty-fifth part of the history of the
the eighty-sixth part of the history of the
the eighty-seventh part of the history of the
the eighty-eighth part of the history of the
the eighty-ninth part of the history of the
the ninetieth part of the history of the
the ninety-first part of the history of the
the ninety-second part of the history of the
the ninety-third part of the history of the
the ninety-fourth part of the history of the
the ninety-fifth part of the history of the
the ninety-sixth part of the history of the
the ninety-seventh part of the history of the
the ninety-eighth part of the history of the
the ninety-ninth part of the history of the
the hundredth part of the history of the





Kanneli-Itti-Kanni

FIG. 5



ANNELI, in another name *Kasjan*, is a tree growing in rocky places; a herb is seen creeping on it, which they call *Kanneli-Itti-Canni*; the branches of which are ash-grey, with white wood, more younger (tender) ones green.

The leaves arise in pairs, on small (short) green peduncles, are oblong-round, thick, and solid with the surface plain and glabrous; the interior ones somewhat closed; the rib stands out somewhat on both sides.

The flowers are oblong buds, four petalled, their neck is oblong, thick, turning beautifully blood red wholly. In the mouth are seen four red and slender stamens, in the inner part, equipped with white, erect apex on the top, inserted among the claws of the leaves; down below is seen a plain, green head, from the top of which emerges a white style, reddish towards the top and provided with a knob. The calyx is round, greenish, tightly clasping the neck of the flower.

The fruits are round, and a bit oblong, anteriorly more narrow, with a plane head at the top, first green, then when mature, dark-red, tinged with a white,

viscid, sticking milk. Besides, it is to be noted that this plant, with its branches creeping over the branches of *Kasjan*, adheres and unites with it so tightly, that, as if, they melt mutually in each other to such an extend that in one and



Fig. 5

the same tree two kinds of flowers and fruits are seen, namely that of the tree and of this small plant. The leaves of this very tree are with an oblong narrow tip, thick and solid in texture. Fruits in racemes, are round and yellowish, provided with a deep navel at the top, contains in themselves a round, rather large seed, the kernel of which is green.

(Its Uses)

From the leaves is prepared a bath, relieving swellings of legs, which the credulity of this people attribute to the powers of magic (charms); the bark prepared into a smear in rice-water, gives the same effect.

Helixanthera wallichiana (Schult.) Danser, Bull. Jard. Bot. Buitenzorg ser. 3, 10: 319. 1929; Manilal & Sivar., Fl. Calicut 252. 1982; Manilal, Fl. Silent Valley 240. 1988; Sasidh. & Sivar., Fl. Thrissur 386. 1996; Sivar. & Philip, Fl. Nilambur 593. 1997. - *Loranthus polystachyus* Wall. in Roxb., Fl. Ind. 2: 217. 1824 (*'polystachius'*), non Ruiz & Pavón 1794. *Loranthus wallichianus* Schult. in Roem. & Schult., Syst. Veg. 7: 100. 1829. *Loranthus kanneli* Schult. in Roem. & Schult., Syst. Veg. 7: 153 (Obs. sub *L. globosus* Roxb.). 1829 [LORANTHACEAE].

Kanneli-itti-canni Rheede, Hort. Malab. 10: 9, t. 5. 1690.

The name Kanell mel ithikkanni [Malayalam script on t. 5] is not used; kanelli refers to trees, mel means on or upon and ithikkanni means a parasite. Kanelli mel itticanni means a parasitic creeper (itticanni) growing on kanelli (fruit trees). No Malayalam name is currently available. It occurs in sacred groves [forests protected on religious grounds] and along forest margins throughout Malabar.





M a n g a - n a r i

FIG. 6



THE Brahmins call it *Ambuli*, it is a small plant, one cubit in height, liking sandy and watery soil, creeping over the earth, and giving out roots, by means of which it attaches itself, from nodes, which (roots) are long, slender and tender fibres, covered and interwoven with hairs, first of white and then of dark red colour.

The shoots are marked out into joints by means of nodes, are very aqueous, tender, spongy, fistular, light green, giving out erect slender shoot-lets here and there from the nodes, in each node, surrounded in a winged manner, by three leaves or also by two mutually decussate ones; which leaves are oblong, bent downwards, and there somewhat closed, thick and rigid in texture, incised in the margin with sharp, small teeth. The mid-rib with other ribs are conspicuous only on the upper side.

Flowers arise on the upper part of the horizontal shoots from nodes above the origin of leaves on slender, short, erect, slight green and also reddish petioles, in threes from nodes which (flowers) are with three leaves, in twos from those which are with two leaves, also winged and placed towards the

shoot, are monopetalous, irregular, dark red, slightly purplish, chiefly in the neck, for the rest light red and whitish, on the outside provided with minute hairs, in the inside beset with rather long, white hairs. In these are four white stamens, provided with white heads, bent towards each other in an arched



Fig. 6

manner in twos, inserted below to the neck, the style is white, provided with a plane knob, emerging from a green, seed-bearing globule. The calyx is five-foliate and red.

Seed-bearing globules are oblong-round, with five sides, separated by furrows; in these are contained numerous seeds like that of fishes, which up to now

joined together, are light green; whitish, and transparent, with age becoming more white, but when dry of dark colour.

The whole plant, chiefly the leaves and buds are of keen, sweet and aromatic smell, smacking somewhat the smell of green *pepper*, the taste is slightly bitter. In the leaves and shoots also the smell of mango is perceived, whence it gets the name *Manga-Nari*.

(Its Uses)

When given in decoction, is against fever; in sour milk, relieves giddiness.

Limnophila aromatica (Lam.) Merr., Interpr. Rumph. Herb. Amboin. 466. 1917; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 430. 1981. -*Ambulia aromatica* Lam., Encycl. 1: 128. 1783. *Limnophila gratissima* Bl., Bijdr. 749. 1826 ("*Lymnophila*") [SCROPHULARIACEAE].

Manga-nari Rheede, Hort. Malab. 10: 11-12, t. 6. 1690.

The name Manganari [Malayalam script on t. 6] is still used; manga means mango and nari means to smell, i.e., smelling like a mango. Rheede noted that in the plant the smell of mango is perceived; and Cramer (l.c.) mentioned a turpentine smell. It occurs in abandoned paddy fields and similar wet places throughout Malabar.

The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1863. It is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The Letter

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.

The letter is a very long one, and it covers a great deal of ground. It begins with a statement of the President's views on the state of the Union, and then goes on to discuss the various measures that he has taken to deal with the crisis.

The letter is a very important document, as it is the first time that the President has written to the Congress since the beginning of his administration.



Ana-schovadi

FIG. 7



NA SCHOVADI, as if you call it the foot-print of an elephant, for it is so strong (prevalent) among the Malabaris; for the Brahmins *Astipada*, which sounds the same, it is so called, because the leaves spread themselves over the earth; or *Godjuva*, that means, according to the same people, the tongue of cow, which name it gets because of similarity with a small plant growing in sandy and wet soils, especially in shady places.

The root is short, rather hard, woody, surrounded by hairy rings, giving out from the side, very many slender and white fibres, in which is a slender and woody filament, of slightly sharp and bitter taste.

The leaves come out from the root, on short, smooth, light green petioles, spread out horizontally on the ground in all directions, are oblong-narrow, with an obtuse tip, on one side with more or less round margin, curved (bent) than in the other (side); slightly incised in the margin, with a lightly rough surface, beset with hirsute hairs, are curled, here and there contracted with wrinkles, thick; of light bitter taste. The rib somewhat stands out on the

upper part which is smooth, dark-green or date-red; on the lower side stands out much, where it is round and green-whitish.

Ana-schoradi L.

ആനശോരടി - mal.

كَنْعَجِيَّوَانِي Arab.

गोसवा Hra.



Fig. 7

Flowers arise in woody, green, dark-red and hairy shoots, which arise among the leaves from the root, and are attached to rigid petioles, coming out from the tips of shoots and are at times covered towards the origin with short oblong-narrow leaves, are clasped with spiny heads which are found on the tip of petioles, supported by three cuspidate, erect, hairy leaves closed towards

the inside; for the rest are small, five petalled, erect, emerging from spiked calyces; of first from bluish or purple-red, next white yellowish; without smell. In the middle is the slender style, bifid on the upper part, coming out from a case.

The seeds which along with the flowers arise in capsules or rather spiked heads, are oblong-round and slender, with the lower part by which they are attached to the mouth of the calyx or the base of the head, cuspidate, have an eye at the top; to which the flowers with their calyces are attached and from it they give out five white slender stamens; and are first white, then yellowish, finally ash-red. Flowers once every year, almost in December, grows only during the rainy season, rarely in summer except in wet, irrigated and shady places.

It is propagated not only by its seed, but also from round, thick, hard and woody appendage, which grows adnate to the root.

(Its Uses)

Crushed with *cumin* in sour milk and taken, stops the flow of stomach especially dysentery, colic of intestines and swellings of stomach; with *sugar* added, it is an anti-melancholic. Cooked leaves are given with effect to those who are suffering from spilling of blood; a decoction from the root and leaves removes dysuria (difficulty or pain in passing urine).

Elephantopus scaber L., Sp. Pl. 814. 1753; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 135. 1980; Manilal & Sivar., Fl. Calicut 149. 1982; Sasidh. & Sivar., Fl. Thrissur 249. 1996; Sivar. & Philip, Fl. Nilambur 370. 1997 [ASTERACEAE].

Ana-schovadi Rheede, Hort. Malab. 10: 13-14, t. 7. 1690.

The name Aanachuvadi [Malayalam script on t. 7] is still used; ana means elephant and chuvadu means footprint, an allusion to the rosettes of leaves looking like an elephant's footprint. It grows in the uplands of Malabar.



Tumba-codiveli

FIG. 8



ACCORDING to the Brahmins *Davo Citroco*, is a small plant of two or three feet, growing in sandy soil. The root is yellow-dark, formed or capillary fibres, stinging and lacerating the tongue, but less like those of *Schetti-Codiveli*. The stalks and shoots are green, angular, striated, striated with veins, separated into nodes.

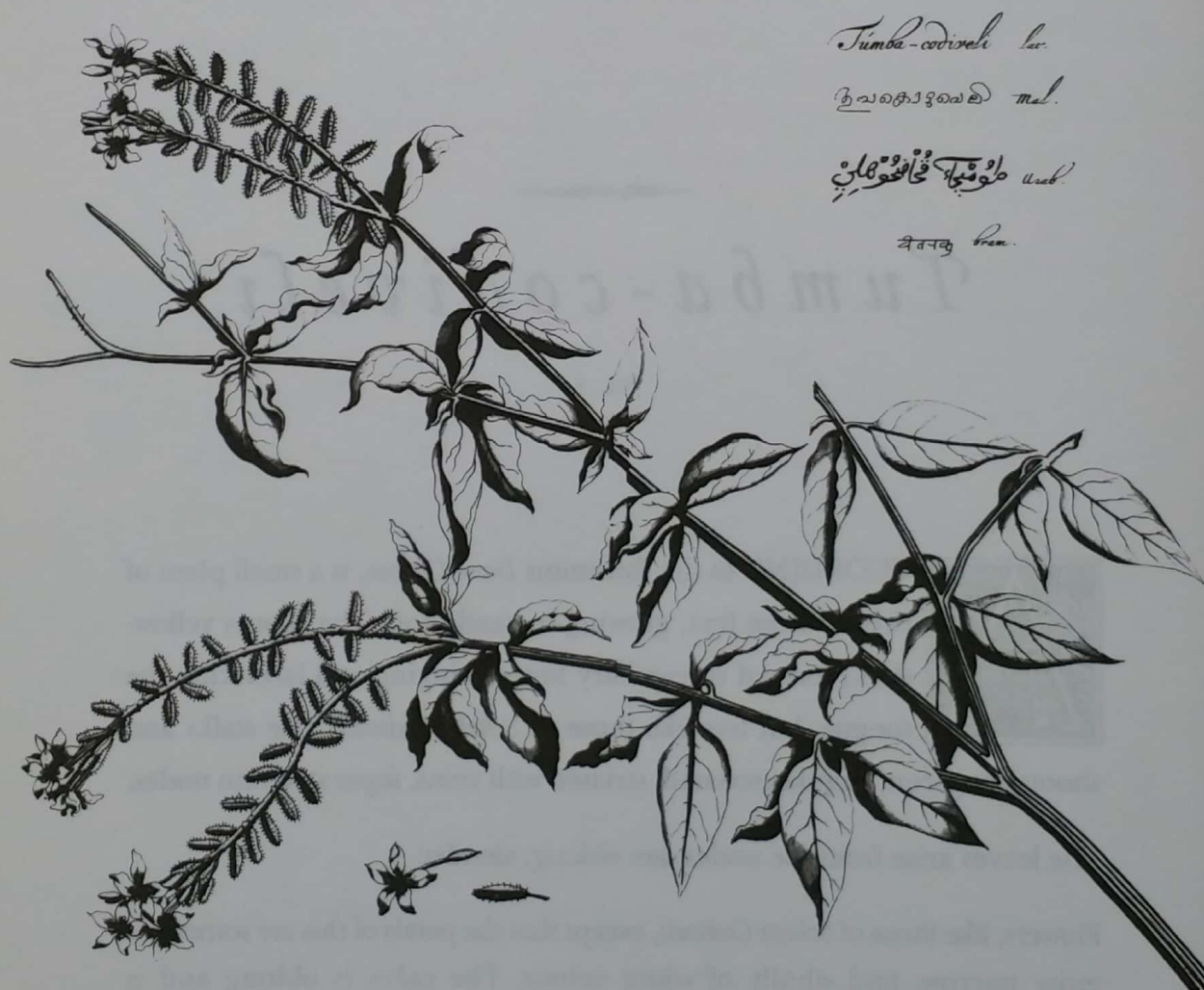
The leaves arise from the nodes, are oblong, slender.

Flowers, like those of *Schetti Codiveli*, except that the petals of this are somewhat more narrow, and wholly of white colour. The calyx is oblong and is surrounded by small stamens which bear red buds (knobs) at the top, of green colour, towards the lower part girded by a dark-green, cuspidate leaf, on the lower side beset with small, erect and studded (glandular) hairs.

The seeds like those of the preceding Table. Flowers the whole year, chiefly during the rainy season.

(Its Uses)

The root boiled in water is employed for fomentation for watery vesicles and pustules which arise below the feet.



Tumba-codiveli *lee.*

தும்பகோடிலி *mal.*

طونجا كوديلي *Arab.*

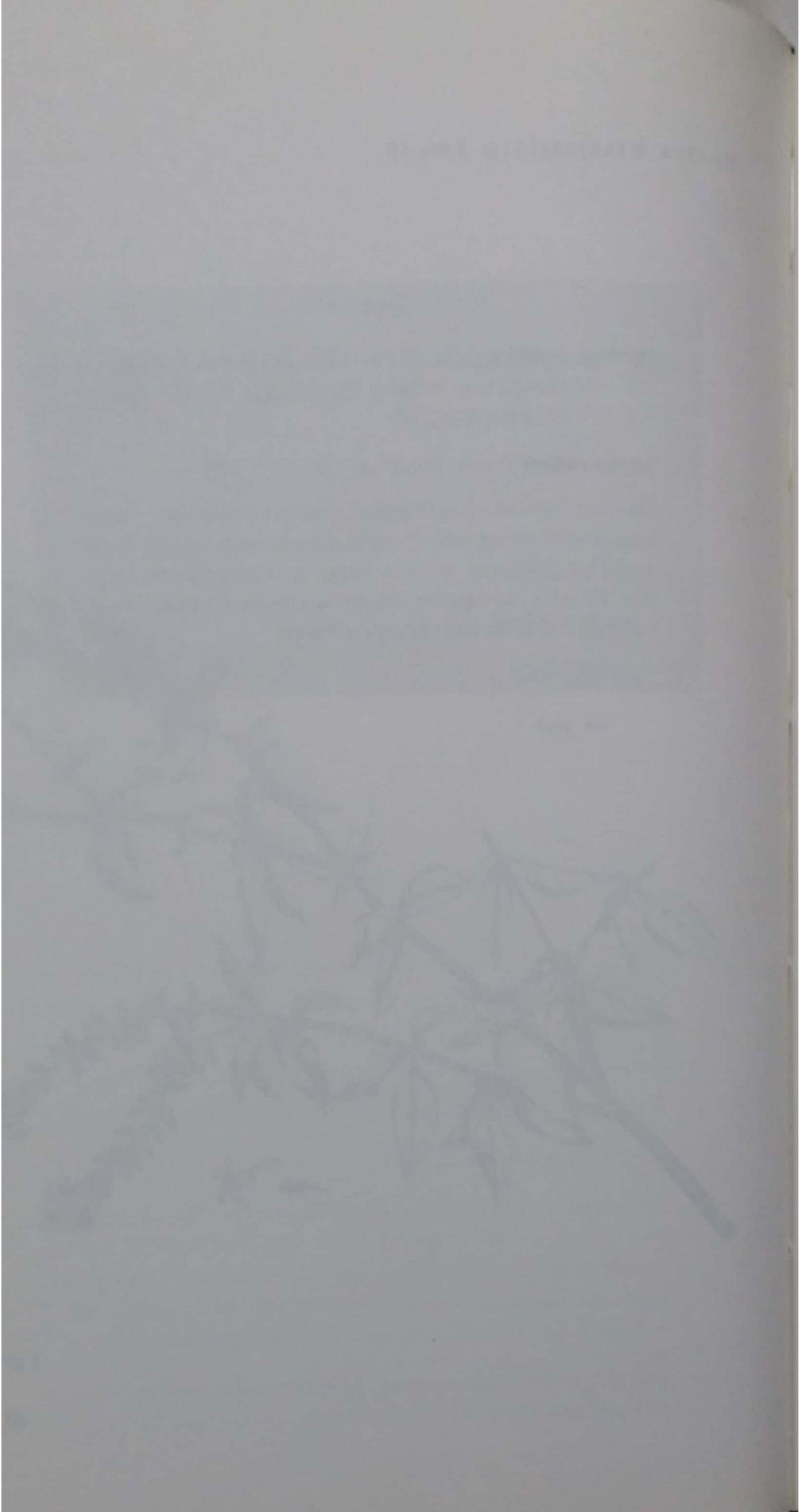
தீவக *brah.*

Fig. 8

Plumbago zeylanica L., Sp. Pl. 151. 1753; Van Steenis, Fl. Males. I, 4: 109. 1949; Manilal & Sivar., Fl. Calicut 156. 1982; Sivar. & Philip, Fl. Nilambur 389. 1997 [PLUMBAGINACEAE].

Tumba-codiveli Rheede, Hort. Malab. 10: 15, t. 8. 1690.

The name Thumbakkodiveli [Malayalam script on t. 8] is still used; thumba indicates white (by extension of original name for white-flowered *Leucas aspera*) and kodi is twig, and veli is hedge, i.e., a white-flowered hedge plant. Kodiveli is *Plumbago*. It is cultivated as a medicinal plant and occurs (escaped?) in disturbed places throughout Malabar.





Schetti-codiveli

FIG. 9



HIS plant is called *Tambido-Citroco* by the Brahmins, is of four or five feet in height, growing in sandy soil. The root is fibrous, yellow-dark, sharply stinging and lacerating the tongue. The stalks and shoots are round, green, striated in length by veins.

The leaves arise here and there in the shoots on short, pale, petioles, inwardly furrowed and reddish, are oblong-round, anteriorly drawn into a narrow tip, very slender, with a smooth surface, of dark-green colour on the upper surface, on the lower of clear colour, with the leaves turning red while tender, yellowish in older ones, with the sides standing out on both sides, leaving a margin with a broad interval (space). The leaves and so also the shoots sting the tongue, but less than the root.

Flowers are attached to the upper part of the shoots here and there with the space of one span, either transversely or erect, or spread out, are five petalled, coral-red, oblong-round, more narrow on the lower part, slender, on the lower side striate with a single shining rib, which somewhat stands out beyond the margin with a tip; attached by means of oblong, somewhat striated and

coral-red peduncle to an oblong, narrow, at times red calyx, which is surrounded by short, transverse stamens which bear small red and whitish knobs and is girded (surrounded) by three short, cuspidate, glabrous leaflets;

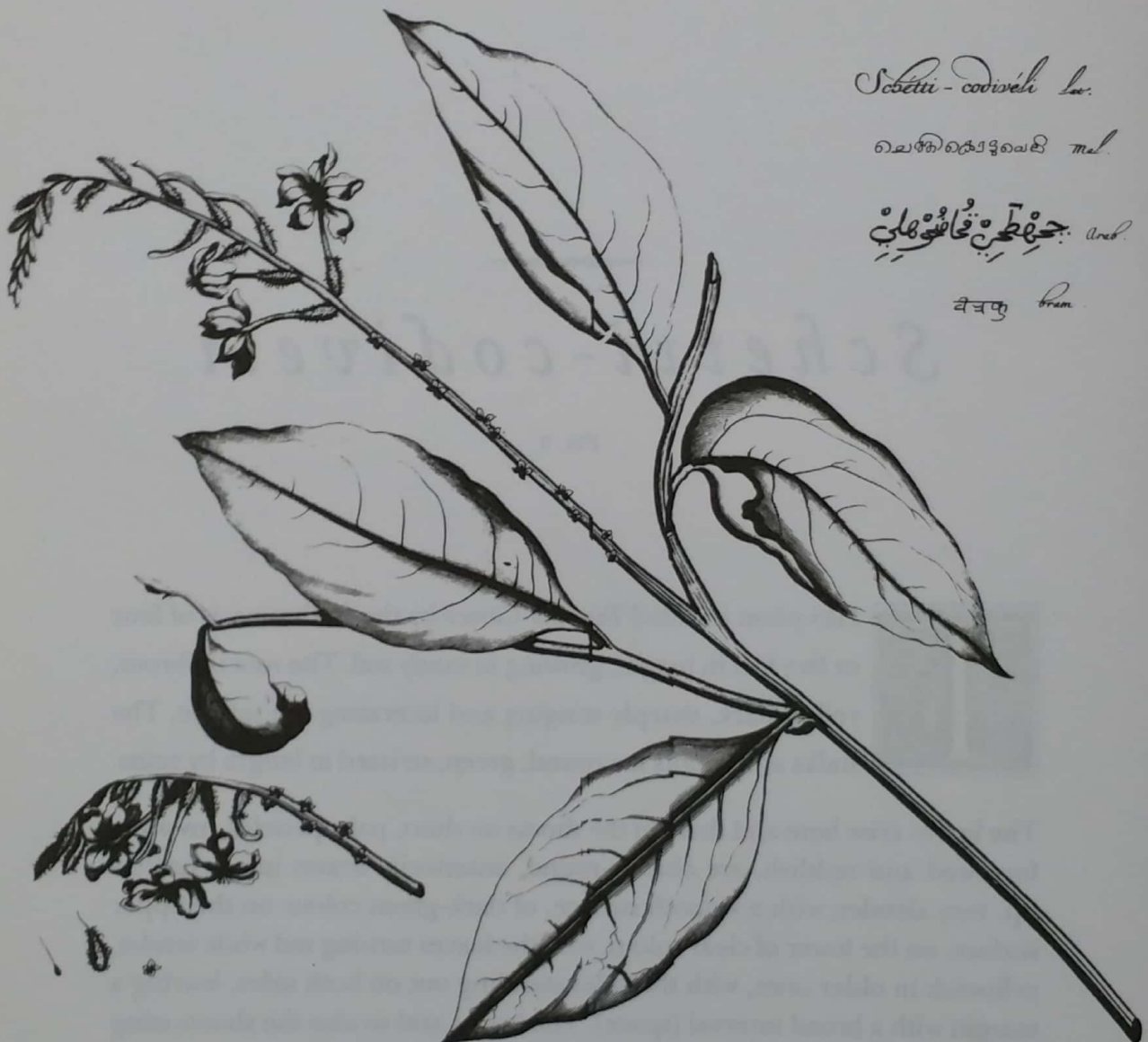


Fig. 9

without any smell. In these stand out five slender, from red to white stamens, from the upper orifice of the foot, with erect bluish purple apices: among these arises, a slender and whitish style from the calyx, on the upper part splitting itself into five small filaments.

The seeds lie hidden in oblong-round spikes, which are striated in length by means of five ribs, and are contained in oblong calyces when the flowers fall down, one in each one, the shape of which is oblong-round, first green, then black. Flowers the whole year, chiefly during the rainy season.

(Its Uses)

The root crushed and given in hot water, helps in cold fever, so also if placed above the arteries; when taken in sour milk, it helps in dysentery.

Plumbago indica L. in Stickman, Herb. Amboin. 24. 1754; Van Steenis, Fl. Males. I, 4: 111. 1949; Sivar. & Philip, Fl. Nilambur 388. 1997. -*Plumbago rosea* L., Sp. Pl. ed. 2, 215. 1762, nom. illeg. (incl. type of *Plumbago indica* L. 1754). *Thela coccinea* Lour., Fl. Cochinch. 119. 1790. *Plumbago coccinea* Salisb., Prodr. 122. 1796, nom. illeg. (incl. type of *Plumbago indica* L. 1754) [PLUMBAGINACEAE].

Schetti-codiveli Rheede, Hort. Malab. 10: 17-18, t. 9. 1690.

The name Chetthikodiveli [Malayalam script on t. 9] is still used; chetthi refers to *Ixora coccinea*, implying red (coral red flowers), kodi is twig and veli is hedge. Codiveli is *Plumbago*, or implies a hedge plant. It is cultivated as a medicinal plant and occurs (escaped?) in disturbed places throughout Malabar.

THE UNIVERSITY OF CHICAGO

It is a pleasure to have you here today. The
University of Chicago is a place where
the best minds in the world come to
study and to work. We are proud to have
you as one of our students.

(and) all

The University of Chicago is a place where
the best minds in the world come to
study and to work. We are proud to have
you as one of our students.

The University of Chicago is a place where
the best minds in the world come to
study and to work. We are proud to have
you as one of our students.

The University of Chicago is a place where
the best minds in the world come to
study and to work. We are proud to have
you as one of our students.



Schada-veli-kelangu

FIG. 10



CHADA-VELI-KELANGU; according to Brahmins *Sasara-Mulli*, is a plant growing in sandy soil, and binding (twining) itself by means of its shoots.

The white root is in the manner of round nodes, from which many small roots hang like tails, to the length of two spans, towards the tips, of fibrous slenderness, in the middle more thick, with aqueous and whitish flesh, provided inside with a woody and slender filament, of aqueous and slightly sharp taste. The stalk, with its horizontal shoots, is slender, woody, green, round, glabrous, rigid, equipped with very many sharp, downwardly bent spines.

The leaves in angular, slender, green stalk-lets, which come out above the spines from the stalk or its shoot-lets, arise in twos, threes, fours or clustered together, and are attached to them horizontally, are small, oblong, very narrow, thick, thin towards the margins, somewhat bent towards the tip of the shoot-lets to which they are attached, are rigid, with a glabrous surface, provided with a vein in the middle, which swells on one side.

The fruits are three sided berries, formed of three round globules tightly united, of which one or two are bigger, first dark green and shining, then reddish, and contain in each globule or side one round seed, first white and transparent, then with a very black rind, not shining. The kernel is white. Flowers once every year almost in November.

(Its Uses)

Roots mitigate the heat of liver notably, stops the boiling of blood, weakens the sharpness (pungency) of bile, drives away melancholy, cheers up the heart, and pickled with *sugar* by the natives, so also in vinegar to promote appetite. The juice of the root pressed out and drunk, sedates burning of chest and hot fever; does good also in giddiness if given with *sugar*; cooked with oil and employed for smearing the head, does good in whatever skin disease, arising from hot cause; a decoction of the root with oil, mitigates pains due to gout, if the affected part is smeared with it; leaves fried in oil and reduced to the form of plasma, is usefully placed over vesicles which arise in burnt parts.

Asparagus racemosus Willd., Sp. Pl. 2: 152. 1799; Jessop in Fl. Males. I, 9: 216. 1979; Manilal & Sivar., Fl. Calicut 293. 1982; Manilal, Fl. Silent Valley 318. 1988; Sasidh. & Sivar., Fl. Thrissur 470. 1996; Sivar. & Philip, Fl. Nilambur 727. 1997 [LILIACEAE].

Schada-veli-kelangu Rheede, Hort. Malab. 10: 19-20, t. 10. 1690.

The Chathaverikizhengu [Malayalam script on t. 10] is still used; chatham (from shatham) means hundred, ver means root, and kizhengu means; tuber. Shatha-veri alludes to the presence of the many small roots [hanging like tails!]. It occurs throughout Malabar.

2. The Role of the Auditor

The second part of the document focuses on the role of the auditor. It describes the various responsibilities of the auditor, including the examination of financial statements, the assessment of internal controls, and the provision of an independent opinion on the fairness of the financial information. The document also discusses the importance of the auditor's independence and the need for the auditor to maintain a high level of professional skepticism throughout the audit process.

3. The Importance of Internal Controls

The final part of the document provides a summary of the key points discussed. It reiterates the importance of accurate record-keeping, the role of the auditor, and the significance of internal controls. The document concludes by stating that these three elements are essential for the effective functioning of the financial system and for the achievement of the organization's goals.



Coluppa

FIG. 11



IN the language of the Brahmins *Coipa*, is a small plant creeping over the earth or in the bottom of water in a zig-zag way, raising (erecting) itself to a foot and a half. The roots which arise from the lower joints of the stalk are fibrous and capillary, first whitish then turning red; of no taste or if they grow in salt water, of salty taste. The stalks are round, aqueous, green, slender, knotted, (nodded) giving out at random two horizontal shoot-lets from the joints.

Leaves arise from the nodes of the stalks in twos and are attached to them, obliquely opposite to each other in a mutual order, are small, oblong-narrow, somewhat curved in a winged fashion, are thick, dense and soft. The mid-rib stands out on both sides.

Flowers arise compactly in spikes on small, short petioles, resembling round or oblong heads, which are closely attached to the joints of stalks. The spikes are small, which open themselves in a star-like manner into five oblong-cuspidate petals, white in colour, turning green towards the thalamus. In

these are three stamens with their own heads, and a green rudiment of the seed-bearing capsule; of no smell.

The capsules themselves are smooth and compressed, formed of petals of flowers, which after the opening close themselves, and are mutually placed in the manner of a shield, giving the shape of a heart, attached to the middle

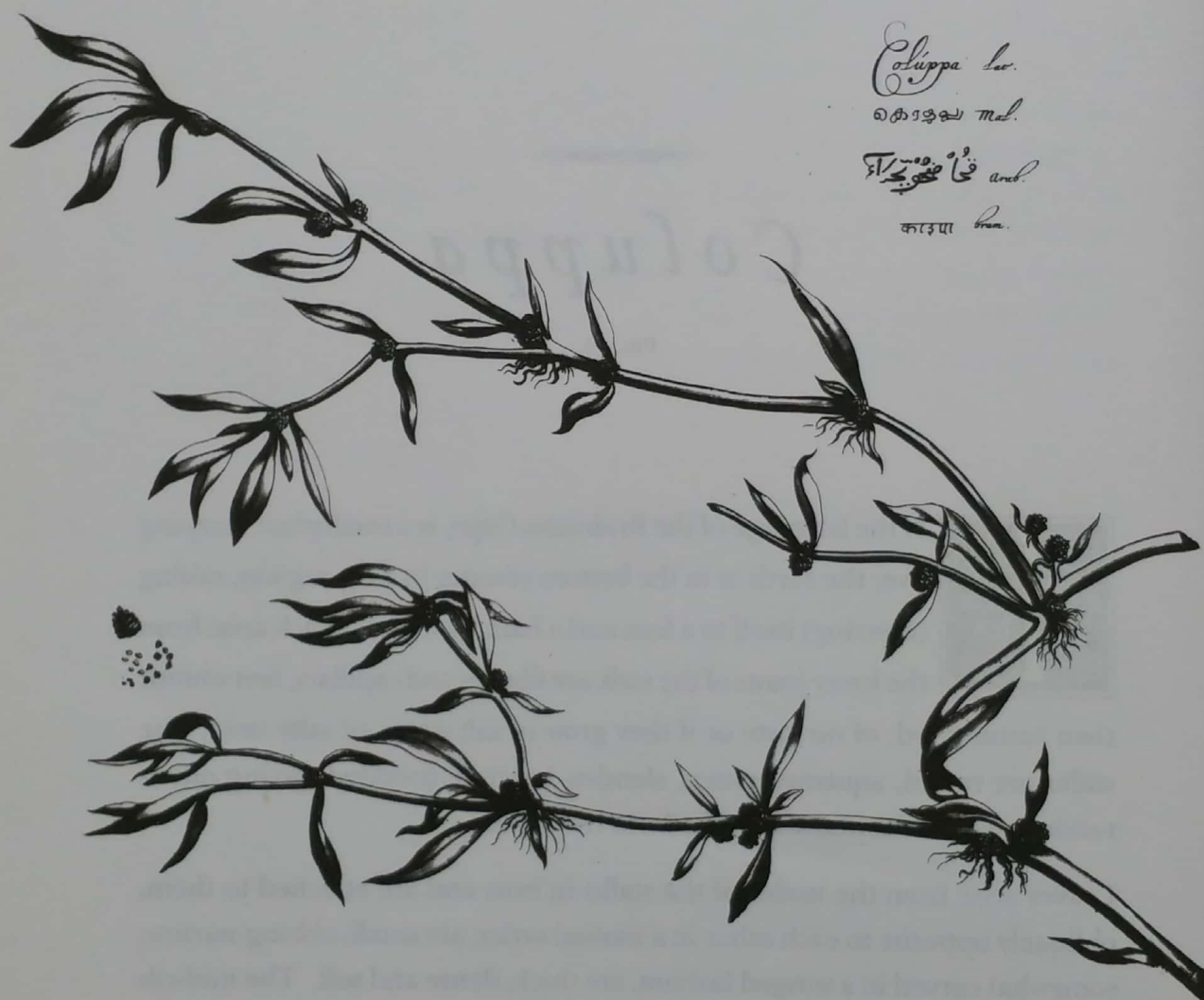


Fig. 11

of the head with its pointed style, white and yellowish in colour: in each is contained a single, small, plain-round seed, first red, then blue, dark, having in the middle a transparent eye.

(Its Uses)

Crushed and smeared on head, relieves its pains; taken with a bit of butter, rose water, and *Muschat* helps in dispersing gas; the juice pressed out and drunk with warm water, removes stomach ache and gas. The root crushed, mixed with *cumin* and *sugar* and according to the nature of the sickness taken either with milk or with water of Indian nut, or sour milk, helps chiefly in the conservation or restoration of power (virility).

Alternanthera sessilis (L.) R. Br. ex DC., Cat. Hort. Monsp. 77.1813; Townsend in Dassan., Rev. Handb. Fl. Ceylon 1: 49. 1980; Mears, Taxon 28: 89.1980; Manilal & Sivar., Fl. Calicut 245. 1982; Sivar. & Philip, Fl. Nilambur 559. 1997. -*Gomphrena sessilis* L., Sp. Pl. 225. 753. *Illecebrum sessile* (L.) L., Sp. Pl. ed. 2, 300. 1762. *Alternanthera triandra* Lam., Encycl. 1: 95.1783 [AMARANTHACEAE].

Coluppa Rheede, Hort. Malab. 10: 21-22, t. 11.1690.

The name Kozhuppa [Malayalam script on t. 11] is still used for this species. Kozhu [from kozhuthathu] means fat and thick, a reference to its leaves. It occurs throughout Malabar.

Nir-valli-pulṣu

FIG. 12



Is a creeping aquatic plant, fixing itself to the bottom with white, slender, fibrous, small roots.

The stalks are smooth, round, jointed, covered with rootlets in the nodes of lower joints, are white, slight-green and shining, in each internode, surrounded by an oblong vesicle in which remains the leaf as in its base, and enclosed as if in its case in a theca like manner, these vesicles however are concave on the inside, from aqueous green-white; on the outside, aqueous red, striated in length with veins, turgid with air; which is sent out by an explosion with sound.

The leaves are distinguished from the vesicles by a yellow-green-narrow joint, are oblong-narrow, striated in length by very subtle veins, on the upper side very rough, of light yellow colour, on the lower side of light bluish colour, glabrous.

(Its Uses)

Tickling of ears, contracted slowly from blocking phlegm, is removed by this plant boiled in the oil of *Sergelim*, or together with the juice of the leaves

dropped into the ears. That endemic disease called *Pitao*, is cured through a decoction of the leaves in water with *sugar*.



Fig. 12

Hygroryza aristata (Retz.) Nees ex Wight & Arn., Edinburgh New Philos. J. 15: 380. 1833; Cope in Nasir & Ali, Fl. Pakistan no. 143: 19. 1982. -*Pharos aristatus* Retz., Observ. Bot. 5: 23. 1789. *Leersia aristata* (Retz.) Roxb., Fl. Ind. 2: 207. 1832 [POACEAE].

Nir-valli-pulll Rheede, Hort. Malab. 10: 23, t. 12. 1690.

The name Neervallipullu [Malayalam script on t. 12] is still used; neer means water, valli means climber, and pullu means grass (or herb). The name refers to its habit as a creeping aquatic herb. It occurs in stagnant freshwater ponds along the coast to Malabar.



Nir-pulsi

FIG. 13



S a creeping herb growing in watery places and in water, fixing itself of the bottom by means of white and capillary rootlets. Stalks round, jointed, swollen at the joints, aqueous, green, tender ones reddish, later date-red, thence turning green, finally purple-red.

Leaves arise in the joints with the origin of flowers, are oblong-narrow, with the bottom part rolled round, enclosing the rudiment of flowers with the new leaves, are thick, striated in length with veins, reddish in the margins towards the inside, with the lower part chiefly in the margins, sparsely beset with long, white, sparse hairs.

Flowers are small, three-petalled, round, of blue purple colour. In these are six blue stamens, bearded and covered by long, dense, blue hairs, whose tips are white, but apices golden yellow; their style is blue drawing to a white apex.

The seed bearing capsules are small, three-sided, in the sides striated with "lyre", in the upper part purple-red, on the lower part green-white. The

calyx is small, trifoliate, transparent, tightly clasping the foot of flowers. In these are contained three seeds, mutually separated by partition walls, are small, oblong, or also round on the surface, made thin in an orderly fashion with holes, black.

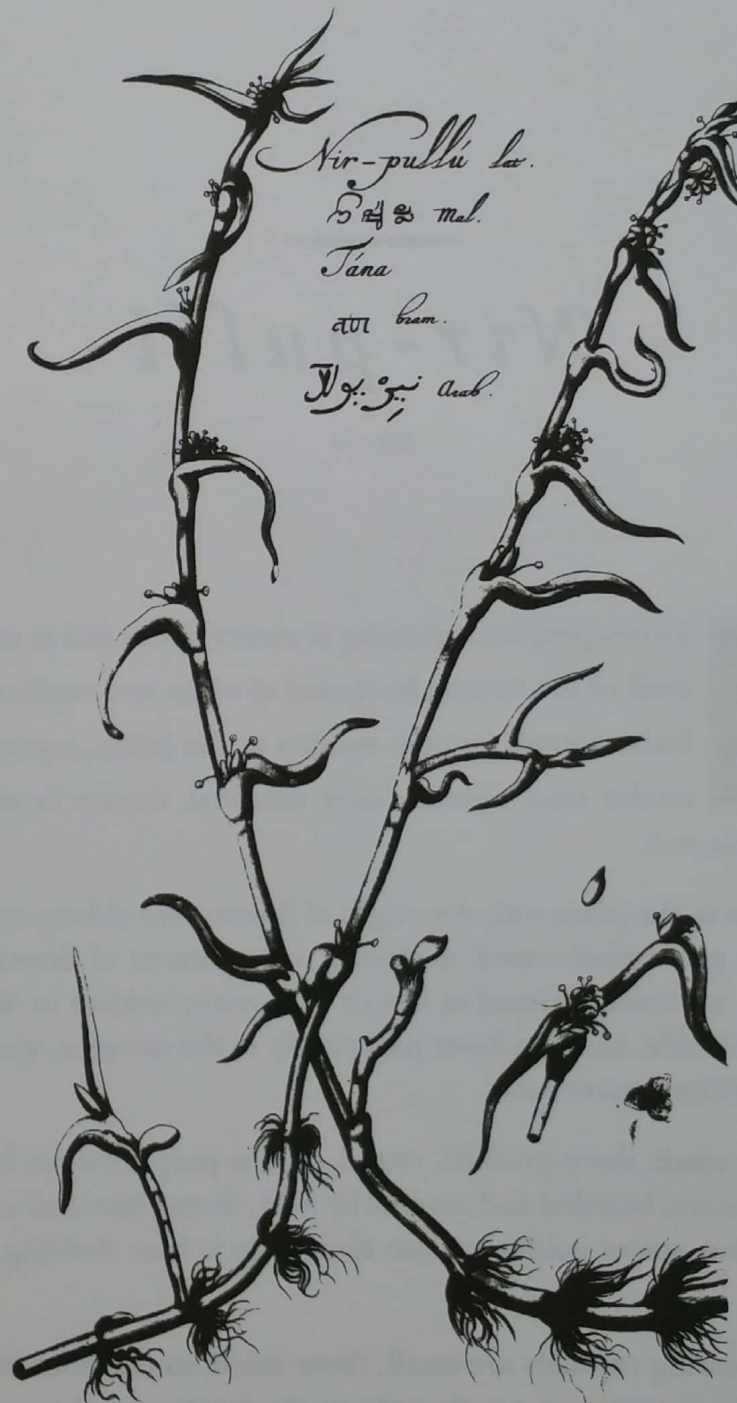


Fig. 13

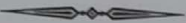
(Its Uses)

Decoction of this plant lessens tympanitis (inflammation of the membrane of the ear).

Cyanotis axillaris (L.) Sweet, Hort. Brit. 430. 1827; Loudon, Hort. Brit. 125. 1830; J. A. & J. H. Schult. in Roem. & Schult., Syst. Veg. 7(2): 1154. 1830; Faden, Taxon 34: 295. 1985. - *Commelina axillaris* L., Sp. Pl. 42. 1753. *Tradescantia axillaris* (L.) L., Mant. 2: 371. 1771; Syst. Veg. ed. 13, 260. 1774; Roxb., Pl. Corom. 2: 5, t. 107. 1799. *Amischophacelus axillaris* (L.) R. Rao & Kamm., J. Linn. Soc. Bot. 59: 306. 1966; Manilal & Sivar., Fl. Calicut 299. 1982 [COMMELINACEAE].

Nir-pulli Rheede, Hort. Malab. 10: 25, t. 13. 1690.

The name Nirpullu [Malayalam script on t. 13] is not used now; neer means water (reference to its occurrence in watery places) and pullu means grass or herb. Today it is sometimes called Mukkutapacha; mukkuta refers to mucus (mucilage) and pacha means fleshy leaves. It occurs throughout Malabar.



B r a m i

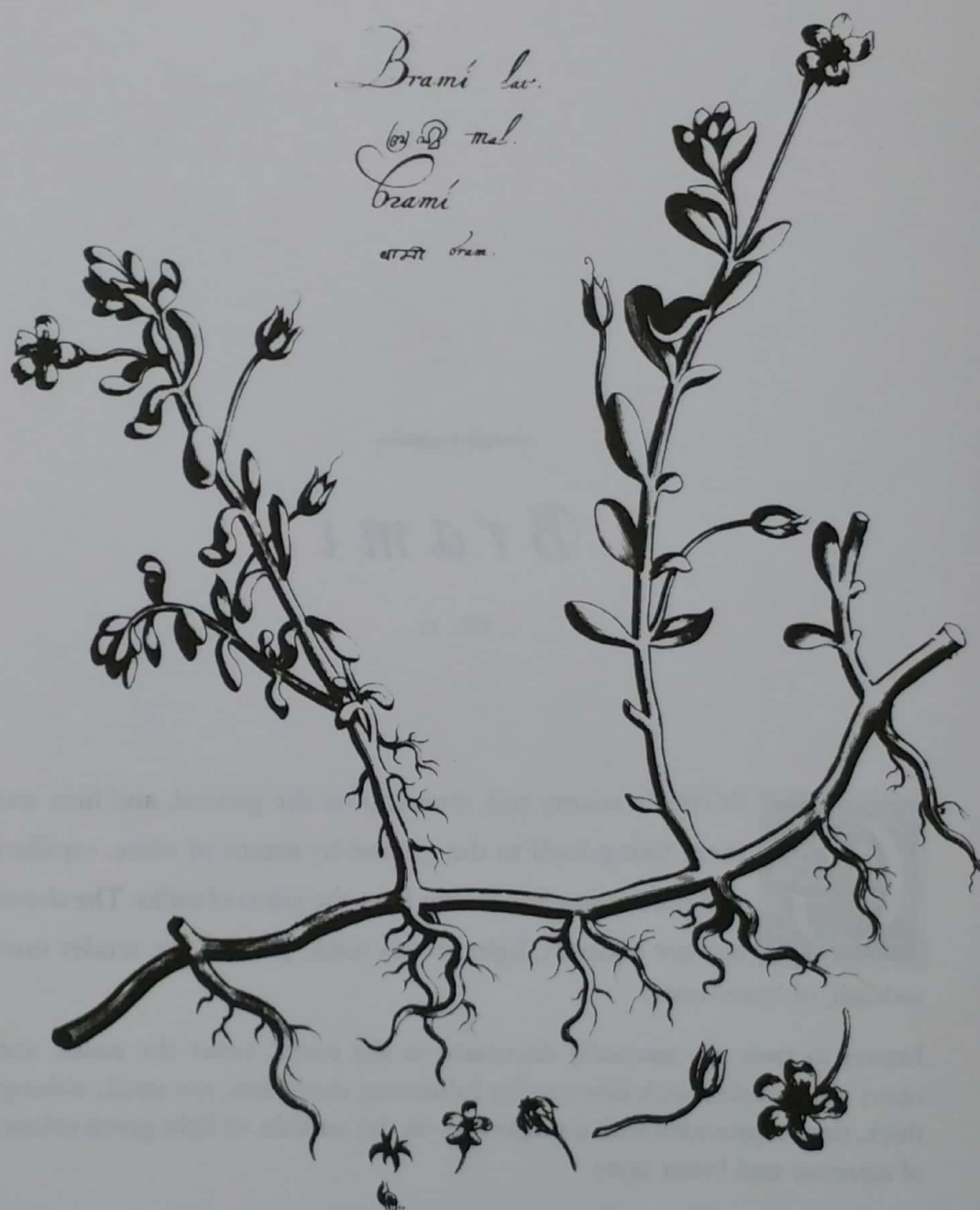
FIG. 14



ROWS in watery soil, creeping on the ground, and here and there fixing itself to the ground by means of white, capillary and fibrous rootlets arising from the joints of stalks. The shootlets are aqueous, light greens thick, jointed, the tender ones reddish, of bitter taste.

Leaves in twos are mutually decussate in the joints, cover the stalks, and often are crowded with new tender foliaceous shootlets, are small, oblong, thick, dense, provided with a single vein on the outside, of light green colour; of aqueous and bitter taste.

Flowers five petalled, striated on the inside with veins, on the outside bent towards each others, light blue, jutting out from a five-foliate calyx with a broad small neck; in them are four white stamens, attached to the collar, provided with semi-lunar, black apices; two of them stand out taller and with these is the green-white style, deeper green at the tip. Seed-bearing capsules are conical, covered by calyces, enclosing in themselves a mass of small seeds like sand, which are placed around the middle style; which seeds are first green, then from white they turn yellow, finally they turn black.



(Its Uses)

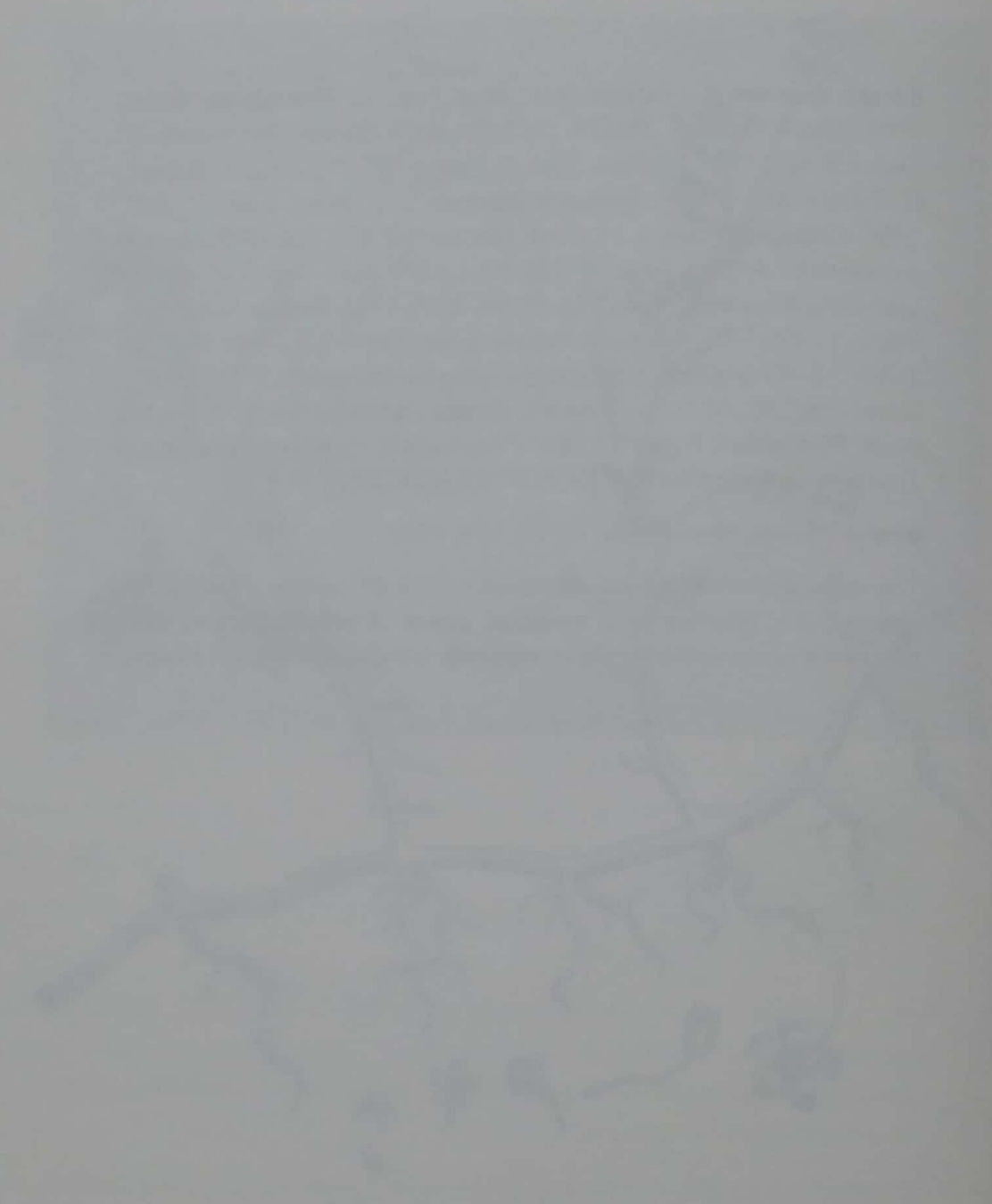
Fig. 14

From the frequent use (consumption) of this plant the udders of cows become turgid with milk, and a decoction is made from it in cow's milk and fresh butter, for smearing on the temples against delirium (loss of memory); crushed with *pepper*, aromatic reed, *Myrabolan* and rice water and taken, renders the voice sonorous.

Bacopa monnieri (L.) Pennell, Proc. Acad. Nat. Sci. Philadelphia 98: 94. 1946; Philcox, Kew Bull. 33: 679. 1979; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 421. 1981; Manilal & Sivar., Fl. Calicut 193. 1982; Sasidh. & Sivar., Fl. Thrissur 319. 1996. - *Lysimachia monnieri* L. in Tamer, Cent. Pl. 2: 9. 1756. *Gratiola monnieri* (L.) L., Syst. Nat. ed. 10, 851. Jun 1759. *Gratiola monnieri* L., Amoen. Acad. 4: 306. Nov 1759, nom. illeg. (incl. type of *Lysimachia monnieri* L. 1756); Sp. Pl. ed. 2, 24. 1762. *Bramia indica* Lam., Encycl. 1: 459. 1785. *Herpestis monnieri* Kunth in H.B.K., Nov. Gen. Sp. 2: 366. 1818, nom. illeg. (incl. type of *Lysimachia monnieri* L. 1756); Benth., Scroph. Ind. 30. 1835 ("monniera"). *Bacopa monnieri* Wettst. in Engl. & Prantl, Pflanzenfam. IV. 3B: 77. 1891 ("monniera"), nom. illeg. (incl. type of *Lysimachia monnieri* L. 1756) [SCROPHULARIACEAE].

Brami Rheede, Hort. Malab. 10: 27, t. 14; 1690.

The name Brahmmi [Malayalam script on t. 14] is still used. Brahma (Brama) means divine, referring to its medicinal power of restoring good, sharp memory. It occurs in marshy places, especially in the coastal areas of Malabar.



There is a faint, illegible text block at the bottom of the page, possibly a caption or a short paragraph. The text is too light to read.



Kirganelli

FIG. 15



HERE are two species of this plant, the former one is called *Bujan-Anvali* by the Brahmins, is of two feet in height, grows in any soil. The root is white, fibrous, hairy, of somewhat sharp taste.

The shoots are slender, woody, green, somewhat shining, leaves arise in twos serially, obliquely placed from behind, small, oblong narrow, slender, smooth of dark and deep green colour on the upper side, on the lower of light green provided with a slender rib, closing themselves towards the evening.

Flowers are attached to the foliaceous petioles themselves in the lower part near the origin of leaves, are very small, six petalled, white, light green on the outside, containing in the middle a yellow globule. These buds become smooth and round, and greenish, containing in themselves seeds, and are on the surface as if granulated and divided into six lattices by means of sutures, with a green rind, which is inside more hard and fresh-white, when the joints are relaxed they dehisce into six triangular see-bearing capsules.

The seeds themselves are small, triangular, date-red.



Fig.1 5

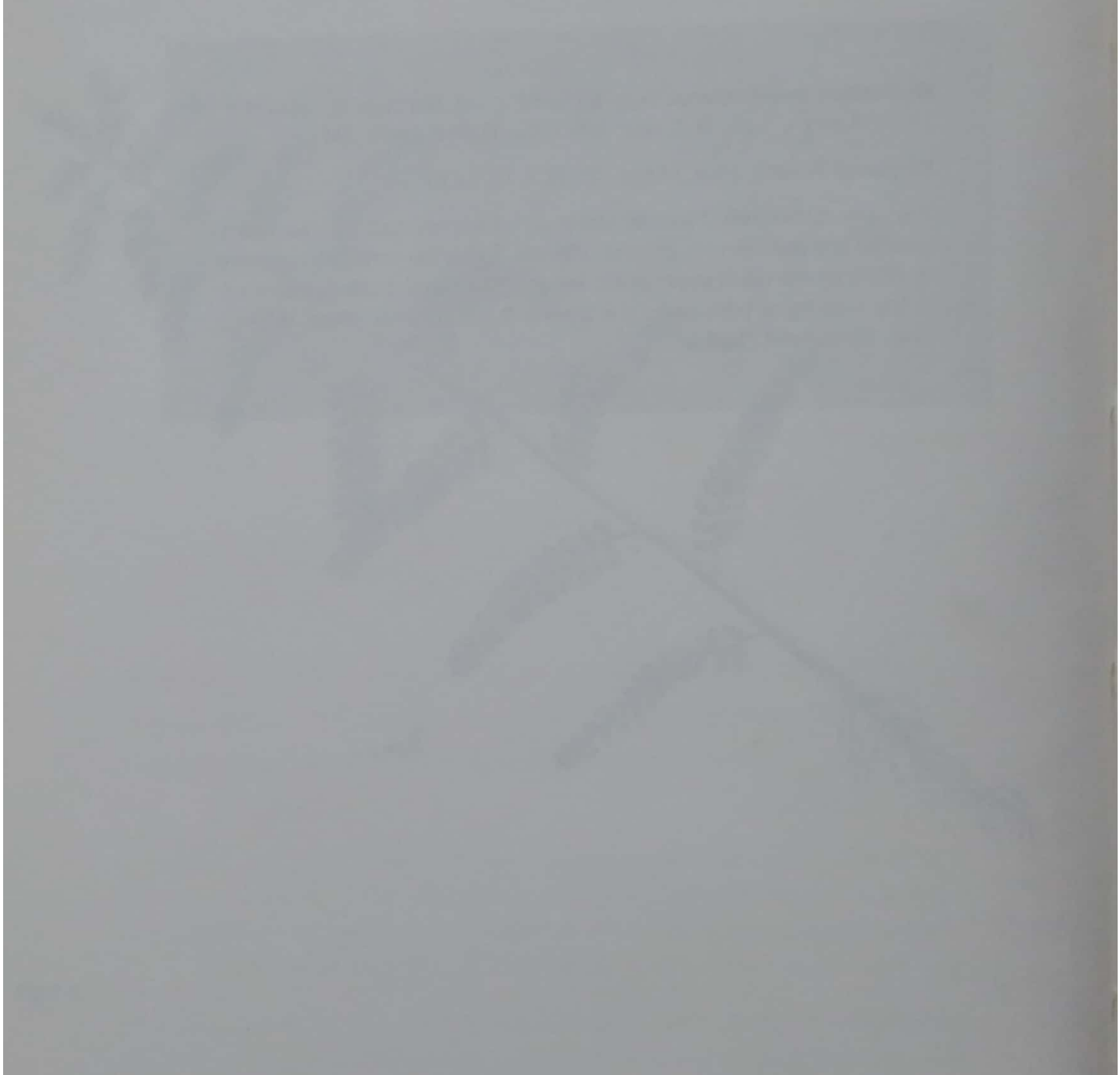
(Its Uses)

The leaves crushed along with the root, open up boils (?); leaves alone, cleans ulcers; fried in the oil of Indian nut, cures wounds; the root with a few others of the same power, added and reduced to powder, does good to the coughing and rheumatic; crushed with onion cleans and consolidates the lacerations of testicles; and is a very effective (contrary) remedy for dysentery.

Phyllanthus kozhikodanus Sivar. & Manilal, J. Ind. Bot. Soc. 56: 165-168. 1977; Manilal & Sivar., Fl. Calicut 264. 1982 [EUPHORBIACEAE].

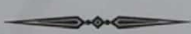
Kirganeli Rheede, Hort. Malab. 10: 29, t. 15. 1690,

The name Kizhkanelli [Malayalam script on t. 15] is not used; kizhuku means inverted and nelli refers to *Emblica officinalis*. Today, the herbaceous species of *Phyllanthus* is called keezharnelli; keezhu means lower side (a reference to the fruits being born under the leaves). It is a common weed in moist lands throughout Malabar.



THE WEST

The west of the United States is a vast and fertile land, rich in natural resources. It is a land of great beauty and interest, and it is one of the most important parts of the country. The west is a land of great opportunity, and it is a land that is full of life and energy. The west is a land that is full of promise, and it is a land that is full of hope. The west is a land that is full of possibility, and it is a land that is full of potential. The west is a land that is full of life, and it is a land that is full of love. The west is a land that is full of joy, and it is a land that is full of peace. The west is a land that is full of happiness, and it is a land that is full of contentment. The west is a land that is full of everything that is good and beautiful in life.



Tjeru-kirganeli

FIG. 16



DIFFERS from the first only in that the stalk-lets of this, so also the foliaceous petioles are reddish, and that the leaves are more narrow, and red in the peduncles and on the lower side, chiefly towards the margin surrounded as if by a red fringe.

Phyllanthus gardnerianus (Wight) Baill., Eteud. Gen. Euph. 628. 1858; Manilal & Sivar., Fl. Calicut 266. 1982. —*Macraea gardneriana* Wight, Ic. t. 1902. 1852. *Phyllanthus simplex* var. *gardneriana* (Wight) Muell.-Arg., Linnaea 32: 32. 1863 [EUPHORBIACEAE].

Tsjeru-kirganeli Rheede, Hort. Malab. 10: 31, t. 16. 1690.

The name Cherukizhkanelli [Malayalam script on t. 16] is not used but its modified version cherukeezhanelli is used. Cheru means small (here, "of lesser power"), keezhu means the lower side (reference to fruits being borne on the lower side of the leaves), and nelli refers to *Emblia officinalis*. This species also is a common weed in moist places throughout Malabar.



Fig. 16



Manja-adeka-manjen

FIG. 17



ROWS in sandy soil; the root is white; the stalks are green, slender, covered with leaves; and they are oblong, rather thick, hairy, crenate with sharp tips; the ribs, which run into the tips, stand up on the lower side.

The flowers are yellow plain-round heads, formed of very many florets, each one of which is like a cyathium, equipped at the mouth with five tips, giving out a thick style, from the tip of which a slender filament comes out; the whole plant is of very pleasing smell.

(Its Uses)

This plant given with "*Uvis Pasis*", *Cariophyllum* and the juice of *glycyrrhiza* eradicates that endemic evil (*Pitao*) and helps in the formation of blood.



Fig. 17

Blumea eriantha DC. in Wight, Contrib. Bot. India 15. 1834; Randeria, Blumea 10: 279. 1960 [ASTERACEAE].

Manja-adeca-manjen Rheede, Hort. Malab. 10: 33, t. 17. 1690.

The name Manjacha adakkamaniyan [Malayalam script on t. 17] is not used for this species now but is for *Grangea maderaspatana*; manjacha (from manja) means yellow and adakkamaniyam means resembling a small betel nut (reference to the yellow dense capitulum). No Malayalam name is currently available for this species. It occurs on lateritic and sandy (hardened soil) slopes and in the uplands of Malabar.

Kurundoti

FIG. 18



plant of almost two feet in height, growing in sandy soil. The root densely beset with fibres is with a whitish bark, on the outside dark earthy, with white wood. Older branches are ash-coloured.

Leaves arise many together in short shoots, on small and light-green peduncles, are small, striated towards the peduncle, broad towards the tip, in the margin incised by curves (crenate), soft, smooth, on the lower side covered with short down. From the mid-rib, rib-lets run in an oblique manner towards the very curves, standing out on the lower side, striating the upper part.

Flowers are seen at the tips of foliaceous shoots, or also above the origin of leaves in thick branches, are five-petalled, yellow, without any smell. The style is yellow, at the top surrounded in a brush-like manner by numerous yellow small stamens, which are provided with minute yellow apices. The calyx is star-shaped, having lobes, which are placed in the inter-spaces of leaves. Flower buds are round, drawing into a tip.

The flowers having faded, there follows in the calyx a globule, containing in itself five three-cornered seeds, first green-yellow, then ash-grey.



Fig. 18

(Its Uses)

A drink made from this plant relieves burning of chest and abdomen; the levigated root of this plant helps wounds of nerves; which moreover cooked with *pepper* and given, helps in cold fevers: The bark crushed with *Carega-Pullu*, butter and women's milk cures convulsions from serious wounds, when smeared on the chest, abdomen, temples and bruised nerves.

Sida alnifolia L., Sp. Pl. 684. 1753; Sivar. & Philip, Fl. Nilambur 89. 1997; Sasidh. & Sivar., Fl. Thrissur 61. 1996. - *Sida retusa* L., Sp. Pl. ed. 2. 961. 1763. *Sida rhombifolia* subsp. *retusa* (L.) Borssum Waalkes, Blumea 14: 198. 1966. *Sida rhombifolia* var. *retusa* (L.) Masters in J. Hook., Fl. Brit. India 1: 324. 1874 [MALVACEAE].

Kurundoti Rheede, Hort. Malab. 10: 35, t. 18. 1690.

The name Kurunthotti [Malayalam script on t. 18] is still used for this species. Kurum [from kuriya] means small, miniature. Thotti is a hook for controlling or disciplining an elephant. Kurumthotti means a small, simple devise, to control nerves [in combination with other medicinal plants], alluding to the effective medicinal powers of this small plant. Used to treat several other diseases also. This is one of the most commonly used traditional medicinal plants. It occurs throughout Malabar.

In addition, the document highlights the role of technology in improving record-keeping. It suggests that the use of digital tools can help to streamline the process, reduce errors, and make it easier to access and analyze data. However, it also notes that technology must be used responsibly and in accordance with established guidelines.

The document concludes by reiterating the importance of a strong ethical framework. It states that all individuals involved in the process must adhere to the highest standards of integrity and honesty. It also encourages ongoing education and training to ensure that everyone is up-to-date on the latest best practices and regulations.



Nelam-pullu

FIG. 19



S a small plant growing in sandy soil. The root is white and fibrous. The stalks are slender, round, green, jointed, a little reddish at the joints, covered with linear leaves.

The flowers, which arise many together at the nodes of the stalks, are round and three petalled, anteriorly however stand out with a narrow tip, of reddish-blue colour on the outside, in the middle of bluish-white colour. In these are six blue stamens, the three outer ones tipped with white, erect apices, black on the lower side; the three inner ones equipped with (provided with) white, trifid, decumbent apices; of no smell, and are surrounded by three small, oblong, green leaves, which are interposed decussately to the petals.

Seed-bearing capsules are oblong, green, in which are contained small seeds, which are first white, then turn reddish.

(Its Uses)

From this plant, boiled with the whey of milk, an ointment is prepared, to be applied in the naval region, which gives an excellent antidote (?).

Nelam-pulli l.

നലപ്പുല്ല mal.

nila-pulla

നീലപ്പുല്ല bram.

نِيلَامُ بَوْلَغْ arab.

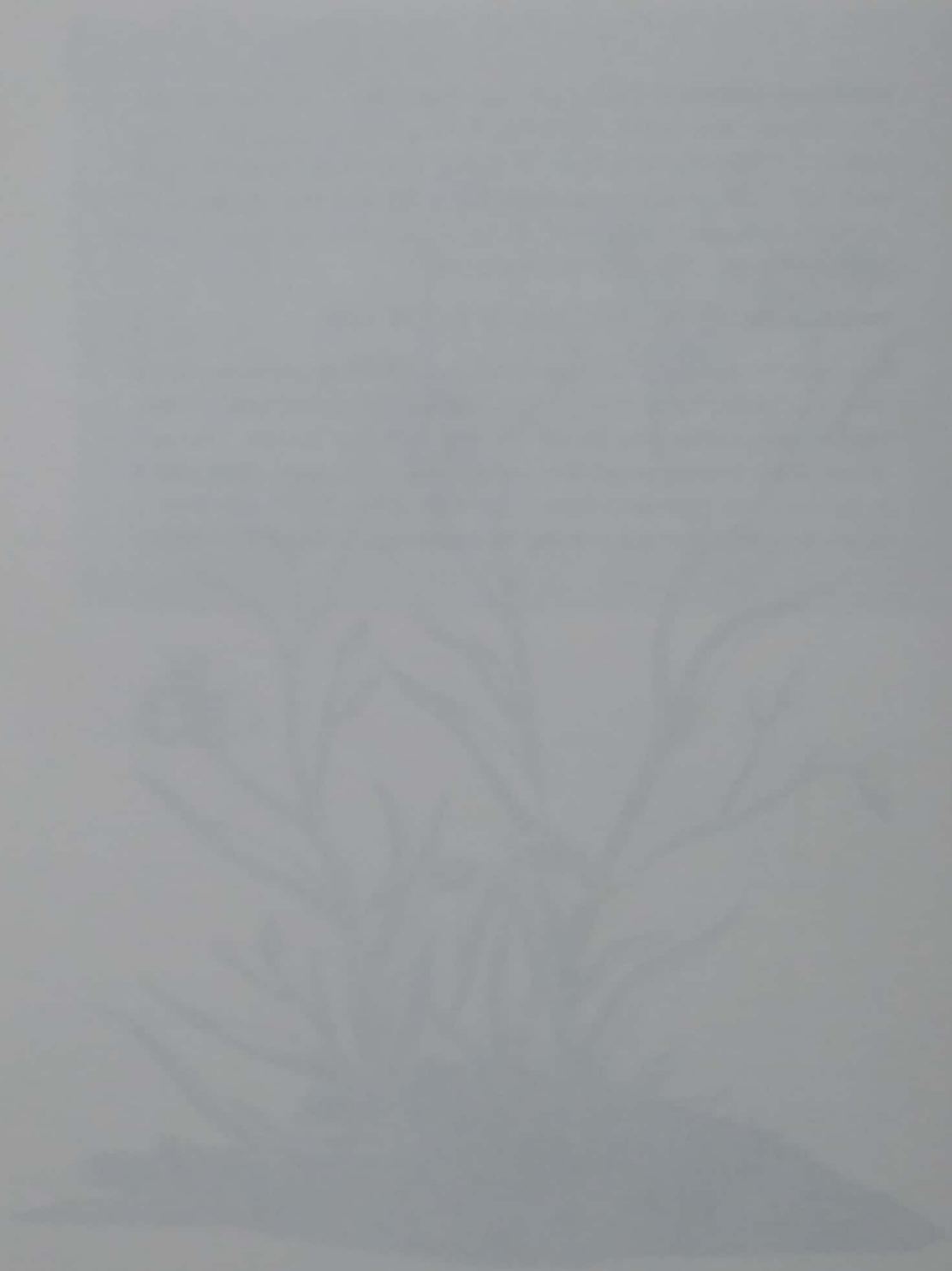


Fig. 19

Murdannia semiteres (Dalz.) Santapau, Poona Agr. Coll. Mag. 41: 284. 1951; Brenan, Kew Bull. 7: 184. 1952; R. Rao & Kamm., Bull. Bot. Survey India 6: 3. 1964; Manilal & Sivar., Fl. Calicut 296. 1982; Manilal, Fl. Silent Valley 327. 1988. -*Aneilema semiteres* Dalz., J. Bot. Kew Misc. 3: 138. 1851. *Aneilema paniculatum* Wall. ex C. B. Cl. in DC., Monogr. Phan. 3: 215. 1881, non Wight 1853 [COMMELINACEAE].

Nelam-pullu Rheede, Hort. Malab. 10: 37, t. 19. 1690.

The name Neelapullu [Malayalam script on t. 19] does not appear to be used now; neela [from neelam] means blue and pullu means grass or herb. Neelam pullu is blue grass [herb], referring to its blue flowers. The plant grows usually in dense populations and when flowering, gives a blue colour to the area. No Malayalam name is currently known for *M. semiteres*. It occurs along the higher grounds near the coastal regions of northern Malabar.





Araka-puda

FIG. 20



s a short plant growing in sandy soil. The root is slender and short. Stalks round, green, languid, not woody, covered with white hairs. In the place of leaves are lateral stalk-lets or shoot-lets somewhat curled, covered with very numerous, dense, long hairs each of which is capped with a yellow bud (gland).

Flowers arising here and there in their own green and hairy petioles, are small, five petalled, round, deep-red, or turning bluish. In these are five very slender stamens, provided with yellow apices, accompanied by five other filaments, which are drawn into apices, and encircling a green globule. The calyx is of five oblong, green leaves, which, when the globule, and with it form the oblong seed-capsules, in which are enclosed numerous seeds, like sand, first white and light greenish, then turning black.

Acara-pudá la.

അക്കാപ്പുടാ mel.

Mel.

मेरी ला.

عقار عذرا and



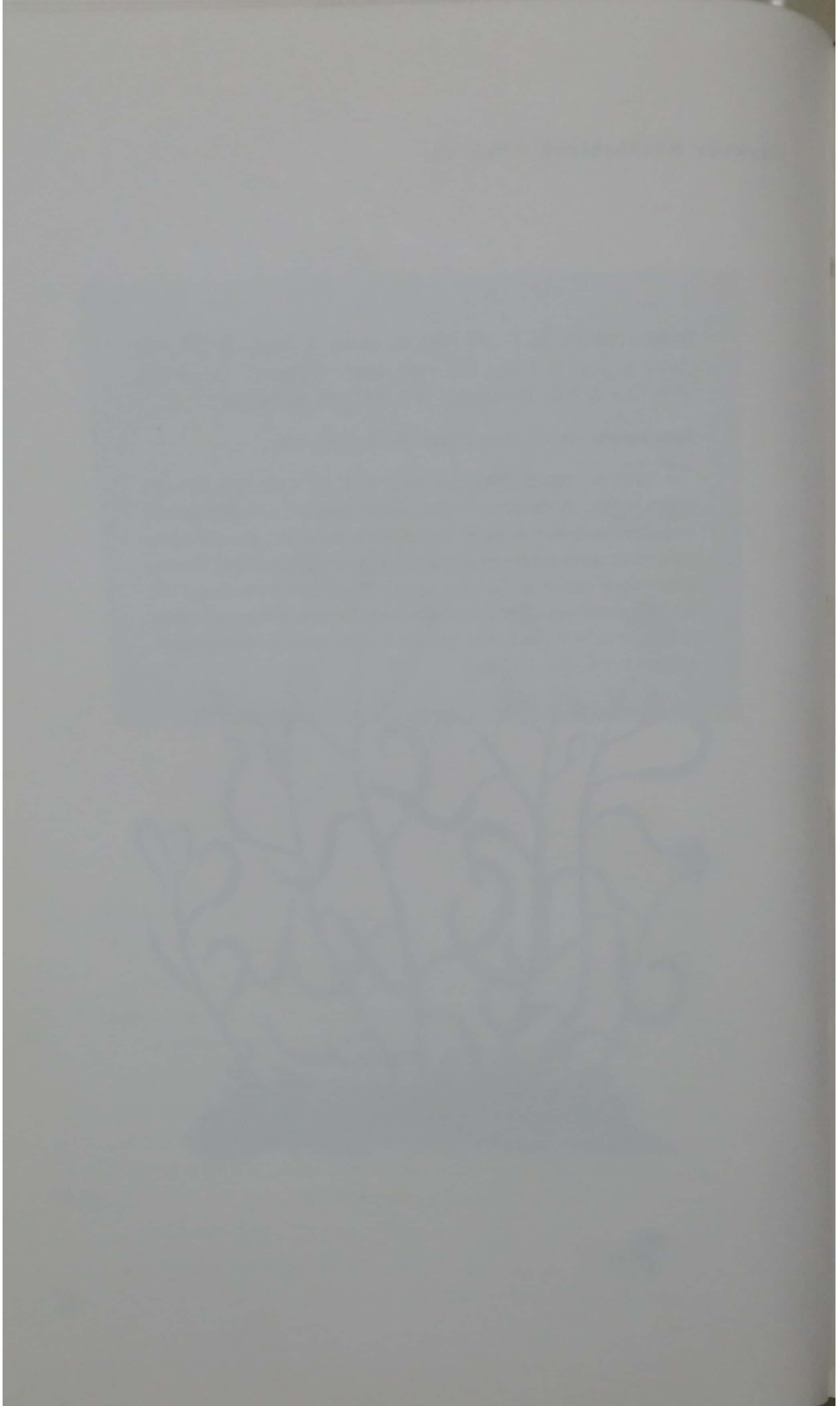
Fig. 20



Drosera indica L., Sp. Pl. 282. 1753; Van Steenis, Fl. Males. 1, 4: 379. 1953; Manilal & Sivar., Fl. Calicut 103. 1982; Sasidh. & Sivar., Fl. Thrissur 173. 1996; Sivar. & Philip, Fl. Nilambur 251. 1997 [DROSERACEAE].

Akara-puda Rheede, Hort. Malab. 10: 39, t. 20. 1690.

The name Akkarapuda [Malayalam script on t. 20] is not used currently. Akkara here is a modification of Arkan, which means sun; puda [from pooda] means thin white hairs or down- a reference to the white hairs covering the stem, which shines like dew in sun's rays (a device to catch small flies). *Drosera* is commonly known as "Sun dew genus". This insectivorous species and also *D. burmannii* are called pranipidiyan-chedi; prani means insect, pidi means to catch, and chedi means plant. It occurs on open sandy and lateritic slopes adjacent to the plains of Malabar.





Karinta-kali

FIG. 21



ROWS in rocky and powdering base. Root is white, round, hairy, clothed with fibres here and there, containing in itself a very slender, white filament of watery taste.

Leaves arise on oblong, light green, aqueous petioles, on the inside somewhat plain, and with barbed hairs, are round, a bit oblong, dark, beset with ribs (?), slightly standing out; devoid of any smell and taste.

Flowers arise in threes at the top of green-white, oblong, round petioles, surrounded at the origin by small, cuspidate leaflets, are star-shaped, monopetalous, five partite, with rather oblong neck protruding from the calyx, very white; of no smell. The calyx is five-foliate, and cuspidate.

The fruits are round berries, first green, then turning red, inside fitted with a little aqueous flesh, and with it with two small white stones, with one side, by which they lie mutually adjacent, plain, the other side convex; of woody

taste.

(Its Uses)

Boiled with whey of milk stops diarrhoea; cooked in oil, removes ophthalmic symptoms (inflammation of the eye).

Karinta-Lali L.

കരിന്തലി മല.

Carinta-cali

करिन्ता

فخاريه قمارين

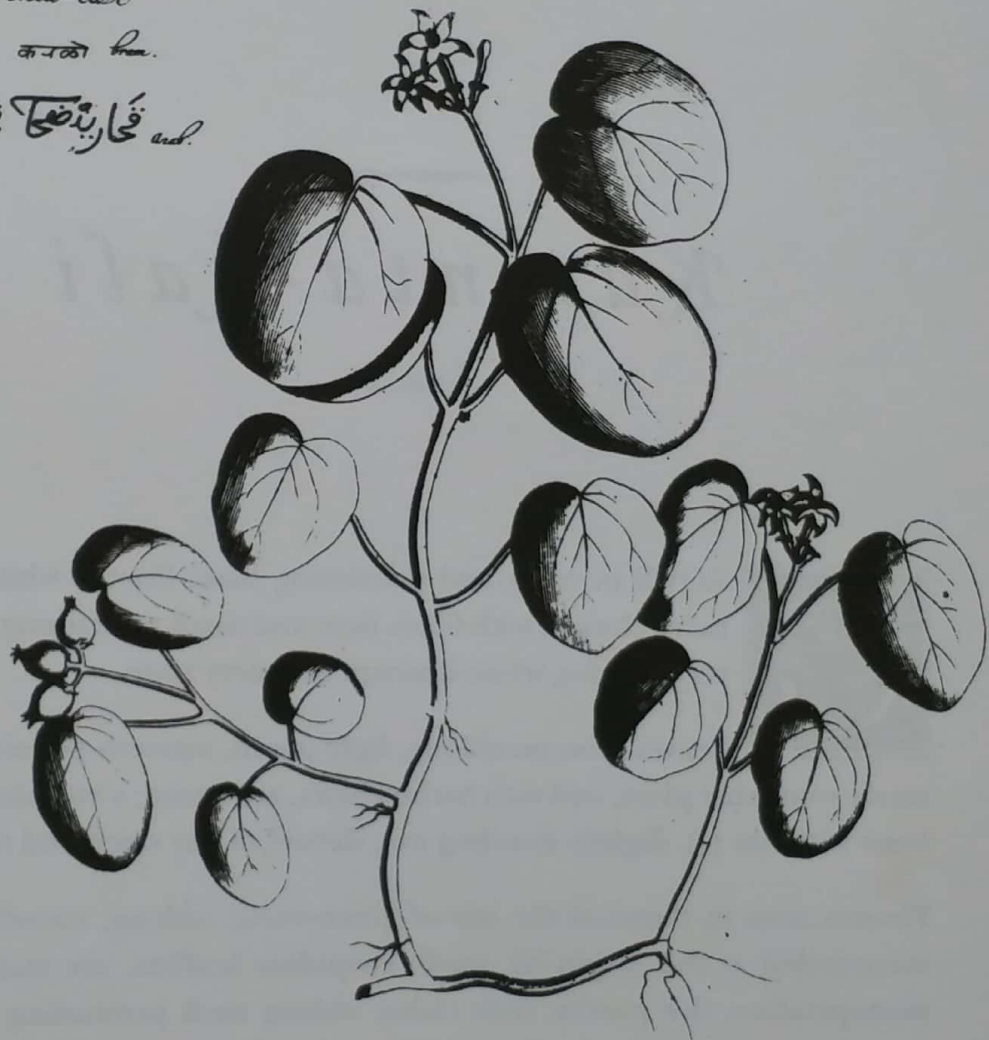


Fig. 21

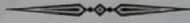


Geophila repens (L.) I. M. Johnston, Sargentia 8: 281. 1949; Backer & Bakh., Fl. Java 2: 324. 1965; Steyermark, Mem. New York Bot. Gard. 23: 395. 1972; Ridsdale in Manilal, Bot. Hist. Hort. Malab. 136. 1980; Sasidh. & Sivar., Fl. Thrissur 219. 1996; Sivar. & Philip, Fl. Nilambur 321. 1997. - *Rondeletia repens* L., Syst. Nat. ed. 10, 928. Mai-Jun 1759. *Psychotria repens* (L.) L. in Sandmark, Fl. Jamaic. p. 14. Dec. 1759; L., Amoen. Acad. 5: 377. 1760. *Psychotria herbacea* Jacq., Enum. 16. 1760; L., Sp. Pl. ed. 2, 245. 1762; Jacq., Select. Stirp. 66., t. 46. 1763. *Geophila reniformis* D. Don, Prodr. Fl. Nepal. 136. 1825, nom. illeg. (incl. type of *Psychotria herbacea* Jacq. 1760, miscited as L.). *Cephaelis diversifolia* Bl., Bijdr. 1004. 1827. *Geophila diversifolia* (Bl.) DC., Prodr. 4: 537. 1830. *Uragoa herbacea* (Jacq.) Kuntze, Rev. Gen. Pl. 300. 1891. *Carinta herbacea* (L.) W. F. Wight, Contrib. US Nat. Herb. 9: 216. 1905. *Geophila repens* var. *asiatica* (Cham. & Schlechtendal) Fosb., Smiths. Contrib. Bot. 45: 27. 1980. - *Geophila reniformis* var. *asiatica* Cham. & Schlechtendal, Linnaea 4: 137. 1829 [RUBIACEAE].

Karinta-kali Rheede, Hort. Malab. 10: 41, t. 21. 1690.

The name Karinthalakali [Malayalam script on t. 21] is not used; karintha means black and Kali is a goddess, also means dark. The allusion is not clear, though it may denote the dark leaves. It could also be Karin (black) + thakkali (tomato) but is quite unlikely. No Malayalam name is currently known. It occurs in the forest undergrowth in some locations of Malabar.





Nela-naregam

FIG. 22



Is a small plant of one or one and a half cubit. The root is with a very aromatic smell, with a yellow reddish colour, with a bitter and slightly sharp taste.

Leaves arise in threes in a winged manner on a single petiole, are small, oblong-round, slightly cuspidate, thick, soft, smooth, gabrous, of dark green and shining colour, of aromatic and slightly cutting taste. The mid-rib is green-white, standing out on the lower side, and on the upper side where it is deeper green.

Flowers are five petalled, oblong-round, very white, in the middle of which arises the oblong, erect, white style, with a thick head, and in the apex yellow where it is crowned with very small florets.

Fruits are small, green, three sided, a bit convex, containing in themselves three or four seeds, separated by partition walls, are oblong, somewhat bent (curved), white, thin at the top, of lightly sharp and cutting taste as also the fruits.



Fig. 22

(Its Uses)

The juice pressed out from each part of this plant and smeared with the oil of Indian nut, removes itches. With the water dripped (pressed out) from the root a drink is prepared against fever accompanying epilepsy, provided against that famous disease called *Pitao*.

Naregamia alata Wight & Arn., Prodr. 117. 1834; Mabb., Taxon 26: 530. 1977; Manilal & Sivar., Fl. Calicut 64. 1982; Sasidh. & Sivar., Fl. Thrissur 98. 1996; Sivar. & Philip, Fl. Nilambur 135. 1997 [MELIACEAE].

Nela-naregam Rheede, Hort. Malab. 10: 43, t. 22. 1690.

The name Nelanarakam [no Malayalam script on t. 22] is still used; nelam means ground and narakam refers to *Citrus* species. It is very common in northern parts of Malabar.



Schanganam-pulṣu

FIG. 23



S a small plant growing in sandy soil. The root is white, yellow, woody. The stalks are square, jointed, on the lower part somewhat swollen, giving out stalklets from any joint.

Leaves come out from nodes, are oblong-narrow, anteriorly somewhat narrow, provided with a nerve that striates the upper side.

Flowers are four petalled, very white, small, more broad on the lower side, anteriorly a bit cuspidate, attached to a calyx of four narrow lobes, in their middle is a small white bud which bulges out into a light green globule, surrounded by four cuspidate leaves, or into the very seed-capsule, is first green, then ash-white.

The seeds are like small grains of sand, a bit oblong, light green, whitish and then dark red.

Sebanganam-pulli L.

മലബാർ പൂർവ്വം *mal*

نَخَاعِثَانَامُ بُولُحُو *Arab.*

പറമ്പാട്ടു *brah.*

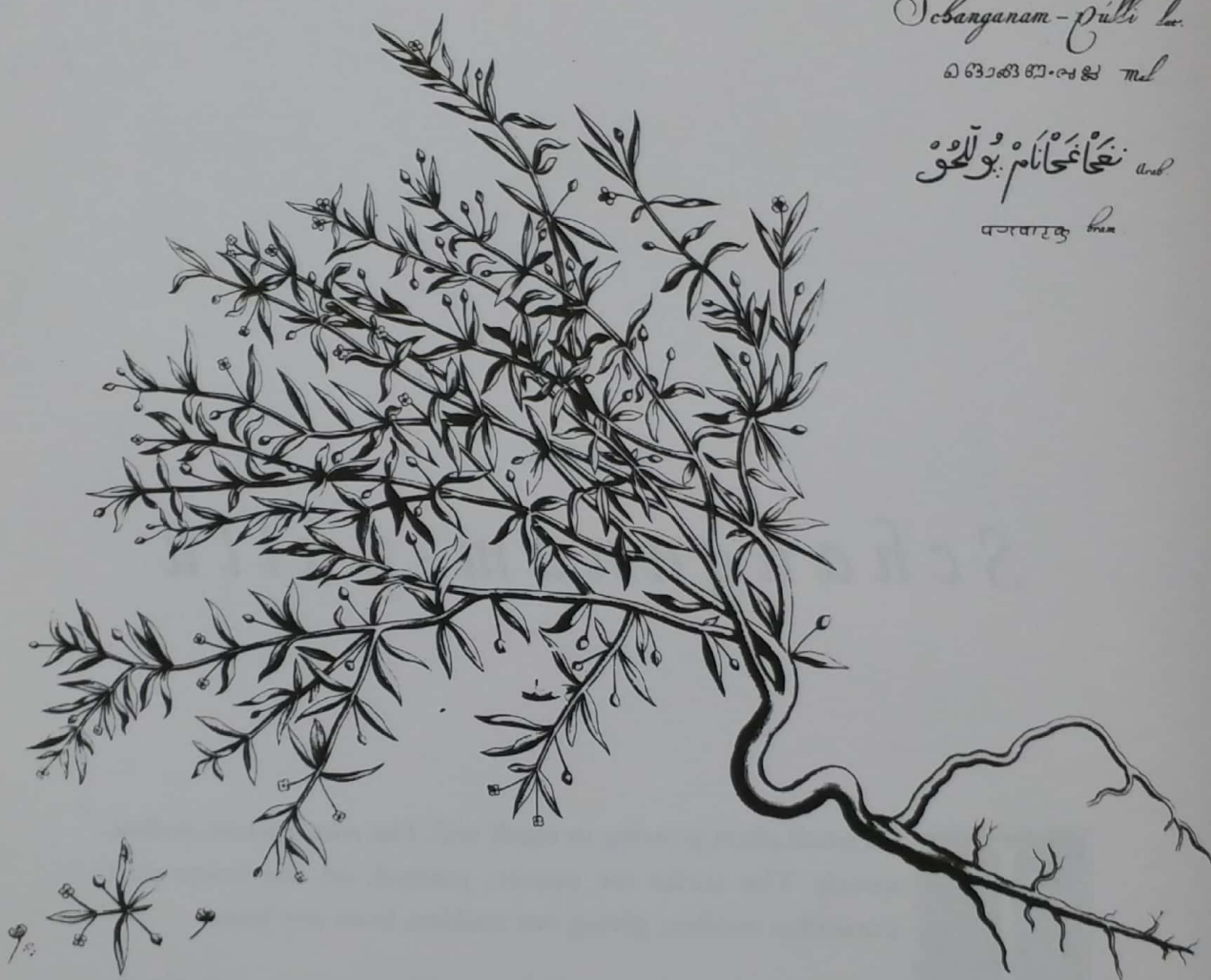


Fig. 23

Hedyotis herbacea L., Sp. Pl. 102. 1753; Ridsdale in Manilal, Bot. Hist. Hort. Malab. 131. 1980; Manilal & Sivar., Fl. Calicut 141. 1982; Manilal, Fl. Silent Valley 132. 1988; Sasidh. & Sivar., Fl. Thrissur 221. 1996; Sivar. & Philip, Fl. Nilambur 326. 1997. - *Oldenlandia herbacea* (L.) Roxb., Fl. Ind. 1: 424. 1820; DC., Prodr. 4: 425. 1830; G. Don, Gen. Hist. 3: 528. 1834. *Hedyotis heynei* R. Br. ex Wight & Am., Prodr. 416. Oct 1834. *Oldenlandia heynei* (Wight & Am.) G. Don, Gen. Hist. 3: 531. Nov 1834 [RUBIACEAE].

Schanganam-pulli Rheede, Hort. Malab. 10: 45, t. 23. 1690.

The name Njonganampullu [Malayalam script on t. 23] is not widely used; njonganam refers to the sound made when dry and brittle materials are crushed as if under a wright and pullu means grass [in the sense of small herb]. Now it is widely known as Parpadakapullu; Parpadam [or Parpadagam] is from parannatu, i.e., flat; and ada, a country wafer, meaning a thin, crisp, wafer-like thing, which is easily broken when pressed, making a cracking sound. It occurs throughout Malabar.



Kaipatsjira

FIG. 24



Is a small, plant, enjoying sandy soil. Root is white, fibrous. Stalks round, green, bent at junctions.

Flowers are attached to the stalks, at the junctions, are small, oblong-round, with an obtuse tip, soft, smooth, of aqueous taste, slightly bitter, provided with a rib, standing out on the lower side. Flowers are seen many together, are five petalled, oblong-narrow, very white, they contain five slender, white stamens, provided with white apices, in the middle of which is the white, seed-bearing globule.

Flower buds are oblong, green; in them are sand-like, black seeds, number of them compressed surrounding the middle, green style.

(Its Uses)

The juice drunk with *Ginger, pepper*, and salt, relieves pains of stomach, called by the natives as *Heniguimao*.



Kaipá-Tsjira Lat.

കൈപ്പടിന mal.

Codiví-rassi

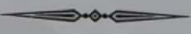
കോദിവടി bra.

قايپا چيرا arab.

Glinus oppositifolius (L.) A. DC., Bull. Herb. Boissier 2(1): 552. 1901; Backer in Fl. Males. I, 4: 270. 1951; Manilal & Sivar., Fl. Calicut 126. 1982; Sasidh. & Sivar., Fl. Thrissur 208. 1996; Sivar. & Philip, Fl. Nilambur 306. 1997. - *Mollugo oppositifolia* L., Sp. Pl. 89. 1753. *Mollugo spergula* L., Syst. Nat. ed. 10, 881. 1759; L., Sp. Pl. ed. 2, 113. 1762. *Pharnaceum mollugo* L., Mant. 2: 561. 1771, nom. illeg. (incl. *Mollugo spergula* L. 1759). *Glinus mollugo* Fenzl, Ann. Wiener Mus. Naturgesch. 1: 359. 1836, nom. illeg. (incl. *Mollugo spergula* L. 1759). *Pharnaceum spergula* (L.) Dillwyn, Rev. Hort. Malab. 51. 1839 [MOLLUGINACEAE].

Kaipa-tsjira Rheede, Hort. Malab. 10: 47, t. 24. 1690.

The name Kaipacheera [Malayalam script on t. 24] is still used; kaipu means bitter and cheera means edible greens [leaves]. It occurs throughout Malabar.



Tsjeru-talu-dama

FIG. 25



S a small plant loving sandy soil. Root fibrous, white. The stalk-lets, which arise many from the root are thick, quadrangular, jointed, of light green colour.

Leaves arise in pairs from the joints of stalks, are oblong, soft, smooth, glabrous, of deeper greenness on the upper part, covered with very minutes hairs, like shining silk; of slight bitter taste. The rib is thick, green-white and standing out on the lower side.

Flowers arise in clusters, are small buds, four petalled, cuspidate, from purple to bluish, with short, oblong neck, to the calyx of which they are attached. In the middle they have small stamens, similarly from purple bluish, provided with apices, the style is capped with a knob at the top.

Seed vesicles in pairs follow the flowers, as if they are composed of two, are light green, provided with four tips in the middle towards the sides, at the tip striated by a very short suture, where (in which) they dehisce. In there are two seeds, one on side, situated (placed) within its own cartilaginous membrane.

Tjéru-tálu-dáma lu.

മലങ്കരകുറുവെട മല

جفرو طارضايل



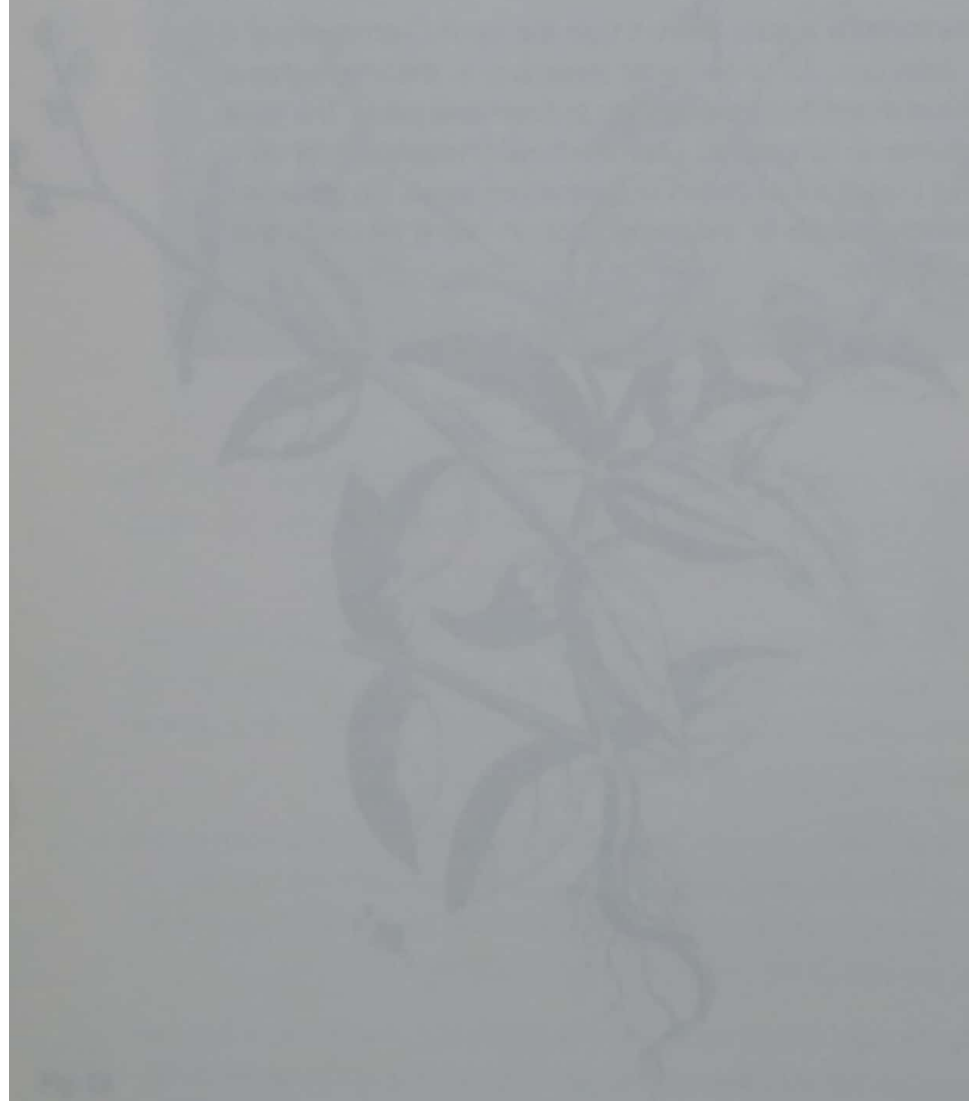
Fig. 25

Neanotis rheedei (Wight & Arn.) W. H. Lewis, Ann. Missouri Bot. Gard. 53: 40. 1966. - *Hedyotis rheedei* Wall. [Num. List no. 1294. 1829] ex Wight & Arn. in Wight, Cat. d. Pl. 77. 1834; Prodr. 409. 1834. *Oldenlandia tubulosa* G. Don f., Gen. Syst. 3: 351. 1834. *Anotis rheedei* (Wight & Arn.) J. Hook., Fl. Brit. India 3: 73. 1880 ("*rheedi*"). *Neanotis tubulosa* (G. Don f.) Mabb. in Manilal, Bot. Hist. Hort. Malab. 92. 1980 [RUBIACEAE].

Tsjeru-talu-dama Rheede, Hort. Malab. 10: 49, t. 25. 1690.

Rheede's transcription is quite different from the name Cherutharthaval in Malayalam script on t. 25, and is better transcribed as cheruthazhuthama; cheru means small and thazhuthama refers to *Boerhaavia diffusa*. This name (Cheruthazhuthama) is not used. Cherutharthaval [Malayalam script on t. 25] is also not used; tharthaval refers to *Spermacoce hispida*. No Malayalam name is currently available for this species. It occurs only in the coastal area of northern Malabar.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
PUBLISHED WEEKLY
CHICAGO, ILL., U.S.A.
Vol. 10, No. 1, January 1915





Tsjeru-jonganam-pulṣu

FIG. 26



ROWS in rocky soils. The stalks are slender light-green angular, a bit woody, jointed.

Leaves are attached to the joints of the stalks, are oblong-narrow cuspidate, more narrow towards the origin, smooth, soft, provided with a rib-let on the lower side.

Flowers arise many clustered together, and are small, white, five petalled, cuspidate.

Seed-capsules are round, green, in which are contained small sand-like, black-reddish seeds.

(Its Uses)

Apozema (decoction) prepared from the whole of this plant cures cholera; from it is also prepared a bath against small pox. The juice, mixed with wine and taken twice a day, for the period of three days, drives away small pox and diminishes the concomitant fever.

Toréú-wojonganámpullú. L.

മലബാർ നീർച്ചെടി *mal*

جھڑو نچونچانوم *Arab.*



Fig. 26

Mollugo stricta L., Sp. Pl. 131. 1762; Sivarajan & Usha, Taxon 32: 125. 1983; Sivar. & Philip, Fl. Nilambur 307. 1997. -*Pharnaceum triphyllum* Dennst., Schlüssel 16, 24, 36. 1818, non (Lour.) Spreng. 1824. *Pharnaceum malabaricum* Kostel., Allg. Med.-Pharm. Pl. 4: 1404. 1835, nom. illeg. (incl. type of *Pharnaceum triphyllum* Dennst. 1818) [MOLLUGINACEAE].

Tsjeru-jonganam-pullu Rheede, Hort. Malab. 10: 51, t. 26. 1690.

The name Cherunjonganampullu [Malayalam script on t. 26] is not used; cheru means small, njonganam refers to *Hedyotis herbacea*, and pullu means grass [in the sense of a small herb]. No Malayalam name is currently available. It occurs along the coasts of Malabar.

THE
STATE OF
NEW YORK
IN SENATE
JANUARY 1899



Niruri
or
Nirpulla

FIG. 27

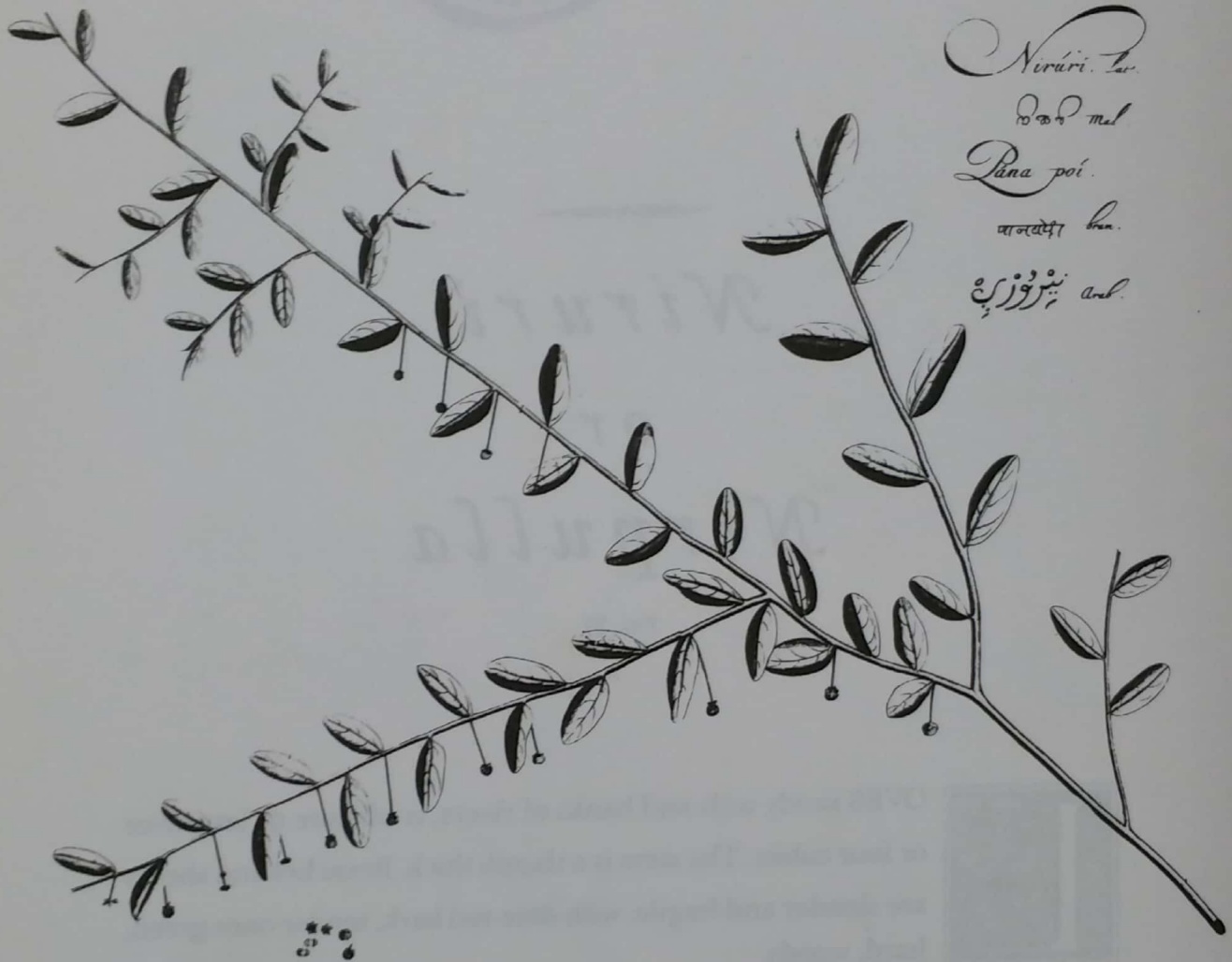


LOVES sandy soils and banks of rivers, is of more or less three or four cubits. The stem is a thumb thick. Branches and shoots are slender and fragile, with date-red bark, tender ones green, hard, woody.

The leaves come out in two series, are oblong-round, slender, Soft, very smooth, of dark green colour on the upper part, in the lower glass-green (hyaline), dark, ash-grey, provided with a deep-green and shining rib-let.

Flowers arise either solitarily (singly) or in twos on very slender lead-purple-red petioles, and are small, six petalled, cuspidate, white, striated with a green vein-let in the middle with a green globule, striated with six vein-lets; without any smell.

Fruits are plain-round globules and as if granulated, are green, surrounded by the leaves of flowers, provided at the top as if with a six cornered starlet; in them are six seeds, contained in a cartilaginous rind, three-sided, with the outer one convex, two inner one being plain, date-red-black and shining.



Niruri. L.

റൂറു മല

Pala poí.

പാലാപോ

نیروری

Fig. 27

(Its Uses)

Each part boiled with *long pepper* and *cumin* is against catarrhal cough (cough with discharge of fluid from the inflammation of a mucous membrane, especially of the nose) and the concomitant fever. The leaves or root reduced to the consistency of plasma in rice-water, reduces oedematous swellings. The root crushed and made into a smear (epithema) with cow's milk, fresh butter, honey and applied to the affected side, cures pleuresi (inflammation of the pleura), its bark or also its root or leaves boiled in skimmed milk, drains out phlegm. From the same bark cooked in oil an anti-oedematous ointment is prepared, mixed with salt in rice-water provides an anti-pleureasic apozema (decoction).

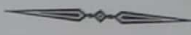
Phyllanthus virgatus G. Forster, Fl. Ins. Austr. 65. 1786; Sald. & Nicols., Fl. Hassan Distr. 347. 1976; Manilal & Sivar., Fl. Calicut 264. 1982; Sasidh. & Sivar., Fl. Thrissur 413. 1996; Sivar. & Philip, Fl. Nilambur 641. 1997. - *Phyllanthus pedunculatus* Kostel., Allg. Med.-Pharm. Fl. 5: 1769. 1836. *Phyllanthus depressus* Ham. ex Dillwyn, Rev. Hort. Malab. 51. 1839, nom. illeg. (incl. type of *Phyllanthus pedunculatus* Kostel. 1836). *Macraea rheedei* Wight, Icon. 5: 27, t. 1901. 1852 ("rheedi"), nom. illeg. (incl. type of *Phyllanthus pedunculatus* Kostel. 1836). *Phyllanthus macraei* Müll.-Arg., Linnaea 32: 29. 1863, nom. illeg. (incl. type of *Phyllanthus pedunculatus* Kostel. 1836); Müll.-Arg. in DC., Prodr. 15(2): 393. 1864 [EUPHORBIACEAE].

Niruri, Nirpulla Rheede, Hort. Malab. 10: 53, t. 27. 1690.

The name Neeroori [Malayalam script on t. 27] is now not used for this species but is used for smaller, herbaceous species of *Phyllanthus*. Neer (nir) is water and uri (from oori) means that which removes or takes away. Neeroori means that which shrinks oedema. Nirpullu means a herb [pullu] growing in or around water [neer]. It occurs in the coastal plains of Malabar.

The first part of the report is a general introduction to the project. It describes the purpose of the study, the objectives, and the scope of the work. The second part of the report is a detailed description of the methodology used in the study. This includes a discussion of the data collection methods, the analysis techniques, and the results of the study. The third part of the report is a discussion of the results of the study. This includes a comparison of the results with the objectives of the study, a discussion of the strengths and weaknesses of the study, and a conclusion. The fourth part of the report is a list of references. This includes a list of the books, articles, and other sources used in the study.

The results of the study show that the methodology used in the study was effective in achieving the objectives of the study. The results of the study are consistent with the objectives of the study, and the strengths and weaknesses of the study are discussed. The conclusion of the study is that the methodology used in the study was effective in achieving the objectives of the study. The list of references includes a list of the books, articles, and other sources used in the study.



Tsjeru-vallél

FIG. 28

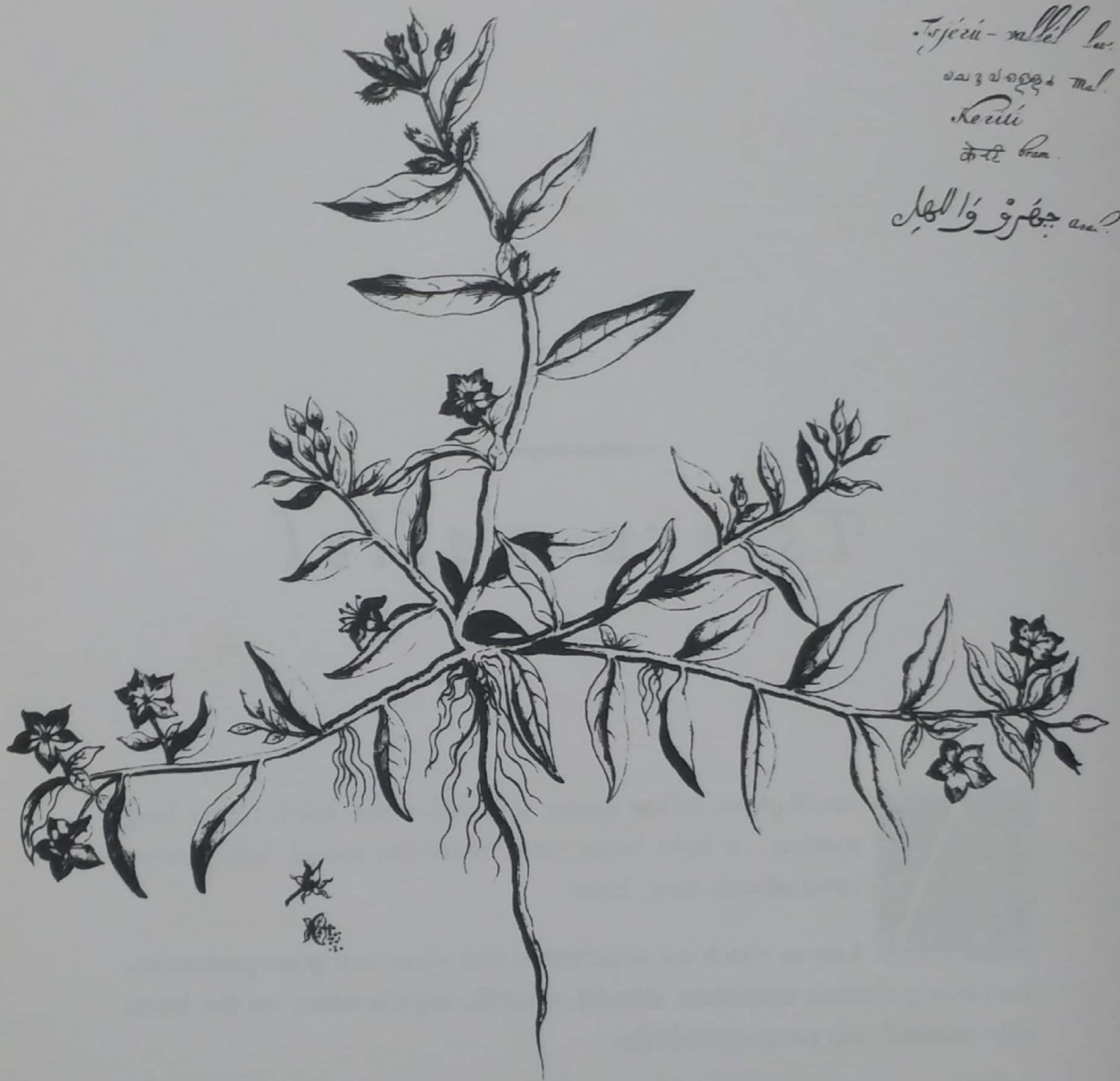


small plant, loving watery soil, with white, hairy, rather long rootlets, of light bitter taste. Stalk-lets round, light green, covered with short hairs.

Leaves which are attached to very short and plain peduncles, are oblong-narrow, cuspidate, slender, smooth, slightly bitter, on the lower side covered with pronounced ribs.

Flowers which arise many together in short petioles, are accompanied by green, small leaves, are star-shaped, five-petalled, handsomely bluish and enticing; without smell. A green head juts out from the mouth, which gives out two bluish stamens from its top, which again are girded by five other white ones, are capped with fork-shaped white apices. The calyx is five-foliate and hairy.

Seed bearing globules are small, oblong, narrow above, wholly covered with the leaves of the calyx, contain in themselves numerous almost sand-like seeds.



Tsjeru-vallel Lu.
 ചെറു വള്ളം മല.
 Cheru
 ചെറു വള്ളം.
 جبرق والهل asa?

Hydrolea zeylanica (L.) Vahl, Symb. Bot. 2: 46. 1791; Backer in Fl. Males. 1, 4: 207. 1951; Manilal & Sivar., Fl. Calicut 175. 1982; Sasidh. & Sivar., Fl. Thrissur 300. 1996; Sivar. & Philip, Fl. Nilambur 437. 1997. - *Nama zeylanica* L., Sp. Pl. 226. 1753. *Steris javana* L., Mant. 54. 1767. *Hydrolea inermis* Lour., Fl. Cochinch. 1: 72. 1790 [HYDROPHYLLACEAE].

Tsjeru-vallel Rheede, Hort. Malab. 10: 55, t. 28. 1690.

The name Cheruvallel [Malayalam script on t. 28] is still used; cheru means small and vallel means being bulged in. The allusion is not clear. It occurs in abandoned paddy fields of Malabar.



Scheru-bula

FIG. 29



HERE are two species of this plant, one of the same name, the other *Scheru-bula*, which is called *Tandalo* in the language of Brahmins, spreading its branches chiefly in breadth up to three feet; loving sandy soil, always flowering. Root is slender, white and reddish, fibrous and light bitter. Stalks are slender, round, light green and reddish, downy, somewhat woody.

Leaves arise in stalks either solitarily or in twos or clustered in threes, and are attached to very short petioles, are small, round, a bit oblong, thick, hairy on the surface, especially on the lower side. The mid-rib with lateral ones stand out on the lower side, striate the upper side.

Flowers in spikes are seen everywhere and compactly on short petioles which arise either solitarily (singly) or in twos or threes together from above the origin of leaves, resembling oblong heads, and are round, white and downy buds, are five petalled, on the outside downy and white, on the inside green; without any smell. In these are five slender stamens, provided with small and yellow apices.



Fig. 29

Seed-capsules are formed from the very flowers, closed again after the opening, in each one is contained a single, minute, round, plain seed, first green, then reddish and finally black and shining.

Aerva lanata (L.) Juss. ex Schult. in Roem. & Schult., Syst. Veg. 5: 564. 1819; Townsend in Dassan., Rev. Handb. Fl. Ceylon 1: 32. 1980; Manilal & Sivar., Fl. Calicut 244. 1982; Sasidh. & Sivar., Fl. Thrissur 368. 1996; Sivar. & Philip, Fl. Nilambur 558. 1997. -*Achyranthes lanata* L., Sp. Pl. 204. 1753. *Illecebrum lanatum* (L.) L., Mant. 344. 1771. *Aerva tandalo* Ham. ex Dillwyn, Rev. Hort. Malab. 51. 1839 ("*Aerua*") [AMARANTHACEAE].

Scheru-bula Rheede, Hort. Malab. 10: 57, t. 29. 1690.

The name Cheruvula [Malayalam script on t. 29] is still used in the variant form of cherula; cheru means small. The meaning of bula [or poola] is not clear, although it is sometimes used to indicate silk cotton [poola panji, panji meaning cotton]. However, Cherupoola is the name of *Aerva lanata*, which plant is used by very low caste Hindus for their funeral ceremonies, instead of the sacred plant Thulasi [*Ocimum tenuifolium*], used by higher caste Hindus. It occurs throughout Kerala.



Bula

FIG. 30



THE second species is called *Dacalo Tandalo* in the language of the Brahmins, is similar to the first except that the stalks are not spread so broadly. Root the same. The stalks are tender and striated, very watery inside, light green or also reddish, which when rubbed together sometimes give out smoke or vapour.

The leaves are a bit smaller, hairy on both sides. The mid-rib stands out on the lower side so also the lateral ones, striate the upper side.

Flowers arise in the same way as those of the preceding one, are white, reddish above, four petalled, without smell. In these are two white stamens, the apices of which also are white. The seeds are in follicles, in each two, but in separate locules, are small, when mature dark.

(Its Uses)

Root crushed with *Scheru-bula* and used as a drink, loosens and drives out aqueous gas.

Bula. l.

മുളി

ملي

മുകുള

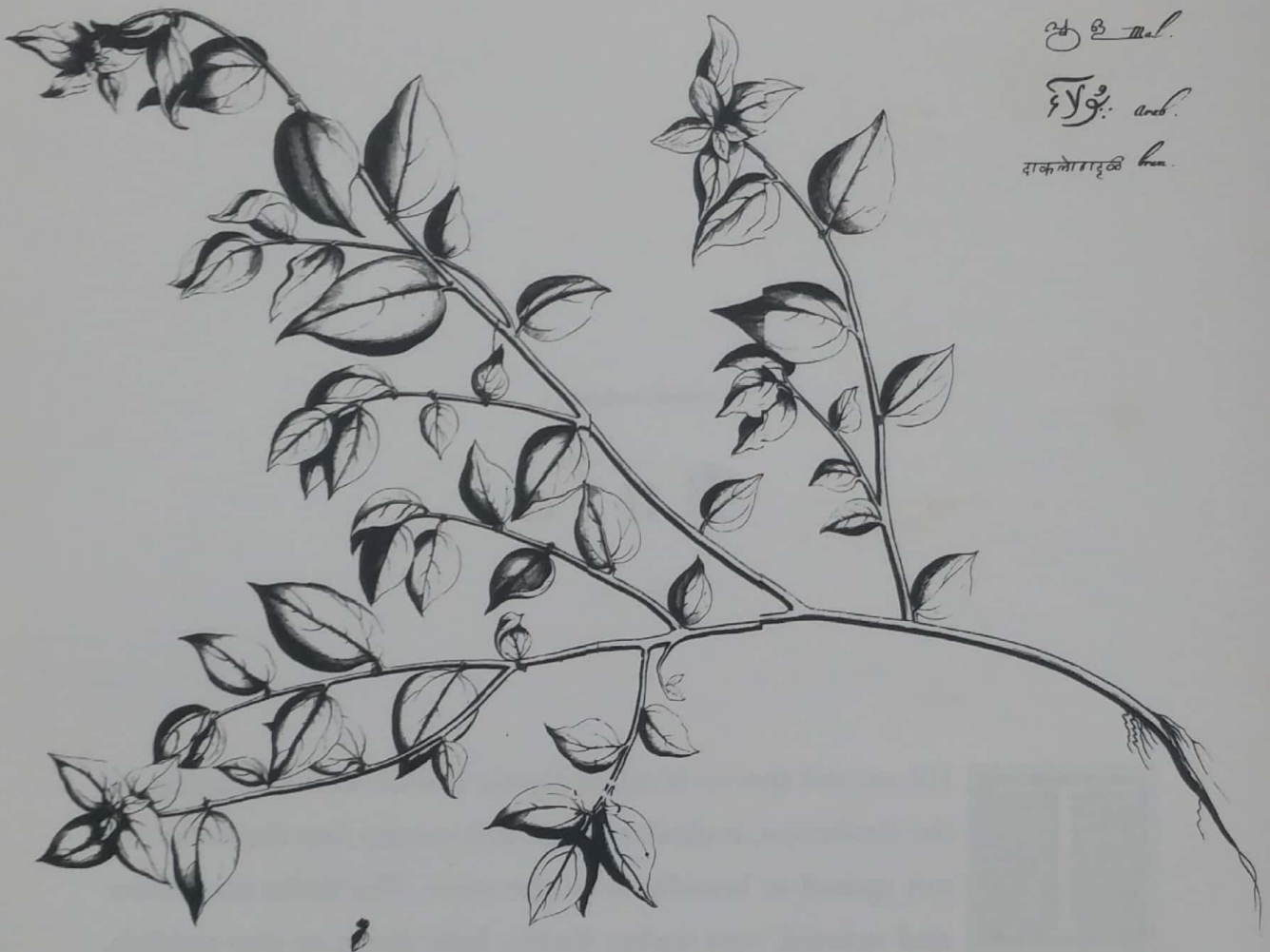


Fig. 30

Pouzolzia zeylanica (L.) Benn., Fl. Jav. Rar. 67. 1838; Manilal & Sivar., Fl. Calicut 280. 1982; Manilal, Fl. Silent Valley 265. 1988; Sasidh. & Sivar., Fl. Thrissur 422. 1996; Sivar. & Philip, Fl. Nilambur 654. 1997. - *Parietaria zeylanica* L., Sp. Pl. 1052. 1753. *Hedyotis subcordata* Dennst., Schlüssel 10, 21, 36. 1818 [URTICACEAE].

Bula Rheede, Hort. Malab. 10: 59, t. 30. 1690.

The name Pula [Malayalam script on t. 30] is not used now. No Malayalam name is currently available for this species. The meaning of Pula [or poola] is not clear, although it is sometimes used to indicate silk cotton [poola panji, panji meaning cotton]. It is very common along the coast of Malabar.



Nela-tsira

FIG. 31



MALL creeping plant, with jointed, watery reddish stalks, fixing itself with white fibres, which it spreads from the joints, hairy around the joints with oblong, white hairs. The leaves are small, oblong-round, very thick and aqueous.

Flowers are small, yellow, four petalled, round, the stamens of which are also yellow.

(Its Uses)

A decoction of this plant in whey of milk, suppresses that famous swelling of feet, called *Todda-Vela*.

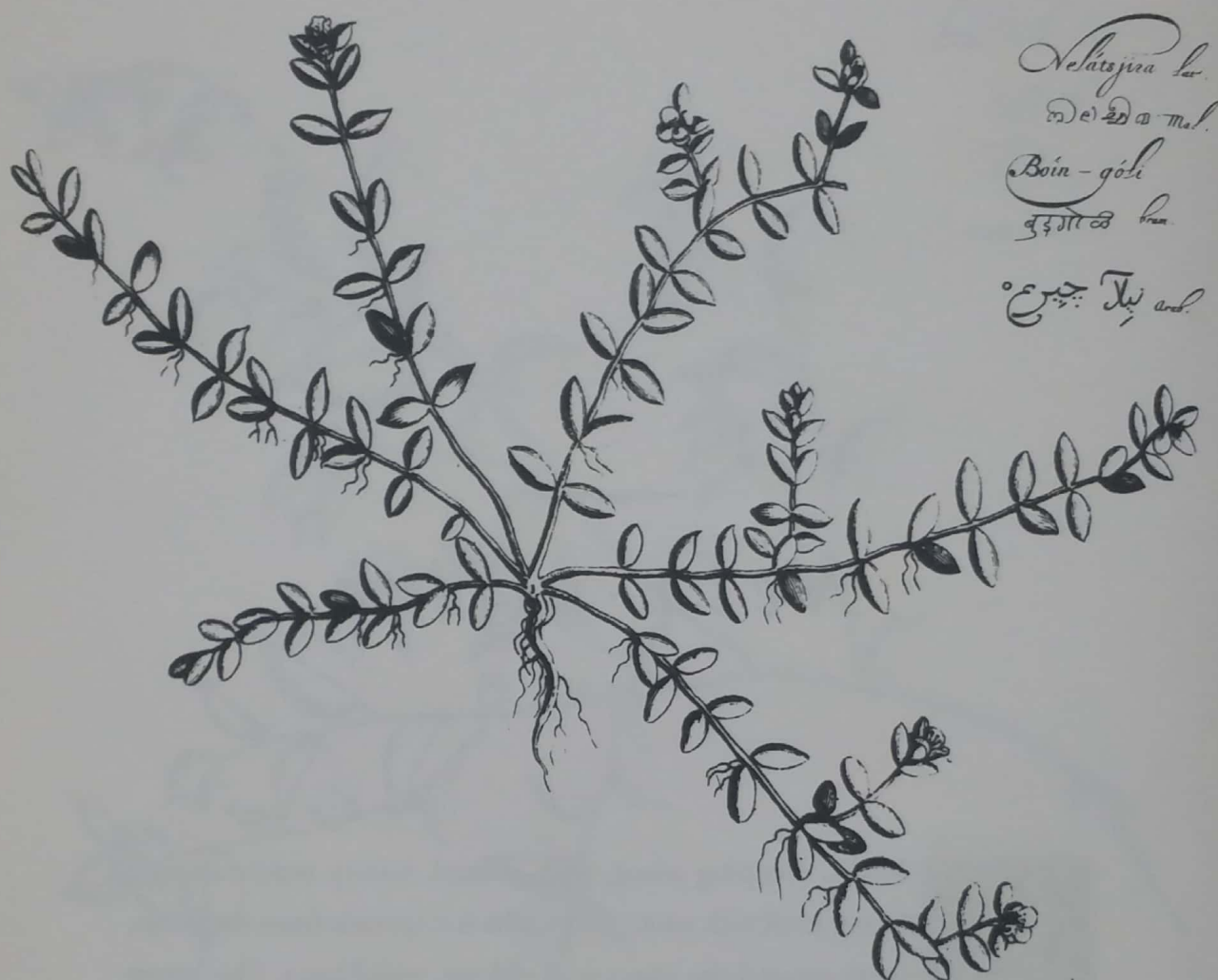


Fig. 31

Portulaca quadrifolia L., Mant. Pl. 73. 1767; Geesink, Blumea 17: 290. 1969; Geesink in Fl. Males. I, 7: 127. 1971. - *Portulaca meridiana* L.f., Suppl. Pl. 248. 1782. *Portulaca quadrifida* var. *meridiana* (L.f.) DC., Prodr. 3: 354. 1828 [PORTULACACEAE].

Nelatsjera Rheede, Hort. Malab. 10: 61, t. 31. 1690.

The name Nilacheera [Malayalam script on t. 31] is not used for this species but is used for *Portulaca oleracea*; nila means ground and cheera edible greens [leaves]. No Malayalam name is currently in use for this species. It is rare in the coastal plains of Malabar.



Muriguti

FIG. 32



LIVES sandy soil, creeping over the ground. Root white, fibrous, of pleasing smell. Branches jointed, green, or also from date-red to reddish when tender, turning white and covered with longer hairs.

Leaves are attached in pairs to the joints, are oblong-narrow, of deep green colour on the upper side, of light green on the lower, slightly covered with hairs, slightly rough. The mid-rib with the lateral ones stand out prominently on the lower side.

Flowers are attached to the joints many clustered together above the leaves, are with a broad neck, small, four petalled or also five petalled but rarely, bent towards the outside, wholly very white. In these are four slender, white stamens, provided with erect, white apices.

Seed capsules round, with a plain, broad tip, first green, a bit bulging (swollen) knob in the middle of the tip. In these three or four, sand-like, very black seeds.

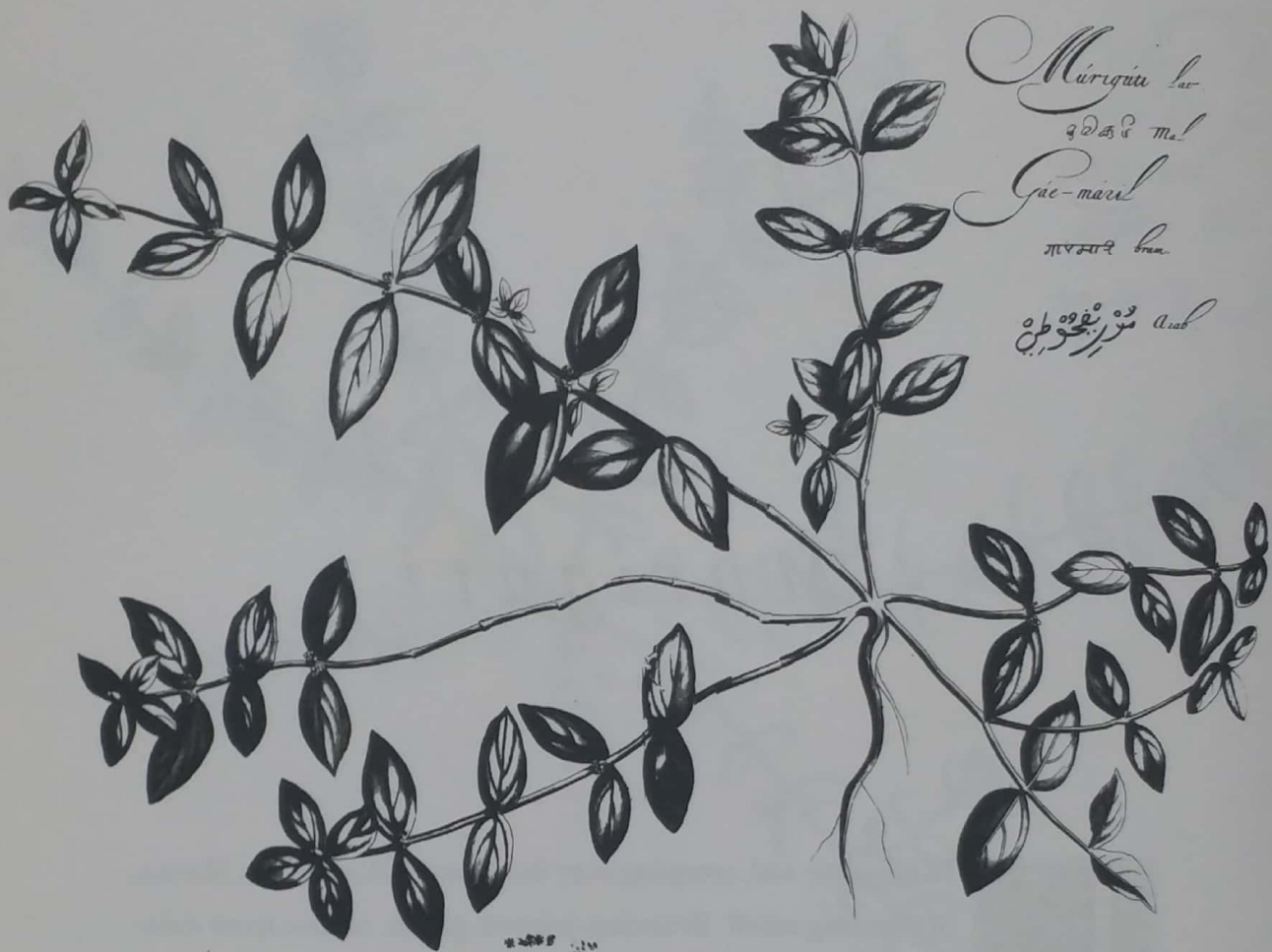


Fig. 32

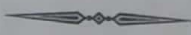
(Its Uses)

The leaves, crushed and mixed with butter gives an ointment maturing (ripening) and opening abscess. If *saffron* is added and boiled with the oil of Indian nut, heals wounds; for the healing power, both in name and reality suits to this plant; for *Murigutti* says this much as *wound, heal*.

Hedyotis auricularia L., Sp. Pl. 101. 1753; Ridsdale in Manilal, Bot. Hist. Hort. Malab. 131. 1980; Manilal & Sivar., Fl. Calicut 140. 1982; Manilal, Fl. Silent Valley 131. 1988; Sasidh. & Sivar., Fl. Thrissur 220. 1996; Sivar. & Philip, Fl. Nilambur 324. 1997. - *Hedyotis hirsuta* Lam., Encycl. 3: 79. 1789. *Oldenlandia auricularia* (L.) K. Schum. in Engl. & Prantl, Pflanzenfam. 4(4): 25. 1891. *Exallage auricularia* (L.) Bremek., Verh. Kon. Nederl. Akad. Wet. 2, 48(2): 142. 1952 [RUBIACEAE].

Muriguti Rheede, Hort. Malab. 10: 63, t. 32. 1690.

The name Murikooti [Malayalam script on t. 32] is still used; muri (from murivu) means wound or cut and kooti means to join together [or heal]. The name indicates its medicinal power of healing wounds. It occurs throughout Malabar.



Caicotten-pala

FIG. 33



IN the language of the Brahmins *Dodini*, is a very small plant, liking sandy soil. Root fibrous and hairy, with a reddish bark which is of light bitter taste. The stalk-lets are round, woody, green and hairy, separated into nodes, bulging out around the upper part of the nodes with light-green tubercle, inside milky.

Leaves arise two by two, are oblong, more narrow towards the petiole on one side, towards the apex on the other side, incised in the margin with minute teeth, milky, slender, with a hairy surface. The mid-rib with nerves stands out on the lower side.

Flowers arise both in the bottom and top part of the stalk, at times one in number, coming out at the origin of each leaf, covered with loose hairs and are numerous light yellow or red buds, which many joined together, at the tip of the petioles, where they spread (split) into very minute branch-lets, form a yellow head; for the rest they are small, four petalled, light green, white, in the middle green, the style of which gives out a slender filament with a knob at the top.

The seed-capsules are somewhat larger, three sided striated on the sides, first green, then yellow. In each are three, small, concise, red seeds. There is still another species of this plant, differing only in this that the stalk-lets turn red as also the buds in heads, the petals of which are white and in the middle very red. Are seen chiefly in the rainy season, rarely however in the summer.

Caecotén - pā'ā lū
 കൈകൊത്തേറ പാ'വുല മാ!

فخمين قواطه يعلع
 5301 Gram



Fig. 33

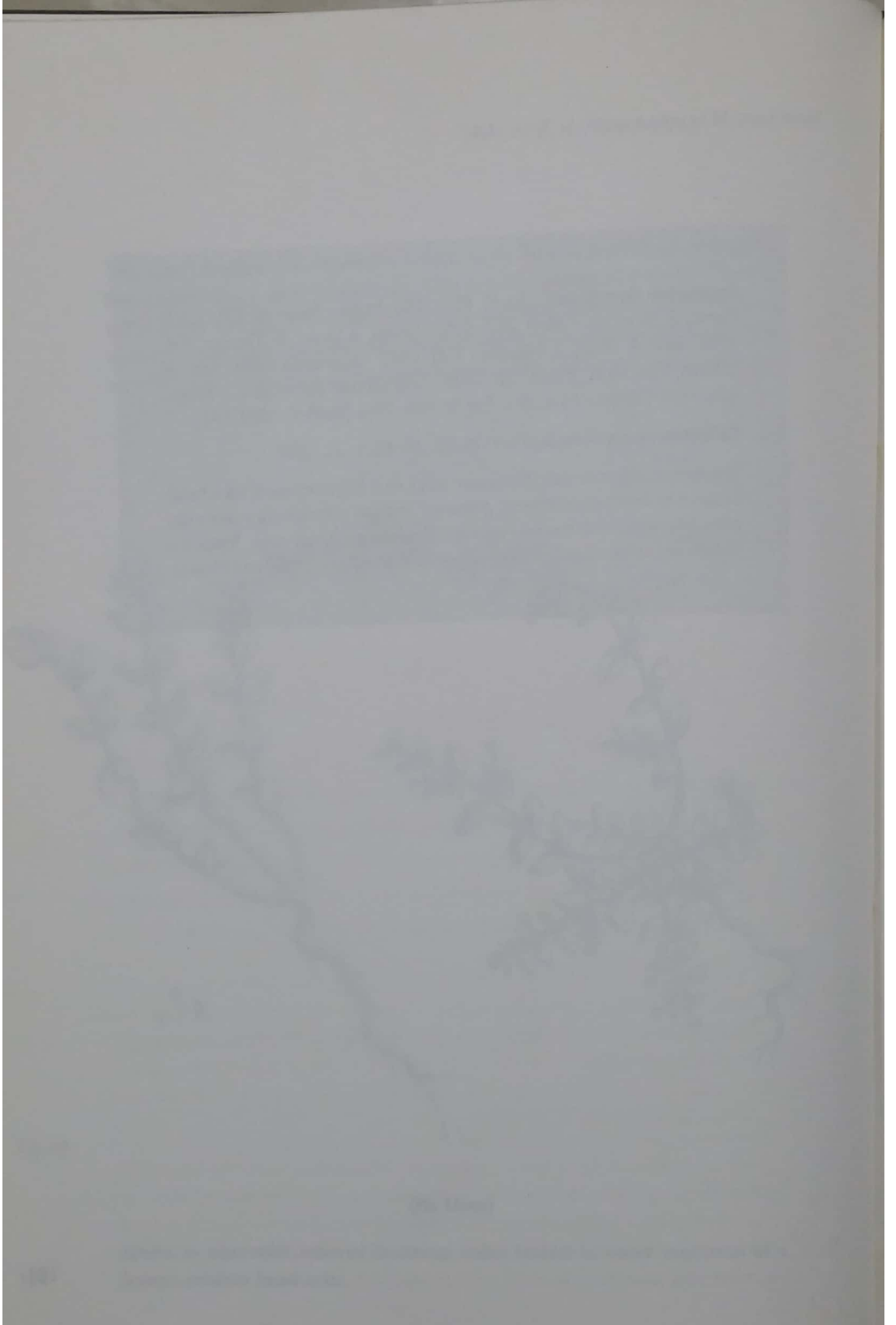
(Its Uses)

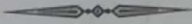
Given in sour milk relieves intestinal colic; boiled in water and used as a lotion, relieves head ache.

Euphorbia thymifolia L., Sp. Pl. 454. 1753; Mabb., Taxon 26: 531. 1977; Manilal & Sivar., Fl. Calicut 257. 1982; Sasidh. & Sivar., Fl. Thrissur 404. 1996; Sivar. & Philip, Fl. Nilambur 620. 1997. -*Euphorbia foliata* Ham. ex Dillwyn, Rev. Hort. Malab. 52. 1839. *Chamaesyce thymifolia* (L.) Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 412. 1916 [EUPHORBIACEAE].

Caicotten-pala Rheede, Hort. Malab. 10: 65, t. 33, 1690.

The name Kaikkothanpala [Malayalam script on t. 33] is not used. Kai is hand; kottan is an insect destructive to granaries; and pala means a plant with milky latex. [Kai kottu also means clapping]. The allusion is not clear. Today it is sometimes called nilapala; nila means ground. It occurs throughout Malabar.





Naru-nundi

FIG. 34



IN the language of the Brahmins *Upa-ra-Sali*, is a herb creeping without tendrils, loving sandy soil. The root is slender, woody, white inside, with a slender milky bark, which while young is light green, then turning yellow, somewhat hairy; when dry somehow of sharp, sweet, aromatic smell. The stalks are slender, milky, red, or date-red, first green.

Leaves arise two by two on very short petioles, on the inside purple-pale, are oblong, narrow, contracted (becoming narrow) towards the top, thinning into an oblong, narrow tip dark-green; during the winter or rainy season almost three times longer than in summer. The rib striates the upper side, where it is purple-pale; on the lower side it stands out.

Flowers are seen in twos, threes or fours with their own peduncles on a short common branch-let, the buds are open, five petalled, thick, cuspidate, on the inside somewhat red or reddish, then more red, in the mouth towards the claws red-bluish, on the outside green-yellow. In the middle is a head, formed of a middle style, with a plane white tip, equipped with five, small,

thick, cuspidate, light red stamens, bent in an arched manner towards the style, resembling as if ribs to heads; without smell.

Does not bear fruit, neither seeds.

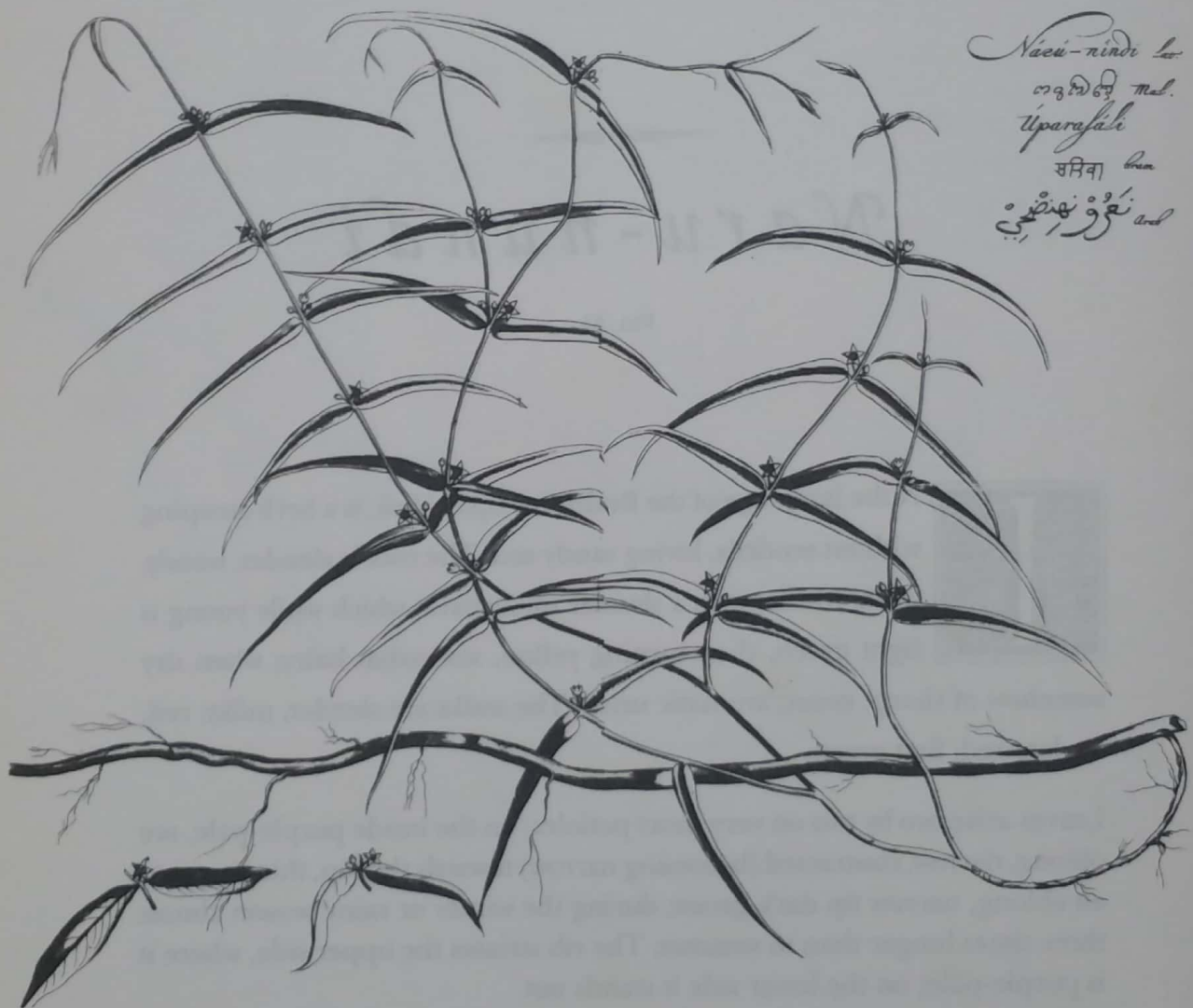


Fig. 34

(Its Uses)

The root cut into pieces with *onion*, and the flesh of *Anatina* and cooked in the oil of Indian nut, gives anti-haemorrhage decoction. Powder of the root, given alone, is against fever; mixed with *sugar* is against quartan fever; taken with wine, or used as a bath, cures empyemate (a collection of puss in any cavity, especially the pleura) and internal abscess. The same root, when placed over the part injured by virulent cobra, is recommended for its alexicac (anti poisonous, or alexiac (?) word blindness, loss of power to read) power; crushed with water yields a drink against diarrhoea. The bulb of the root with the milky juice of coconut taken in, removes haemorrhage. From the same bark, reduced to fine smooth powder with milk and fresh butter, is prepared an ointment against poisonous owls, to be applied externally; the same bulb, powdered with oil and reduced to the form of a libation, stops (resists) haemorrhage.

Hemidesmus indicus (L.) W. T. Aiton, Hort. Kew. ed. 2, 2: 75. 1811; Manilal & Sivar., Fl. Calicut 171. 1982; Huber in Dassan., Rev. Handb. Fl. Ceylon 4: 185. 1983; Manilal, Fl. Silent Valley 178. 1988; Sasidh. & Sivar., Fl. Thrissur 289. 1996; Sivar. & Philip, Fl. Nilambur 427. 1997. - *Periploca indica* L., Sp. Pl. 211. 1753. *Asclepias pseudosarsa* Roxb., Hort. Beng. 20. 1814, nom. illeg. (incl. type of *Periploca indica* L. 1753) [ASCLEPIADACEAE].

Naru-nindi Rheede, Hort. Malab. 10: 67-68, t. 34. 1690.

The name Naruneendi [Malayalam script on t. 34] is still used. It is also called Nannari. Naru (connected with nal, means fragrance; neendi means long, alluding either to the long leaves or long lasting fragrance. Nannari means having good (nan or nal) fragrance (naari), referring to the unique fragrance of its roots. The root is called Indian sarsaparilla (giving rise to Roxburgh's species epithet) and has a cooling effect. It occurs throughout Malabar.

The second part of the document provides a detailed overview of the various methods used to collect and analyze data. It describes the different types of data sources, such as surveys, interviews, and focus groups, and explains how this information is used to identify trends and patterns. The document also discusses the importance of ensuring the reliability and validity of the data collected.

The third part of the document focuses on the analysis and interpretation of the data. It describes the various statistical techniques used to analyze the data, such as regression analysis and correlation analysis, and explains how these techniques are used to draw conclusions from the data. The document also discusses the importance of considering the context of the data and the potential limitations of the analysis.

The final part of the document provides a summary of the key findings and conclusions. It emphasizes the importance of ongoing monitoring and evaluation to ensure that the system remains effective and efficient. The document also discusses the need for continued research and development to improve the system and to address any emerging challenges.



Parpadagam

FIG. 35



small plant, liking sandy soil, with the stalk-lets spread broad. The root is fibrous, white. Stalks are round light green, jointed, clothed in the joints with leaves in pairs in a decussate order, which are oblong-narrow, cuspidate, a bit thick, striated with a vein standing up on the lower side.

The flowers are small, reddish, four petalled, cuspidate, white, light purple in the tip; are clasped by a green globose calyx, with a round orifice, the leaves of which are turned towards the interspaces of petals: in these are four erect, white stamens, provided with white apices; whose style is white and bifurcated.

The seed-capsules, bear four tips at the top, and in the same place are red, in the middle striated in length by a suture, inside separated into two parts by an intermediary membrane, which runs from the suture. In them are contained numerous, sand-like seeds, placed on greenish flesh.

(Its Uses)

Crushed with *citrus*, *sandalwood*, in water and milk, an apozema (decoction) is made against burning and when *cumin* and *Tsjaninaigam* added, against spasmodic fevers.

Sarpagüm L.

മലബാറിലെ മര.

قحار يا ساغلمه

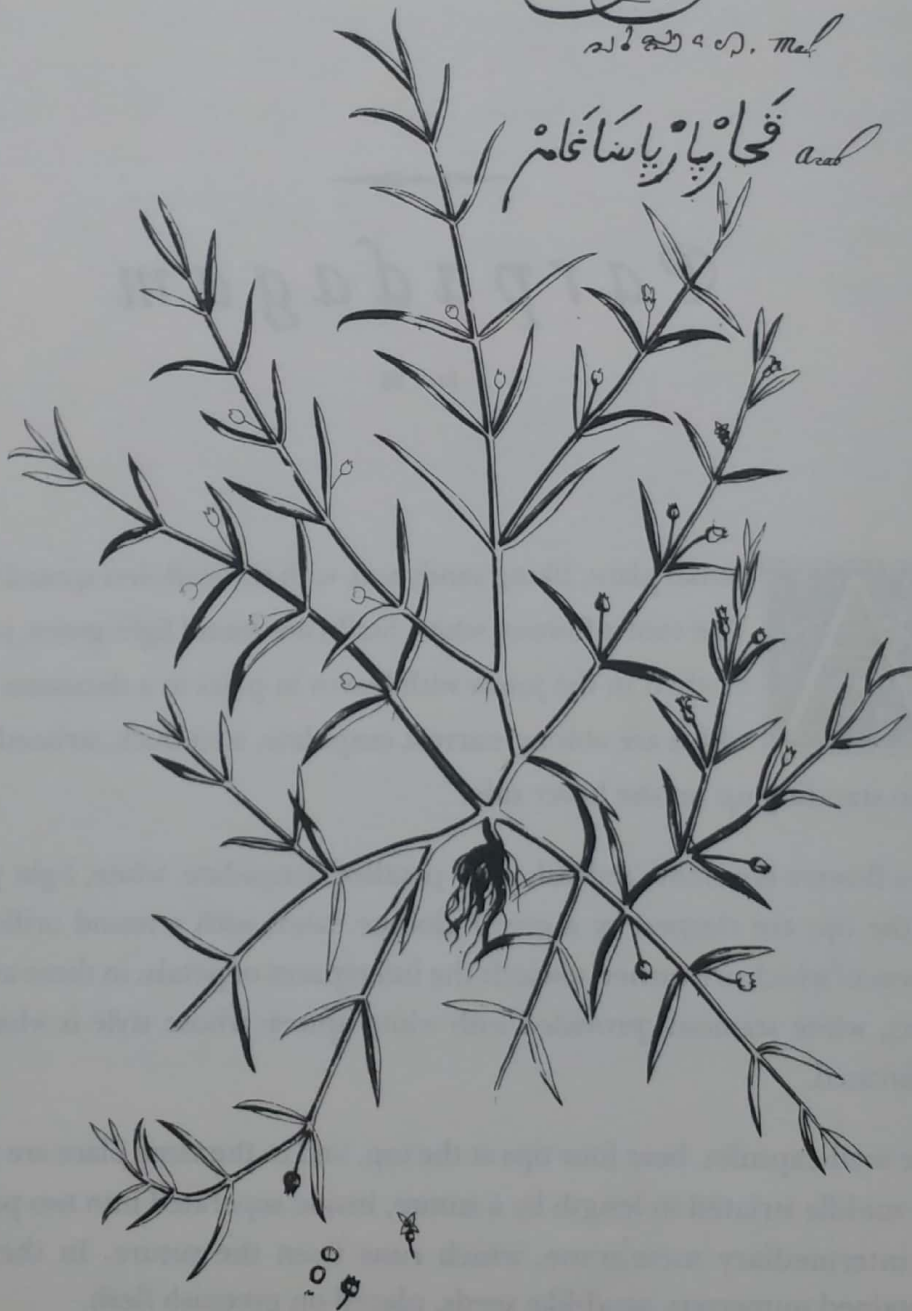


Fig. 35

Hedyotis corymbosa (L.) Lam., Tabl. Encycl. 1: 272. 1791; Ridsdale in Manilal, Bot. Hist. Hort. Malab. 131. 1980; Manilal & Sivar., Fl. Calicut 142. 1982; Sivar. & Philip, Fl. Nilambur 325. 1997. - *Oldenlandia corymbosa* L., Sp. Pl. 119. 1753. *Oldenlandia tenuifolia* N. Burm., Fl. Ind. 37. 1768 [RUBIACEAE].

Parpadagam Rheede, Hort. Malab. 10: 69, t. 35. 1690.

The name Parpadakam [Malayalam script on t. 35] is still used for this and sometimes also for *Hedyotis herbacea* L. It occurs throughout Malabar.



Kara-tsjira

FIG. 36



LS a species of *Pola Tsjira*, is a small plant, liking sandy and wet soils, with the stalks spread horizontally on the earth and decumbent. Root is white, fibrous, inside woody, stalks round, green, on one side often from date-red to reddish, glabrous, soft, pale, aqueous, giving out very many horizontal branches.

Leaves arise many together, are oblong, broad, narrow towards the petiole, anteriorly round rather thick, soft, fragile to touch, smooth, provided on the lower side with a vein, dark, reddish towards the margin, very similar to the leaves of *Portulaca*, but less oblong, of aqueous taste, a kind of vegetable.

Flowers, many together come out from the middle of the origin of leaves, are small, five petalled, oblong, in the middle on the inside incised, yellow, are clasped in a green broad, rigid, big, compressed calyx, drawn into two sharp margins: in them are many, yellow stamens, provided with yellow knobs. Flower buds are green, anteriorly compressed, with round and sharp margins.

Seed-capsules are enclosed in the contracted calyx, contain numerous, round, small seeds, first white then reddish, finally black.

(Its Uses)

Crushed with the washings of rice, heals boils.

Caca - taja L.

കാതാ . Mal

Goh

നീർ വെ.

فَقْعُ جِرْعِ Arab

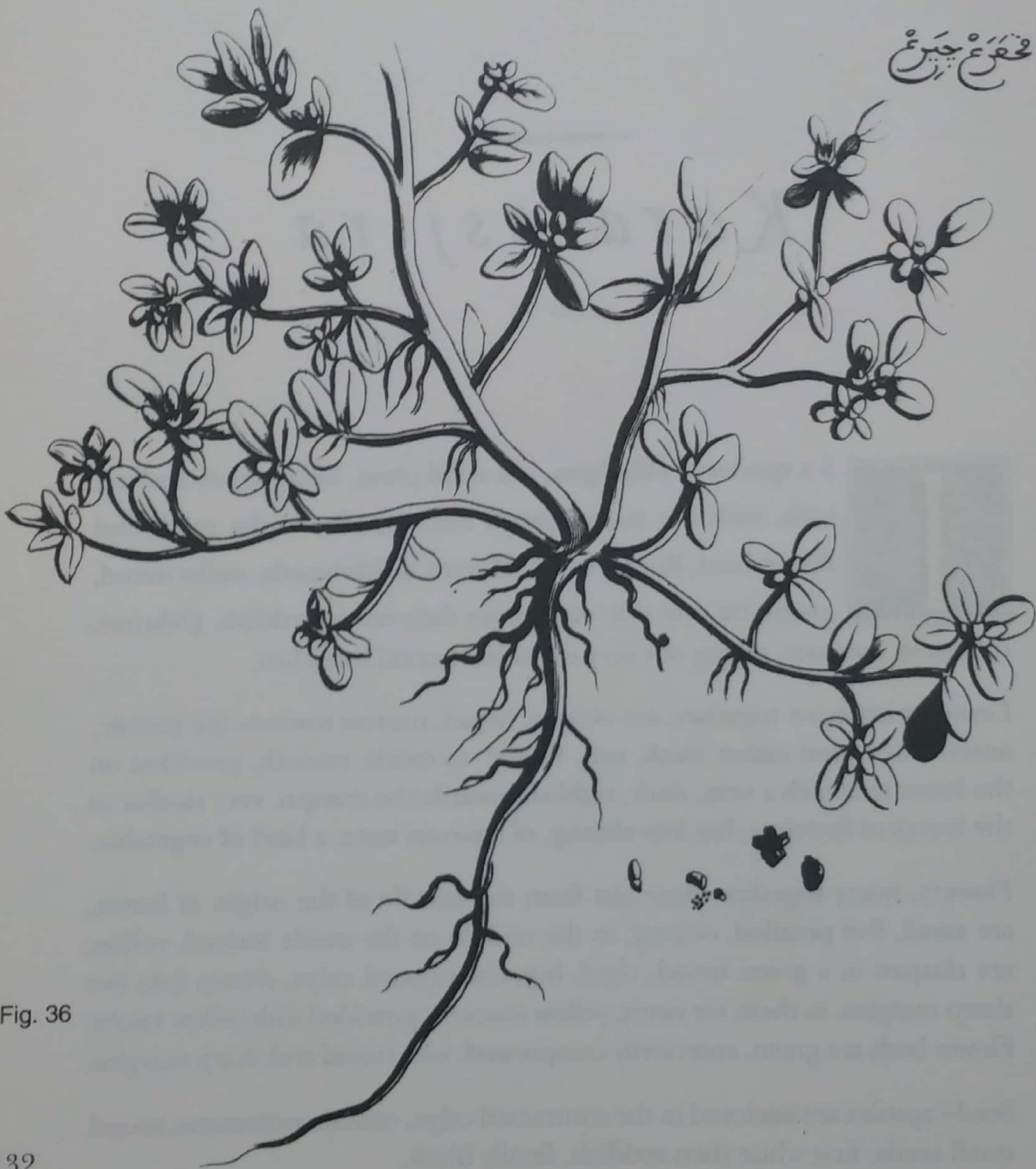


Fig. 36

Portulaca oleracea L., Sp. Pl. 445. 1753; Geesink, Blumea 17: 292. 1969; Geesink in Fl. Males. 1,7: 129. 1971; Manilal & Sivar., Fl. Calicut 40. 1982; Manilal, Fl. Silent Valley 17. 1988; Sasidh. & Sivar., Fl. Thrissur 50. 1996; Sivar. & Philip, Fl. Nilambur 66. 1997. - *Portulaca oleracea* var. *sylvestris* L. ex Dennst., Schlüssel 12, 24, 36. 1818 [PORTULACACEAE].

Kara-tsijira Rheede, Hort. Malab. 10: 71, t. 36. 1690.

The name Karacheera [Malayalam script on t. 36] is not used; kara means terrestrial (land) and cheera refers to leafy vegetables. Today it is called Nilacheera; nilam also means terrestrial. It is sometimes used as a leafy vegetable and occurs throughout Malabar.



Wadapu

FIG. 37



ROWS in sandy soils. Branches are round, light green, jointed, reddish in the joints, covered with shaggy hairs a bit hirsute, which render them slightly rough when they are pressed by hand.

Leaves arise in pairs in the joints, or also many together, where shoot-lets arise from the joints of branches, are oblong-narrow, thick, light green, covered on both sides with white hairs. The rib stands out on the lower side.

Flowers are compactly clustered together, are purple-red, but from ash coloured to white, in these are yellow starlets, five cornered, standing out from the middle; the flowers themselves open slowly, first the lower ones with their starlets, the upper ones still being closed. The seeds are situated among the hairy filaments in the middle of two leaves, one in number, which when dry are of red-black colour.

It is to be observed also in this plant that during the rainy season, the seeds remaining in the heads, produce the rudiments of new plants (germinate) similarly as if they were sown in soil; the shoot of which is tender, of one



Fig. 37

thumb in length and light red, and at the top covered with two dark-green, oblong-round, small leaves; from the heads however hanging towards the earth, the very rudiments come out from their seeds, the shoots standing erect and turned away from the tips of leaves, into the lofty and free air. During the summer and hot season nothing similar is observed in any plant.

There is also another species, differing from the first only in that the heads of flowers are with white leaves; the starlets are yellow, the heads as in the former species, red.

(Its Uses)

The leaves of this plant, taken in with *citrus*, *sandal* wood, in water, mitigates cough and the accompanying pain of bowels and throat.

Gomphrena globosa L., Sp. Pl. 224. 1753; Backer in Fl. Males. I, 4: 95. 1949; Mears, Taxon 29: 85. Feb. 1980; Townsend in Dassan., Rev. Handb. Fl. Ceylon I: 55. Feb. 1980; Manilal & Sivar., Fl. Calicut 246. 1982 [AMARANTHACEAE].

Wadapu Rheede, Hort. Malab. 10: 73-74, t. 37. 1690.

The name Vadaapoo [Malayalam script on t. 37] is still used; vadaa (from vaduka; -aa denotes negative) means that which does not wilt and poo means flower. The name Vadapoo means a flower that does not wilt. It is also known as Vadaa-malli, malli also meaning flower. It is cultivated as a garden plant in Malabar.

There is also a number of small bones, some of which are found in the same place as the large bones, and some of which are found in the same place as the large bones.

(The bones)

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.

The bones of the skull are found in the same place as the large bones, and some of which are found in the same place as the large bones.



Belutta-adeca-manjen

FIG. 38



S an aqueous plant. Root white, fibrous. Stalks woody, green.

The leaves which are attached to the shoots, are oblong-narrow, slender, smooth. The mid-rib with the lateral ones stands out on the lower side.

Flowers arise in spikes, in heads, first round, then more oblong, are five petalled, rather rigid, on the inside spoon-shaped, white and slightly red-purple and shining. In them are five red stamens, provided with red apices, the style of which is more oblong, capped (knobbed) at the top.

Three or four seeds are placed in spikes, are small, circular, plain-round, from date-red to black, glabrous and very shining.

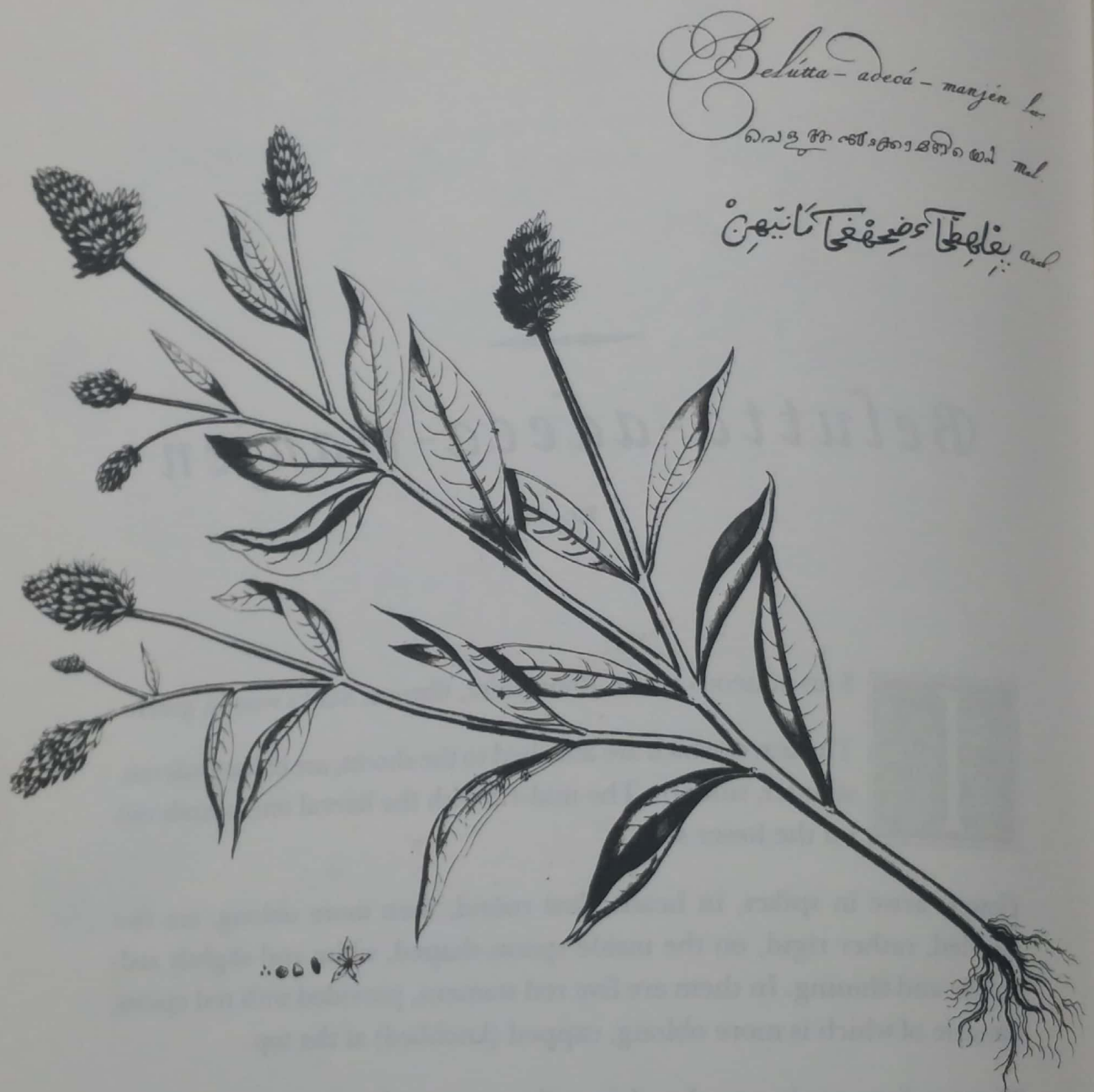


Fig. 38

Celosia argentea L., Sp. Pl. 205. 1753; Townsend in Dassan., Rev Handb. Fl. Ceylon 1: 3. 1980; Manilal & Sivar., Fl. Calicut 246. 1982; Sivar. & Philip, Fl. Nilambur 556. 1997. - *Celosia margaritacea* L., Sp. Pl. ed. 2, 297. 1762. *Celosia argentea* var. *margaritacea* (L.) N. Burm., Fl. Ind. 64. 1768 [AMARANTHACEAE].

Belutta-adeca-manjen Rheede, Hort. Malab. 10: 75, t. 38. 1690.

The name Veluthadakkamaniyan [Malayalam script on t. 38] is not used; velutha means white, adakkamaniyan refers to tender (young) *Areca* fruits [or similar structures]. No Malayalam name is now available for this. It occurs on the margins of paddy fields in Malabar.

Handwritten text block in the upper middle section of the page, possibly a list or a paragraph.



Tsjeria-belutta-adeka-manjan

FIG. 39



GREES with the first, except that this is with more oblong and more and narrow leaves, with smaller spiked heads which are cuspidate, narrow, white and slightly purple.

Celosia argentea L., Sp. Pl. 205. 1753; Townsend in Dassan., Rev Handb. Fl. Ceylon 1: 3. 1980; Manilal & Sivar., Fl. Calicut 246. 1982; Sivar. & Philip, Fl. Nilambur 556. 1997. - *Celosia margaritacea* L., Sp. Pl. ed. 2, 297. 1762. *Celosia argentea* var. *margaritacea* (L.) N. Burm., Fl. Ind. 64. 1768 [AMARANTHACEAE].

Tsjeria-belutta-adeka-manjen Rheede, Hort. Malab. 10: 77, t. 39. 1690.

The name Cheriya veluthadakkamaniyan [modern transcription, no Malayalam script on t. 39] is not used; cheriya means small, velutha means white and adakkamaniyan refers to tender (young) fruits of *Areca* [or similar things]. No Malayalam name is currently available for this. It occurs on the margins of paddy fields in Malabar.

Lycra-bellute-adea-manjen L.



Fig. 39



Vallia-manga-nari

FIG. 40



S a plant of two feet in height, liking sandy soil. Root is white, fibrous, of pleasing and aromatic smell. Branches are knotted, swelling at the joints, green or also purple, reddish and shining, the older ones ash-grey, with white inner wood.

Leaves arise in pairs in the nodes, on pale, light green petioles, are oblong, with a broad and round circle (periphery) around the petiole, anteriorely drawn into a point (tip), crenate, covered subtly with very short hairs, half-rough and smooth, very fine, of deep greenness, of sharp taste and smell. The mid-rib with rib-lets stand out on both the sides, chiefly on the lower side.

Flowers arise here and there from above the origin of leaves, eight petalled, yellow or saffron, surrounding a middle head, somewhat narrower towards the tips, and mutually set apart, bifid or tri-fid above by a fine incision, and on the outside with two pronounced rib-lets, in the trail of which are, on the inside, striated with lyras, provided with a claw and a small, bifurcated, yellow stamen towards the middle of each petal. From the middle of the head of

flowers, emerge numerous florets, are monopetalous, small, erect, thick, cuspidate, on the inside spoon-shaped, theca-shaped, with a yellowish small neck, split into five tips above, from which the black style provided with a yellow, bifurcated shoot; and these florets are first small, yellow, round buds,



Fig. 40

later opening themselves, conveying the shape of minute heliotropes; without smell. Calyx is formed of many long, cuspidate, rigid, light green leaves.

The seeds are oblong, cuspidate below, attached to the base of the head of flowers with the tip, above with a level tip, to the centre of which is attached a floret, quadrangular and black; that are together united with the florets, from the middle head. The leaves and the heads of florets, the same as fruits. When not ripe give out smell.

(Its Uses)

Crushed and threshed with the juice of *Ginger*, are given in pains of gassy intestines.

Wollastonia biflora (L.) DC., Prodr. 5: 546. 1836; Fosb. & Sachet, Smiths. Contrib. Bot 45: 32. 1980. - *Verbesina biflora* L., Sp. Pl. ed. 2, 1272. 1763. *Wedelia biflora* (L.) DC. in Wight, Contrib. Bot. India 18. 1834; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 216. 1980 [ASTERACEAE].

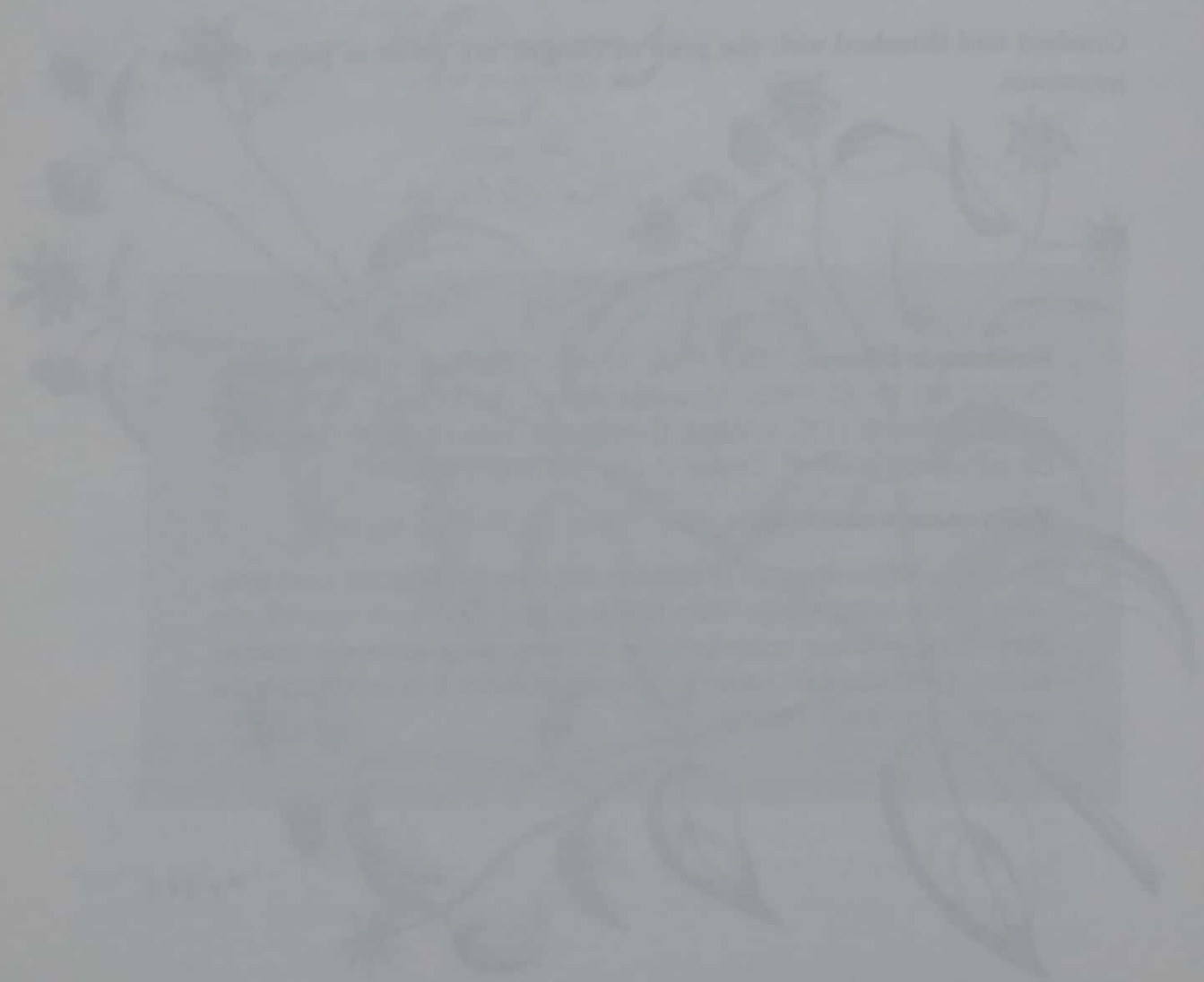
Vallia-manga-nari Rheede, Hort. Malab. 10: 79-80, t. 40. 1690.

The name Valiyamanganari [Malayalam script on t. 40] is not used now; valiya means large, manga refers to mango and nari means to smell, the plant having an odour resembling that of mango [or a somewhat resinous odour]. No Malayalam name is currently available. It is found along the beaches of northern Malabar.

The results of this study are compared with those of previous studies of the same area. The results show that the population of the area has increased since 1950. This is due to a number of factors, including the construction of a new road and the establishment of a new school.

CONCLUSION

The results of this study show that the population of the area has increased since 1950. This is due to a number of factors, including the construction of a new road and the establishment of a new school.



The results of this study show that the population of the area has increased since 1950. This is due to a number of factors, including the construction of a new road and the establishment of a new school.



Cajenneam

FIG. 41

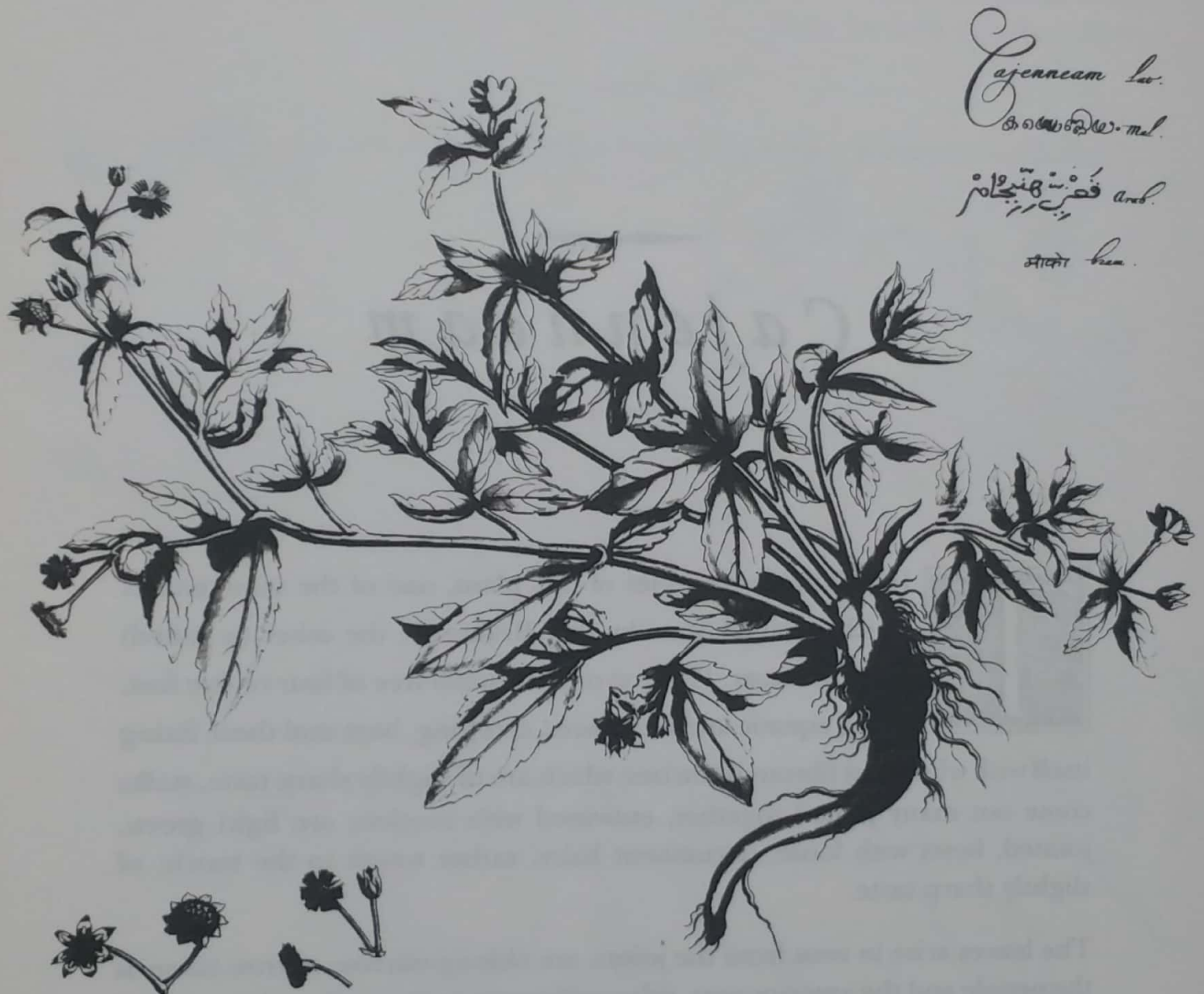


HERE are two species of this plant, one of the same names which is called *Maco* by the Brahmins, the other (is called) *Pee-Cajenneam*. The first one is a small tree of four or five feet, liking aquatic and wet places, creeping, here and there fixing itself with white and fibrous branches; which are of slightly sharp taste, stalks come out many joined together, entwined with rootlets, are light green, jointed, beset with loose, decumbent hairs, rather rough to the touch; of slightly sharp taste.

The leaves arise in twos from the joints, are oblong-narrow, narrow towards the petiole and the anterior part, sides uniform in some, on the others curved in a winged fashion, in the margin slightly crenate, covered with fine, decumbent hairs, rough, slender, dark-green; of slightly sharp and bitter taste, which is more intense in the root.

Flowers arise either singly or many together, are small, ten petalled, white, placed around a middle plain, round, green head, by means of their own claws. In the middle there spring forth many cyathia (?) from the head, are

four petalled, giving out a bifid from white to yellow style with a black theca, surrounded by small, green, cuspidate leaves, are clasped by a calyx of ten cuspidate, green leaves.



Cajeneam lae.
കാഞ്ഞിരം. mal.

قنبره هندی. arab.

मीको. brah.

Fig. 41

Numerous seeds are contained in the round, plain head, are oblong-narrow, smooth, somewhat convex, cuspidate towards one side, with the thicker part bent upwards, receiving the feet of cyathia in their eyes (holes) with their interspersed leaves, are first white and light green then dark-green, and finally ash-grey, in the length on both sides covered with a slightly purple fringe. In

the middle portion within the fringe there is a projection length-wise. This plant flowers in rainy season, also in summer but only in damp places and well irrigated areas.

(Its Uses)

A decoction made of the plant and exposed, removes head ache and tooth ache. The juice extracted, together with butter helps in all pains of symptoms of arthritis. It is given with cow's urine for common endemic ailments. Its oil, mixed with "pillula" (small pill?) is administered as a remedy against giddiness, phlegmatic irritation of the head. Leaves reduced to powder, mixed with salt, *pepper* and *lime* juice, promotes appetite and drives out nausea.

Eclipta prostrata (L.) L., Mant. 2: 286. 1771; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 212. 1980; Manilal & Sivar., Fl. Calicut 152. 1982; Sasidh. & Sivar., Fl. Thrissur 249. 1996; Sivar. & Philip, Fl. Nilambur 369. 1997. - *Verbesina prostrata* L., Sp. Pl. 902. 1753. *Verbesina alba* L., Sp. Pl. 902. 1753. *Eclipta erecta* L., Mant. 2: 286. 1771, nom. illeg. (incl. type of *Verbesina alba* L. 1753). *Eclipta alba* (L.) Hassk., Fl. Jav. Rar. 528. 1848 [ASTERACEAE].

Cajennaem Rheede, Hort. Malab. 10: 81-82, t. 41. 1690.

The name Kanjenniam [Malayalam script on t. 41] is still used. Kayyanniam or Kayyanni is an abbreviated form of "karachil-akanniam". Karachil means crying and akanniam [and akatti/akanni] means that which distances itself; perhaps alluding to its power of removing painful aches (head ache and tooth ache). It occurs throughout Malabar.

The results of the study are as follows: The first group of subjects, who were given the placebo, showed no significant improvement in their symptoms. The second group, who were given the active treatment, showed a significant improvement in their symptoms.

(The Use)

The use of the active treatment was as follows: The subjects were given the active treatment for a period of 12 weeks. The results of the study are as follows: The first group of subjects, who were given the placebo, showed no significant improvement in their symptoms. The second group, who were given the active treatment, showed a significant improvement in their symptoms.



Fig. 1

The results of the study are as follows: The first group of subjects, who were given the placebo, showed no significant improvement in their symptoms. The second group, who were given the active treatment, showed a significant improvement in their symptoms.

Pe e - c a j e n n e a m

FIG. 42



THE other species is called *Bringarasi* by the Brahmins, is similar to the first one, but of less height, with the stalk light red, more numerous, larger, thicker leaves; taste the same.

The flowers are larger and yellow, at times eight petalled, oblong, more broad at the top, cut into two or three tips, striated in length with plaits; the cyathia are yellow, five-petalled, small, cuspidate with a black theca, growing out a yellow, bifid style; placed around the head towards the claws of each yellow petal, the yellow bifid style comes out. The calyx is of more or less ten, cuspidate, unequal leaves. Seeds the same.

(Its Uses)

The juice with a little of iron-rust, well burnt (toasted) and steeped in cow's urine is taken in for dropsy (a morbid accumulation of watery fluid in any part of the body). Increases hairs if the head is washed with it; a decoction of leaves with fresh oil mitigates head ache; for the rest the powers are the same as those of *Cajenneam*.



Fig. 42

Wedelia chinensis (L.) Merr., Philipp. J. Sci. 12: 111. 1917; Merr., Trans. Amer. Philos. Soc. n.s. 24: 390. 1935; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 215. 1980 [all cited authorship of combination as "(Osbeck) Merr."]. - *Verbesina chinensis* L., Sp. Pl. 901. 1753; Syst. Nat. ed. 10, 2: 1226. 1759; Sp. Pl. ed. 2, 1270. 1763. *Solidago chinensis* Osbeck, Dagbok Ostind. Resa 241. 1757, nom. illeg. or comb. nov.? (based on same type as *Verbesina chinensis* L. 1753). *Verbesina calendulacea* L., Sp. Pl. 902. 1753; Syst. Nat. ed. 10, 2: 1226. 1759; Sp. Pl. ed. 2, 1272. 1763. *Wedelia calendulacea* (L.) Less., Syn. 222. 1832, non Pers. 1807 [ASTERACEAE].

Pee-cajenneam Rheede, Hort. Malab. 10: 83, t. 42. 1690.

The name Peekayyunniyam [Malayalam script on t. 42] is not used; pee means wild and kayyanniyam refers to *Eclipta prostrata*. Today it is called Manjakayyunniyam; manja means yellow. It occurs in marshy places in the coastal lowlands of Malabar, commonly around Cochin.

Main body of handwritten text, appearing to be a list or series of entries.





Adaca-manjen

FIG. 43

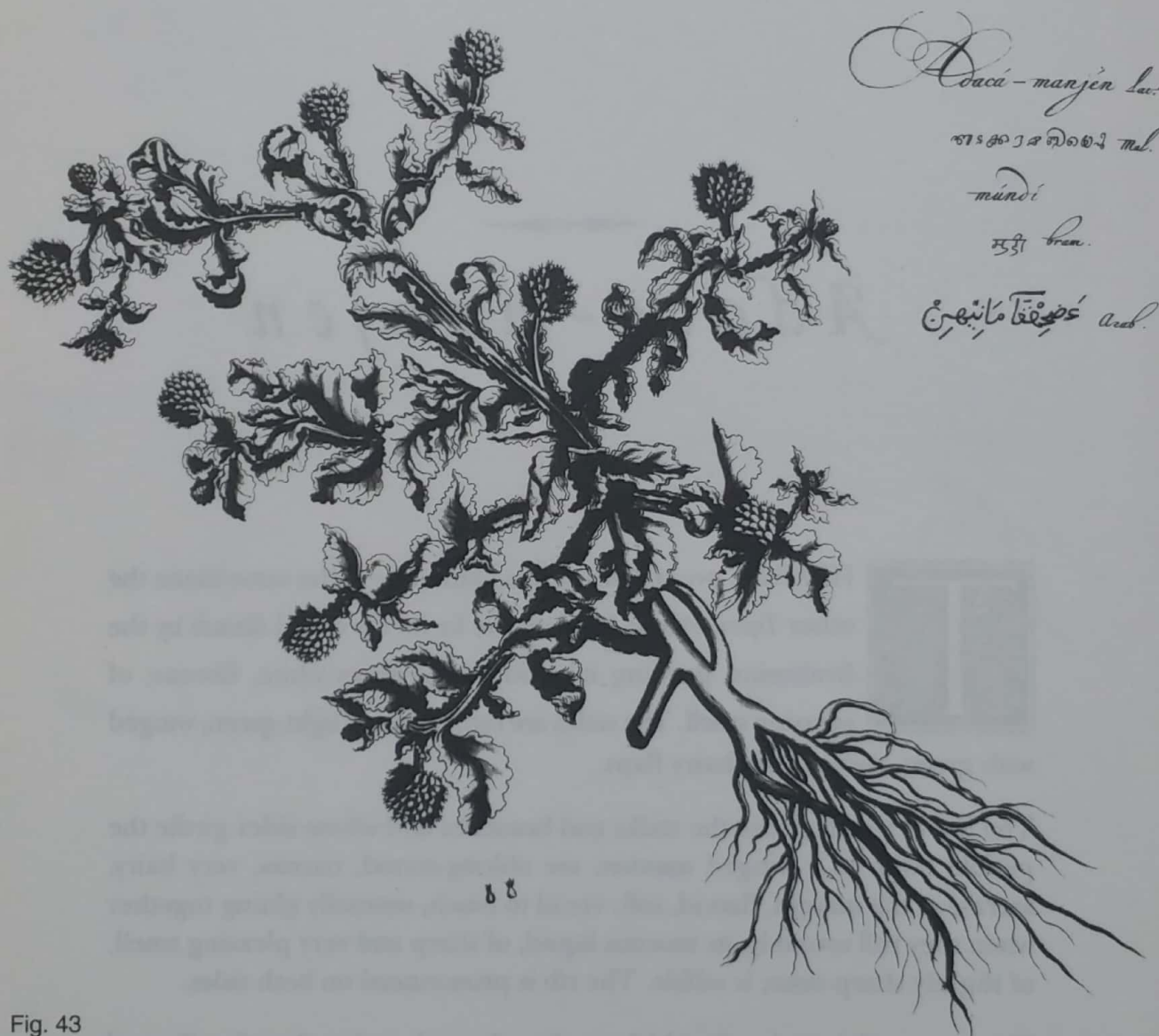


HERE are two species of this plant, one of the same name the other *Tsjeria-Adaca-Manjan*; the former is called *Mundi* by the Brahmins, growing in sandy soils. Roots white, fibrous; of pleasing smell. The stalks are rather round, light-green, winged with green, crenate and hairy flaps.

The leaves which clothe the stalks and branches and whose sides girdle the petiole down in a winged manner, are oblong-round, narrow, very hairy, serrate at the margin, flaccid, soft, viscid to touch, mutually gluing together when they roll round by its mucous liquid, of sharp and very pleasing smell, of slightly sharp taste; is edible. The rib is pronounced on both sides.

Flowers are globose heads, which are found on winged nodes of stalks and branches; wholly covered with erect balls, of rich purple-red colour, especially in the balls, from which florets come but like oblong, purple stamens, white on the upper side, which give out a small, purple-white style; and these globose heads are green, while young, and imbricately covered with green, decumbent balls, which while decaying turn red, are accompanied by many interposed

florets, and to the neck or base are attached small seeds, which are engrafted in a circular fashion to the green, middle, common style, within the head; they are however small, oblong, red.



Daca-manjer Lac.
 അടകാമൻജി Mal.
mündi
 मूँडी Ben.
 عَضْفَقَا مَانِيَهْرُ Arab.

Fig. 43

(Its Uses)

From the whole of this plant, except the root, a decoction is prepared in flatulent cardialgia (heart burn) and stomach-colic, chiefly if the affected part is for some time rubbed with pulverised *cumin*; and also from it a power

is made, which when roasted with oil gives an ointment against scabies and other skin diseases; mixed with honey, cures cough. From the root exposed (dried) to sun, a powder for disorders in the stomach is prepared, which also resists pains of intestines; its bark crushed with whey of milk, and given cures haemorrhage; is employed by the natives in the preparation of drink.

Sphaeranthus indicus L., Sp. Pl. 927. 1753; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 181. 1980; Manilal & Sivar., Fl. Calicut 151. 1982; Sasidh. & Sivar., Fl. Thrissur 253. 1996; Sivar. & Philip, Fl. Nilambur 377. 1997. - *Sphaeranthus hirtus* Willd., Sp. Pl. 3: 1804. *Sphaeranthus mollis* Roxb., [Hort. Beng. 62. 1814, nom. nud. ("mollis") Fl. Ind. 3: 446. 1832 [ASTERACEAE].

Adaca-manjen Rheede, Hort. Malab. 10: 85-96, t. 43. 1690.

The name Adakkamaniyan [Malayalam script on t. 43] is still used; adakkamaniyan refers to tender (young) fruits of *Areca* [or other similar things], a reference to its inflorescences. It occurs frequently in abandoned paddy fields of Malabar.

The first of these is the fact that the human brain is not a simple organ, but a complex one, and that it is capable of a great deal of development. The second is the fact that the human brain is not a simple organ, but a complex one, and that it is capable of a great deal of development.

Human brain
Diagram



(See text)

The brain is a complex organ, and it is capable of a great deal of development. The human brain is not a simple organ, but a complex one, and that it is capable of a great deal of development.



Tsjetti-pu

FIG. 44



Is called *Alosna de botao* by the Portuguese; grows in sandy soils; of aromatic smell wholly. Branches are round, woody, green, thickly covered white downy hairs.

The leaves are incised into oblong-narrow lobes, of rich greenness on the upper side, on the lower very hairy, green-white where also hairy ribs stand out.

Flowers which emerge in twos, threes, fours above the origin of leaves on oblong, round, slender, branched, hairy and green white petioles, are seen many clustered together and are green buds, white on the upper side, formed of green cuspidate petals, in the middle of which are seen many green-yellow stamens.



Tsjetti-pu L.
ചെട്ടിപ്പൂ mal.
Scánnú
शेवती bra.
فخيطي arab.

Fig. 44

Dendranthema indicum (L.) Des Moulins, Act. Soc. Linn. Bordeaux 20: 562. 1859; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 238. 1980; Hara et al., Enum. Fl. Nepal 3: 24. 1982. -*Chrysanthemum indicum* L., Sp. Pl. 889. 1753. *Matricaria indica* (L.) Desr. in Lam., Encycl. 3: 734. 1792. *Pyrethrum indicum* (L.) DC., Prodr. 6: 62. 1838 [ASTERACEAE].

Tsjetti-pu Rheede, Hort. Malab. 10: 87, t. 44. 1690.

The name Chettipoo [Malayalam script on t. 44] is not used; chetti refers to a particular caste, who had migrated from southern Canara (plant introduced by them?); and poo means flower. Today it is called a kind of jamanthi (allusion not known). It is cultivated as an ornamental throughout Malabar.



Kat u - t s j e t t i - p u

FIG. 45



S a plant of four or five feet, liking sandy soil. Branches are green, woody, in the upper part where they are younger, green-light-bluish, somewhat hairy.

Leaves which arise in branches and shoots, are lobed, thick, smooth, on the lower side, where the ribs are pronounced, hairy; of pleasing and aromatic smell as is the whole plant, of slightly sharp taste.

Flowers are plain-round roses, attached to the lips of shoots, the petals of which are oblong-narrow, striated in length by plains (folds) and in their trails (tracks) where they opened long, splitting themselves, are yellow, each one of which is accompanied by a green-yellow stamen, with the upper part forked, which comes out from the base of the theca-like platform.

The seed-capsules are plain-round and green, open late, so that they remain closed for four or five months.

(Its Uses)

This plant brought to the seat of a patient, indicates the danger of life, if from that the sick person does not sleep; boiled in the oil *Zergelim* or *Tzit-Elu*, and burnt wine, and applied to the affected part, cures empyemata



Fig. 45

(collection of puss in any cavity, especially the pleura) and hidden abscesses of the bowels, before they ripen, especially if its juice is drunk; with burnt wine and together with European and Malabaric *hore-hound* (*Marrubium*) reduced to the form of plaster, and placed over the paining part, cures cramp; swallowed with honey fasting, loosens dropsy (hydropen). Root boiled with

the oil of *Sergelim*, smeared with a rag and renewed every twelve hours, cures eruption on the skin; boiled with the milky juice of coconut cures spreading ulcers; the bark of the root placed over the affected part, gives the same effect.

Artemisia japonica Thunb., Fl. Jap. 310. 1784. *A. parviflora* Roxb. ex D. Don, Prodr. Fl. Nep. 181. 1825. *A. japonica* var. *parviflora* [Roxb. ex D. Don] Pamp. in Nuovo Giorn. Botan. Ital. n. s. 34. 665. 1927. *A. glabra* DC. in Wight, Contr. 20. 1834. [ASTERACEAE].

Katu-tsjetti-pu Rheede, Hort. Malab. 10: 89, t. 45. 1690.

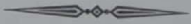
Kattu means wild but only chettipu appears in Malayalam script on t. 45. Today it is called Pachakarpuram; pacha means wet [not dried] and karpuram means camphor, referring to the camphor-like aromatic smell of crushed leaves. It occurs in coffee and tea plantations at higher elevations but, elsewhere in Malabar, in lower elevations, it is found only in cultivation as a medicinal plant. (The related species *A. nilagirica* does not easily survive in lower elevations).

The following is a list of the names of the members of the American Medical Association who have been elected to the office of President of the Association for the year 1936. The names are listed in alphabetical order of their last names.

The following is a list of the names of the members of the American Medical Association who have been elected to the office of President of the Association for the year 1936. The names are listed in alphabetical order of their last names.

The following is a list of the names of the members of the American Medical Association who have been elected to the office of President of the Association for the year 1936. The names are listed in alphabetical order of their last names.

The following is a list of the names of the members of the American Medical Association who have been elected to the office of President of the Association for the year 1936. The names are listed in alphabetical order of their last names.



Codagen

FIG. 46



CAPANI or *Undiri* in the language of the Brahmins, is a creeping plant. The root consists of more fibres, is hairy, white, slightly saltish, very cutting, biting (stinging) as is the whole plant. The stalks give out here and there from the joints lateral ones and rootlets by which they fix themselves to the ground, are slender, round, watery, noded, covered with sparse hairs, green or also partly red.

Leaves arise in threes, fours and also fives from the joints on long petioles somewhat knotted at random, striated with a broad furrow, and are round, spread sideways, incised towards the petiole, crenate in the margin, hairy. The ribs pronounced on the lower side, run out conspicuous on the upper side, more or less six, seven or eight.

Flowers are five-petalled, cuspidate, purple-red, in the middle of which are five, small stamens, provided with red knots, attached to bursiform (shaped like a pouch), plain, seed-capsules, in which are two small, compressed seeds, separated by partition walls, of slight ash colour.

(Its Uses)

Crushed and taken with sour milk relieves giddiness; with thick sour milk called *Tayr*, stops dysentery; boiled in water cures hot fever and head-ache.

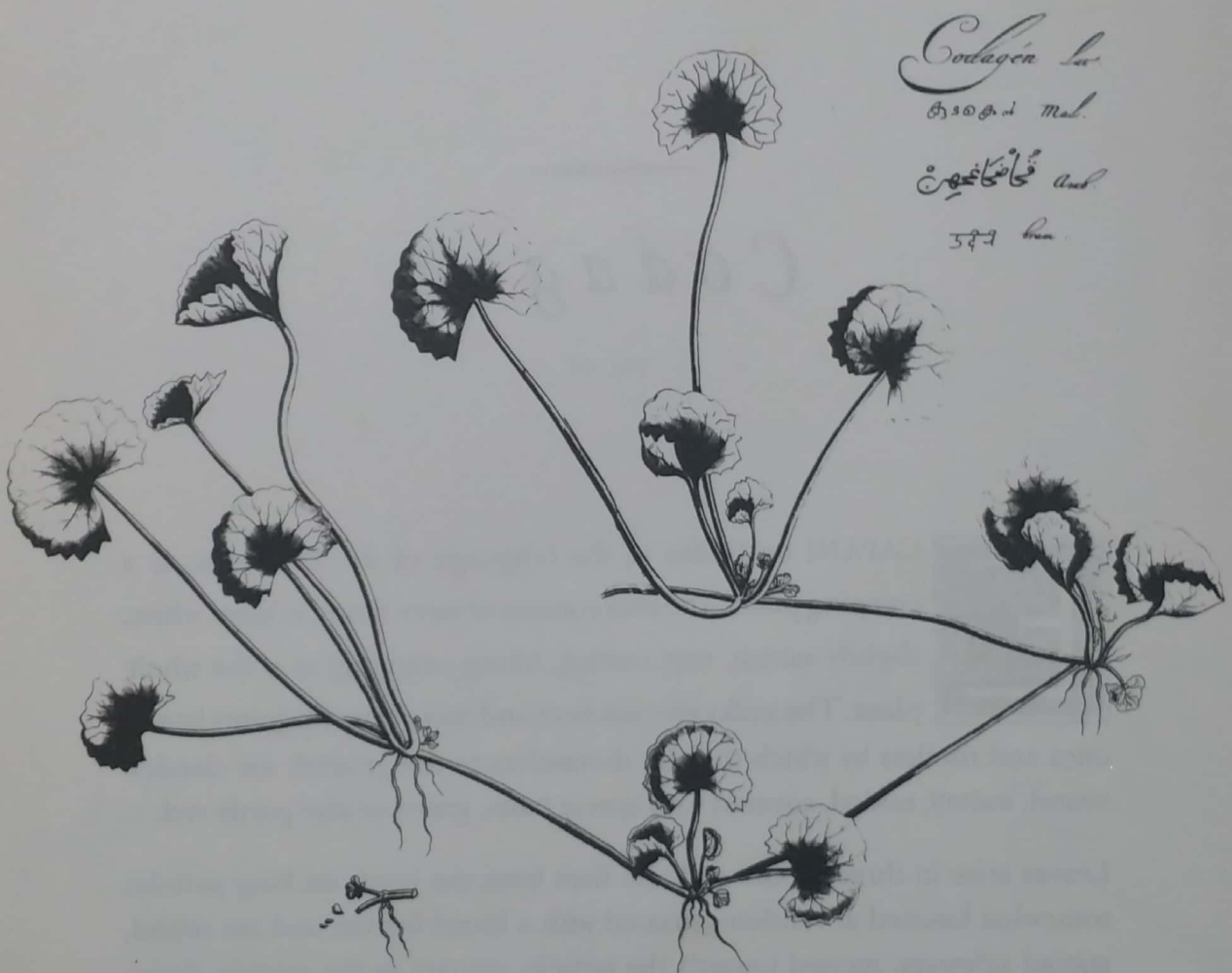


Fig. 46

Centella asiatica (L.) Urban In Mart., Fl. Bras. 11: 287, t. 78, f. 1. 1879; Buwalda, Blumea 2: 134. 1936; Buwalda in Fl. Males. 4: 117. 1953; Krahulik & Theob. in Dassan., Rev. Handb. Fl. Ceylon 3: 484. 1981; Manilal & Sivar., Fl. Calicut 128. 1982; Manilal, Fl. Silent Valley 124. 1988; Sasidh. & Sivar., Fl. Thrissur 209. 1996; Sivar. & Philip, Fl. Nilambur 308. 1997. -*Hydrocotyle asiatica* L., Sp. Pl. 234. 1753 [APIACEAE].

Codagen Rheede, Hort. Malab. 10: 91, t. 46. 1690.

The name Kudakan [Malayalam script on t. 46] is still used. The plant is also known as Kudavan. Kudagan means one [coming] from Kudagu (Coorg), indicating its original land from where it might have been introduced to Malabar. Kuda means umbrella, alluding to the orbicular leaves with a slender petiole, resembling an umbrella. The origin of the name[s] not very clear. It occurs throughout Malabar, sometimes cultivated in homesteads as a medicinal plant useful in the treatment of hot fever especially in children.



Ana-coluppa

FIG. 47



IS the second species of *Coluppa*; in the language of the Brahmins *Adaly*, is a small plant creeping with the lower part of the stalks, the upper stalks rise up to one foot, loving sandy and rocky soils. Roots fibrous, hairy, springing up from the nodes of stalks; of bitter and sharp taste. Stalks are green, round, slightly rough.

Leaves are seen from the nodes two by two, more short and more broad than those of the first species, incised with notches, thick, dense, with slightly rough surface, of dark-green colour, of aqueous and bitter taste. The mid-rib with lateral ones stand out on the lower side.

Flowers arise in oblong-round, purple-red heads which are formed of small leaflets, tightly closed in a star-like manner around a slender, middle style, coming out from the nodes above the leaves, and are small buds, either white or somewhat purple-red, four petalled, one of which, very adjacent to the head is bifid, and smaller, two lateral ones are larger, the fourth one the

largest; always they are found in one circle, those from the lower shields wither away, soon others succeed; of no smell.

Numerous seeds are contained in these heads, are small, in between star-like and foliaceous boundaries, one within each; are round, somewhat plain, striated in length in the middle, first of light-green colour then white.

Aca-culappa L.
 ആനക്കുളപ്പ മല.
 عاقله
 അറ്റൽ



Fig. 47

(Its Uses)

Heals sacred disease if the juice, crushed with *pepper* is drunk; which alone (by itself), frustrates the virulent sting of cobra.

Phyla nodiflora (L.) Greene, Pittonia 4: 46. 1899; Manilal & Sivar., Fl. Calicut 231. 1982; Mold. in Dassan., Rev. Handb. Fl. Ceylon 4: 236. 1983. - *Verbena nodiflora* L., Sp. Pl. 20. 1753. *Zapania nodiflora* (L.) Lam., Tabl. Encycl. 1: 59, t. 17, f.3. 1791. *Lippia nodiflora* (L.) A. Rich. in Michaux, Fl. Bor. Amer. 2: 15. 1803 [VERBENACEAE].

Ana-coluppa Rheede, Hort. Malab. 10: 93, t. 47. 1690.

The name Aanakozhuppa [Malayalam script on t. 47] is not used; aana means elephant [or large] and kozhuppa refers to *Allmania nudiflora*. No Malayalam name is currently used. It is very common along the coasts of Malabar.



Bena-patsja

FIG. 48



RAHMINS call it *Ageru*, is a small plant growing in wet places. The root is white, giving out many fibres; of slight sharp taste. The stalks are rather thick, round, pale, thickly covered with shaggy rough, long, white hairs, green.

Leaves come out two by two on long, green, pale, hairy petioles, smooth on the inside, girded in a winged manner towards margins on both sides by a narrow foliaceous lobe, accompanied at random on the new parts of stalks, are oblong, with round margin, more narrow towards the tip, equally incised here and there by sparse corners, very pale, soft, thickly covered on both sides with white hairs, chiefly where they are more tender (young), where older slight rough, of dark-green and dim colour; bad smelling. The rib stands out on both sides, very much however on the lower, giving out many lateral ones.

Flowers come out on the upper part of stalks, where they are bent and curved with a tip, from one part from which the bent tip turns itself away, placed in two series, small, white, of five short tips, to each tip, striated by a vein, springing forth from the calyx with a short, thick, hairy neck; when open,

new white flower buds are seen in the very curved and very hairy tip; of no smell. The calyx is formed of five dark green, cuspidate, and very hairy leaves. Bifid, dark-green, shining, glassy, seed-capsules follow the flowers, provided with a cleft along the length of the petiole. In each are contained two seeds, separated by partition walls, are small, cuspidate, with the upper part somewhat rough, red.



Fig. 48

(Its Uses)

The whole plant boiled in coconut oil, cures the disease called *Pitao*, by drying. The same is given in the poisonous bite of large wolf (called *Jakhalsen* in Belgian).

Heliotropium keralense Sivar. & Manilal, Jour. Indian Bot. Soc. 51. 348-350. 1972. Manilal & Sivar. Fl. Calicut 176. 1982. [BORAGINACEAE].

1. Flowers pale violet or pink *H. indicum*.
1. Flowers white:
2. Leaves large, up to 10 X 6 cm *H. keralense*.
2. Leaves much smaller, 1.5 x 0.5 cm *H. scabrum*.

Bena-patsja Rheede, Hort. Malab. 10: 95-96, t. 48. 1690.

The name Venapacha [Malayalam script on t. 48] is still used; vena (from venal) means summer and pacha means a herb with a rather fleshy stem (in this context), referring to the fact that the plant comes up in the summer (the dry season before the north-west monsoon). It occurs in moist lands in coastal regions of Malabar.



Nelam-pata

FIG. 49



OVES sandy oil. The root is white, fibrous; of pleasing smell. The stalks are round, hairy, green, spreading itself wide.

The leaves cut into sinuate lobes, are hairy, soft, smooth. The mid-rib stands out on the lower side; of very sharp taste.

The flowers are round, plain heads, attached to both the nodes of stalks and the petioles, and arising from the stalks, are first green, then yellow, finally either reddish or red-black; in these are seen very many florets, with oblong and somewhat smooth seeds, to the tip of which they are attached by means of an oblong narrow neck, are five-petalled, very narrow, cuspidate; from the middle they give out a small stamen.

The very seeds are ingrafted (firmly fused) to the base of the head, which is green, hairy, on the upper part dissected into tips, are first green, then red.

(Its Uses)

Powder is useful in spreading ulcer; mixed with goat's milk, relieves pains of throat; boiled with "*uvis pasis*" and butter, is against dropsy (morbid

accumulation of watery fluid in any part of the body), removing leprosy, harmful gas and consumption; when swallowed with *Ginger, pepper* and *sugar* corrects immoderate bile, removes epilepsy, mania and soothes the acuteness of coma.

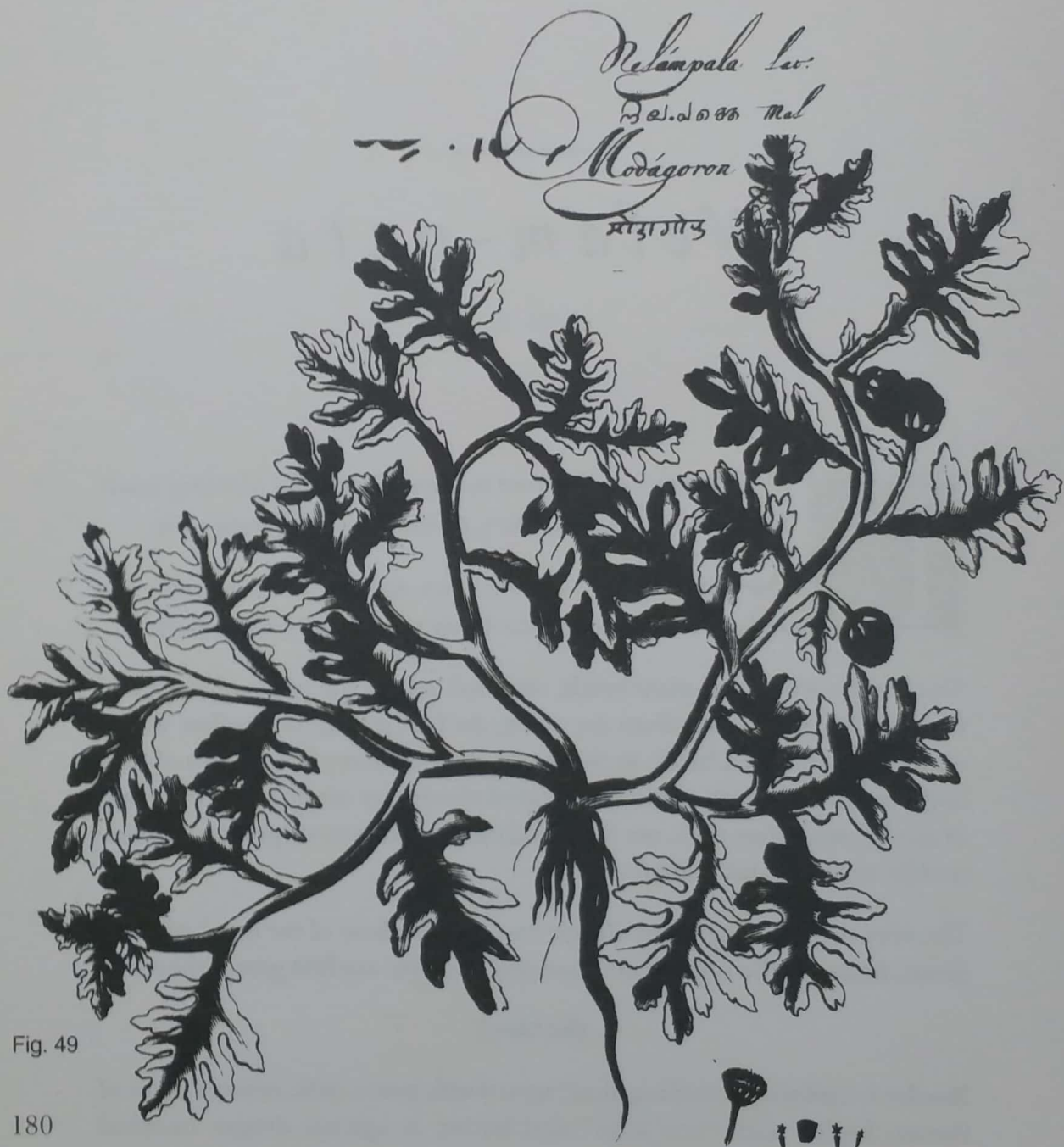


Fig. 49

Grangea maderaspatana (L.) Poir. in Lam., Encycl. Suppl. 2: 825. 1812; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 150. 1980; Manilal & Sivar., Fl. Calicut 150. 1982; Sasidh. & Sivar., Fl. Thrissur 251. 1996. -*Artemisia maderaspatana* L., Sp. Pl. 849. 1753. *Cotula maderaspatana* (L.) Willd., Sp. Pl. 3: 2170. 1803 [ASTERACEAE].

Nelam-pata Rheede, Hort. Malab. 10: 97, t. 49. 1690.

The name Nilampatha [Malayalam script on t. 49] is not used now; nilam means ground and patha means prostrate. Today it is called Manjadakkamaniyan, manja means yellow and adakkamaniyan refers to a tender *Areca* nut (similarity to inflorescence). It occurs along margins of paddy fields of Malabar.



Nanshera-canshabu

FIG. 50



CHANGA-CUSPI in the language of the Brahmins; is a small, low plant, which is not seen except in the rainy season, rarely in summer, and only in wet and shady places, the roots of which, going out from the stalk are slender and white fibres, later turning red. The stalks themselves are green, hairy, angular, noded, striated, conveying the shape of small theca, which hides a loose, slender, white filament.

The leaves arise from the nodes two and two and are attached to them, are very small, a bit oblong, with round margin, very subtly incised in the margin, covered with loose hairs, with the rib pronounced on the lower side; of slightly bitter taste.

Flowers are four petalled, irregular, without smell, with a short neck, sitting on a hairy, green calyx of five cuspidate leaves, of which three petals are white and their middle from white to bluish, very near to the neck beset with a yellow or saffron suture, the fourth one is reddish or dark-red. In these are four white slender stamens, two by two mutually bent to each other, among which juts out a slender, white, smooth style.

The seed capsules are oblong, round, light-green, striated in length by a suture through the tip, the style of which is rather thick, with the aid of which, by means of a fine membrane, are separated into locules. In these are numerous seeds, first dark green, then from green to more yellowish, finally dark and black.

Vanschoea-canschabii Bo.

വണ്ടുവേലി Mal.

نانبجاء كانبجاء Arab.

वकडवरी Bra.



Fig. 50

(Its Uses)

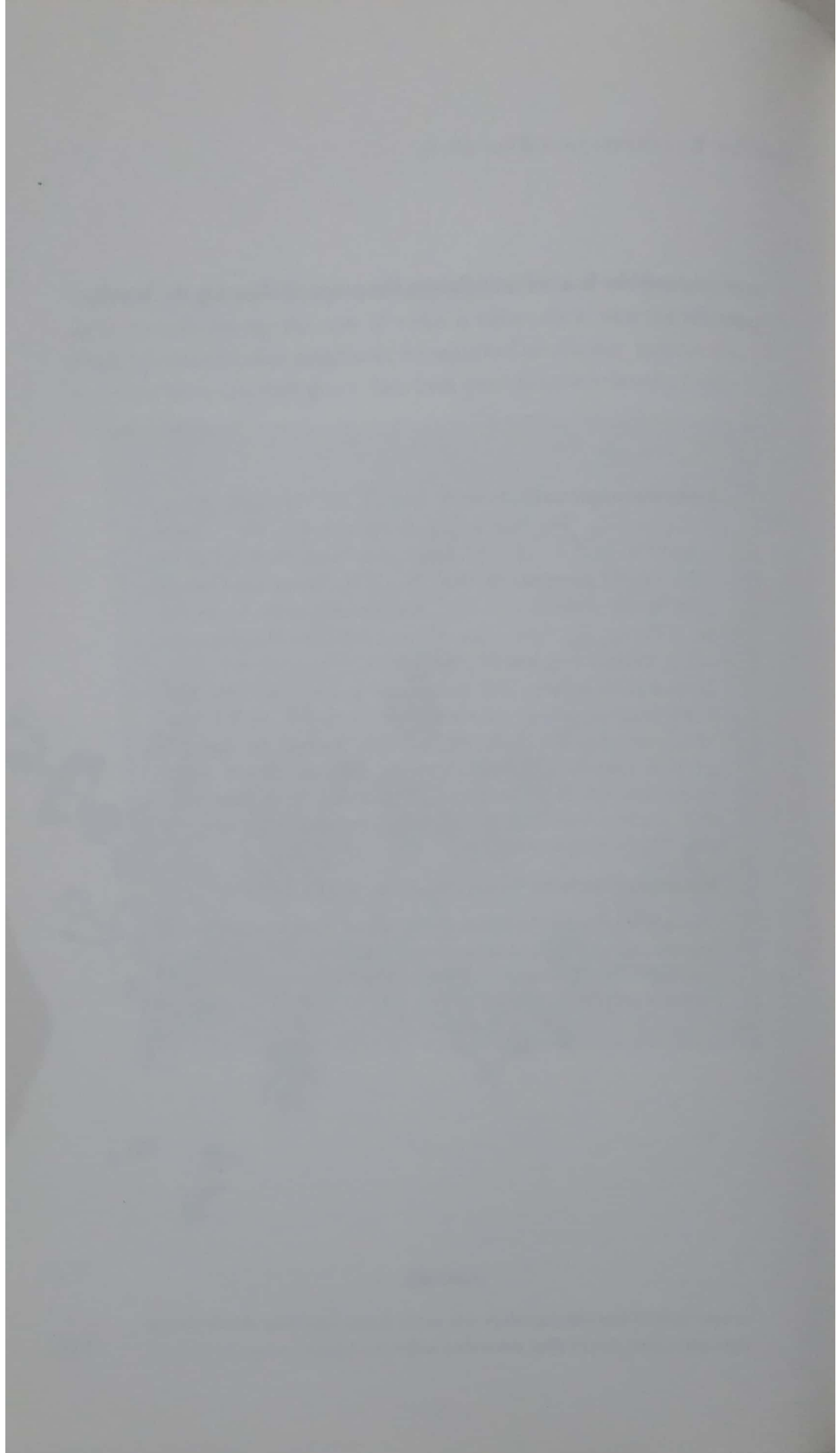
Crushed with milk and drunk cures the endemic diseases of that region (*Pithao*); the juice pressed out, taken with sweet milk expels poison through

vomiting and also is a cathartic (having the power of cleansing the bowels; purgative).

Lindernia caespitosa (Bl.) Panigrahi, Taxon 33: 320. 1984; Sasidh. & Sivar., Fl. Thrissur 322. 1996; Sivar. & Philip, Fl. Nilambur 472. 1997. - *Gratiola pusilla* Willd., Sp. Pl. 1: 105. 1797. *Selago pusilla* Thunb., Prodr. Fl. Cap. 99. 1800. *Diceros caespitosus* Bl., Bijdr. 753. 1826. *Torenia hirta* Cham. & Schlechtendal, Linnaea 2: 571. 1827. *Vandellia scabra* Benth., Scroph. Ind. 36. 1835, nom. illeg. ? (incl. ? type of *Torenia hirta* Cham. & Schlechtendal 1827). *Vandellia caespitosa* (Bl.) Benth. in DC., Prodr. 10: 415. 1846. *Lindernia pusilla* Boldingh, Zakfl. Landbouwstr. Java. 165. act. 1916 (type here?). *Lindernia pusilla* (Thunb.) Merr., Philipp. J. Sci. Bot. 11: 312. Nov. 1916; Philcox, Kew Bull. 24: 33. 1968 [as (Thunb.) Boldingh], non Boldingh, act. 1916. *Lindernia pusilla* (Willd.) Schlechter, Bot. Jahrb. 59: 106. 1924; Philcox, Kew Bull. 24: 41. 1968 [as (Willd.) Boldingh], non Boldingh, act. 1916. *Lindernia hirta* (Cham. & Schlechtendal) Pennell, J. Arnold Arb. 24: 250. 1943 [SCROPHULARIACEAE].

Nanschera-canschabu Rheede, Hort. Malab. 10: 99, t. 50. 1690.

The name Nancharakanchavu [Malayalam script on t. 50] is not in use now; nanchara means irrigated and watery land; and kanchavu refers to *Cannabis sativa* L. No Malayalam name is currently available. It is very common along margins of paddy fields in Malabar.





Nir-cottam-pala

FIG. 51



ROWS in sandy soils. Root white, fibrous. Stalks woody, milky inside, jointed, round, green and turning reddish, which from the joints always given out new shoots.

Leaves are seen in the nodes in pairs, are oblong-round, thin, smooth, somewhat glabrous on the upper side, of deep greenness; on the lower of light greenness, and there covered with very fine hairs, milky. The rib is pronounced on the lower side.

Flowers are in umbels, are small, four petalled, on the inner mouth deep red, on the upper part white. The style is oblong, theca like fine, giving out a fine white filament, capped by a small knob.

The seed-capsule juts out from the flower, is four sided, provided with short, red stamens at the tip, in the middle of the sides striated with a green, more dark vein, in each side containing one seed.

(Its Uses)

The whole of this plant with water of *Lanjae* given, heals the bloody mixture; the juice of leaves relieves the pain of colic.



Nir-cottam-pala L.

എറട്ടുകൊണ്ടിടല mal.

نير قحاطهم يعلّ arab.

Euphorbia hypericifolia L., Sp. Pl. 454. 1753; J. Hook., Fl. Brit. India 5: 249. 1887. -*Euphorbia indica* Lam., Encycl. 2: 423. 1786; Boiss. in DC., Prodr. 15(2): 22. 1864. *Euphorbia androsaemoides* Dennst., Schlüssel 14, 21 ("*androsaemifolia*"), 36. 1818. *Euphorbia ovalifolia* Kostel., Allg. Med.-Pharm. Fl. 5: 1724. 1836 (not seen), nom. illeg. (incl. type of *Euphorbia androsaemoides* Dennst. 1818). *Chamaesyce hypericifolia* (L.) Millsp., Publ. Field Mus. Nat. Hist. Bot. Ser., 2: 302. 1909; Burch & Webster, Ann. Missouri Bot. Gard. 54: 345. 1968 [EUPHORBIACEAE].

Nir-cottam-pala Rheede, Hort. Malab. 10: 101, t. 51. 1690.

The name Neerkottampala [Malayalam script on t. 51] is not used. Neer means water, kottan is an insect destructive to granaries, and pala means plant with milky sap. The allusion is not clear. No Malayalam name is currently available. It occurs in paddy fields of Malabar.



Cansjan-cora

FIG. 52



LOVES sandy soil. Root white, fibrous, stem woody, slender, green-white, jointed, bent at junctions.

Leaves come out in pairs, tightly attached to the branches, are oblong-narrow, fine in texture, light green.

Flowers arise in slender winged petioles, which arises from the nodes of branches, and these are clothed with narrow, small leaflets in pairs, provided with a very minute leaf, which girdles under the middle petiole like a collar, for the rest are four petalled, irregular, white, and very lightly red, transparent, striated with veins from the claw, are received in a rather large, oblong, tight, light green calyx, bound beneath by light-green, veiny, broad, thin and transparent wings; in these are four stamens, one of which capped with a saffron-red knob juts out (stands up) higher; three others light-green, provided with light yellow or green, oblong, erect apices. With these, from the top of the green capsule, enclosed in the foliaceous calyx, springs forth, a white style, provided with a smooth, white head.

After the flowers have fallen down, the seed capsules, covered with the foliaceous calyx, remain, which still dark-green and tender between the interspaces of wings, on the outside transparent with bluish-green colour, offer themselves to sight, are oblong-round, finely compressed, slightly red with white-reddish follicles, like *Lupuli*, in these are numerous, dark-red, black seeds.



(Its Uses)

Crushed with *Crocus* (saffron) removes white spots on dark skin, and dark (marks) in white men.

Canscora perfoliata Lam., Encycl. 1: 601. 1785; Manilal, Fl. Silent Valley 182. 1988; Sasidh. & Sivar., Fl. Thrissur 298. 1996; Sivar. & Philip, Fl. Nilambur 434. 1997. - *Pladera perfoliata* (Lam.) Roxb., Fl. Ind. 1: 418. 1820. *Canscora grandiflora* Wight, Ic. 4(2): 7, t. 1326. 1848 [GENTIANACEAE].

Cansjan-cora Rheede, Hort. Malab. 10: 103, t. 52. 1690.

The name Kanchakora [Malayalam script on t. 52] is not used. Kancha [ganja], from Kanchaavu, means *Cannabis sativa*. Kora [from kura] means cough. The allusion is not clear. No Malayalam name is currently available. It occurs in wet areas along forest margins of Malabar.



Tsjeru-parua

FIG. 53



ROWS in sandy soils. Root fibrous, white. Stems are round, green, glabrous. Leaves are long-narrow, cuspidate, serrate; smaller but glabrous, smooth, in shape emulating the leaves of *Uren*.

Flowers arise many together, yellow, five-petalled, transparent, somewhat shining, irregular, in their midst is the theca shaped yellow, rather thick style, to which are attached (annexed) the claws of petals, surrounded on the upper side (part) by very many small stamens spread out in all directions in a brush like manner, the apex of which are yellow, sending though a slender filament from a globule in the mouth of the calyx, split into five small stamens, provided with yellow knob. The calyx is cap-shaped, light green, of five tips, striated with five green nerves.

Seed-capsules are plain round, and mucronate at the top. In these are six, seven, eight, nine, three side leaves, with one side more round, two plain, of ash colour.



Fig. 53

(Its Uses)

The juice of leaves, mixed with the milky juice of coconut, reduced to the form of drink or ointment relieves kidney pains; the root crushed in common water stops erysipales (inflammatory disease, generally in the face, marked by a bright redness of the skin).

Sida acuta N. Burm., Fl. Ind. 147. 1768.

Sida acuta subsp. ***acuta*** Borssum Waalkes, Blumea 14: 186. 1966; Manilal & Sivar., Fl. Calicut 45. 1982; Manilal, Fl. Silent Valley 28. 1988; Sasidh. & Sivar., Fl. Thrissur 61. 1996; Sivar. & Philip, Fl. Nilambur 88. 1997. -*Sida stauntoniana* DC., Prodr. 1: 460. 1824 [MALVACEAE].

Tsjeru-parua Rheede, Hort. Malab. 10: 105, t. 53. 1690.

The name Cheruparua [Malayalam script on t. 53] is not used; cheru means small and parua means spreading as a creeper. Today it is called Kattukurunthoti; kattu means wild and kurunthoti refers to *Sida retusa*. It occurs throughout Malabar.



K a t u - u r e n

FIG. 54



S a species of *Uren*, loving sandy soil, of three or four feet in height. Root white, fibrous. The stem covered with hairs, very smooth to the touch.

Leaves are on striated and hairy petioles, human heart shaped, serrate in the margin beset with hairs, thick, soft, with very smooth surface; of slightly sharp taste. The rib, with rib-lets stands out on the lower side, striating the upper.

Flowers are seen in twos, threes, many or also singly on thin, small and hairy petioles, are white and light-yellow or saffron, fine petalled, oblong-round, of more width at the top of membranous thinness transparent, obliquely striated in length with vein-lets, greenish towards the claws. The style is light green, at the top provided with a brush of numerous thin filaments, which are short and white, and endowed with small yellow heads. The calyx is hairy, five foliate, in the upper part light green, in the margins dark-green, in the corners between the tips striated with a pronounced nerve-let.

Seed capsules, which on the plain tip, and as if striated by hairs, are almost wholly enclosed (included) by the leaves of the calyx and are guarded (protected) in the upper margin by numerous rigid, erect, small stamens spread in all direction in a comb-like manner, first green, then reddish, gaping



Fig. 54

(dehiscing) through the top because of dryness. In there are eight, nine or ten seeds, mutually placed around towards each other, united by three sides, one round, two plain, striated with hollow spaces, provided at the top with two spiked stamens; first of white colour then dark ash-grey.

(Its Uses)

The whole plant boiled in water, is wholly diuretic. The root reduced to powder and taken with *pepper*, suppresses cold fever. From the same, an oil is also pressed out.

Sida cordifolia L., Sp. Pl. 684. 1753; Borssum Waalkes, Blumea 14: 200. 1966; Manilal & Sivar., Fl. Calicut 43. 1982; Sasidh. & Sivar., Fl. Thrissur 62. 1996; Sivar. & Philip, Fl. Nilambur 91. 1997. -*Sida herbacea* Cav., Diss. 1: 19, t. 13, f. 1. 1785 [MALVACEAE].

Katu-uren Rheede, Hort. Malab. 10: 107, t. 54. 1690.

The name Katturen [Malayalam script on t. 54] is not found to be used now; kattu means wild and uren refers to *Urena lobata*. Today it is called Aanakurunthoti; Aana means elephant (in the sense of large) and kurunthoti refers to *Sida retusa*. It occurs throughout Malabar.



Niruren

FIG. 55



LIKES sandy soil. Root white, fibrous. Stems and branches round, first dark-brown, then reddish, beset with very small, loose hairs.

The leaves which arise on hairy, deep brown petioles, on the inside plain, give the shape of human heart, equally crenate in the margin, covered with loose (sparse) hairs, somewhat rough, of dark-green and shining colour, of slightly bitter taste, provided with ribs.

Flowers are small, fine petalled, oblong-narrow, totally of yellow colour, their stamens are thin, white, light yellow, capped with yellow knobs; the style is short, springing forth from the apex of an oblong, green head. The calyx is five foliate and light green, seed-capsules are oblong-narrow, fine cornered, provided at the top with bifid tips, green or dark-brown. In each side there are numerous seeds, placed in two series, angular, white.

(Its Uses)

The leaves along with seeds mixed with woman's milk, drips a juice, two drops of which put into nostrils, loosens catarrh (discharge of fluid from the

inflammation of a mucous membrane, especially of the nose, caused by cold in head), with a useful sneezing; the root boiled in oil and smeared on the head removes continued head ache.

Nirurea L.

നൂറുവേല

نیروزه and.

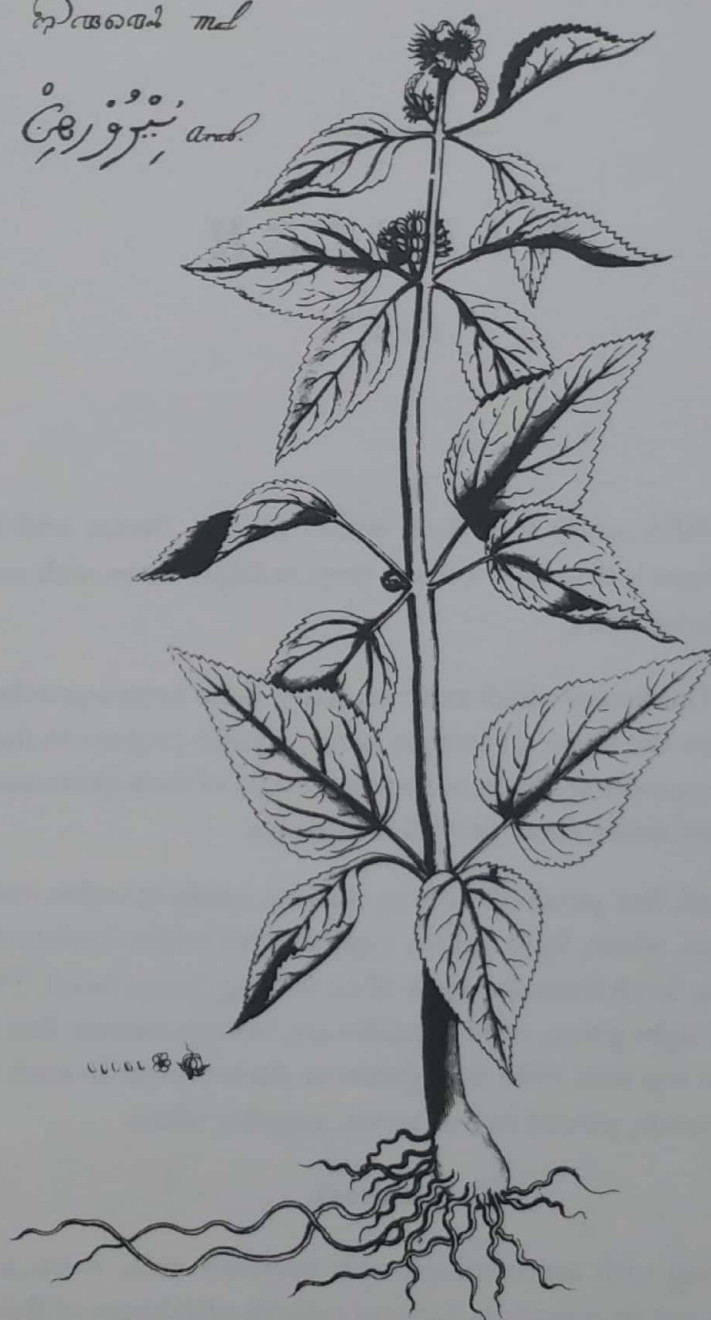


Fig. 55

Melochia corchorifolia L., Sp. Pl. 675. 1753; Goldberg, Contrib. U.S. Nat. Herb. 34: 304. 1967; Manilal & Sivar., Fl. Calicut 51. 1982; Sasidh. & Sivar., Fl. Thrissur 67. 1996; Sivar. & Philip, Fl. Nilambur 100. 1997. -*Riedlea corchorifolia* (L.) DC., Prodr. 1: 491. 1824 ("Riedleia"). *Riedlea radiata* Bl., Bijdr. 86. 1825 ("Riedleia") [STERCULIACEAE].

Niruren Rheede, Hort. Malab. 10: 109, t. 55. 1690.

The name Neeruren [Malayalam script on t. 55] is not in use now; neer means water and uren is that which removes [also refers to *Urena lobata*]. It occurs throughout Malabar.

THE
JOURNAL
OF
THE
SOCIETY
OF
THE
HISTORY
OF
THE
CITY
OF
NEW
YORK
FOR
THE
YEAR
1881





Naga-pu

FIG. 56



OVES sandy soils. The leaves are oblong-narrow, serrate in the margins, rigid, glabrous, smooth, on the upper surface dark-green, on the lower ash-grey, of slightly biting taste, provided with a mid-rib and lateral ribs.

Flowers arise on short petioles, are five petalled, round, in the margins folded in a curled manner, of a colour between rosaceous and blue, in the middle furnished with a yellow floret, like our *wild Roses*, to which they are similar.

Fruits are round, globose, four cornered (quadrangular) by means of raised up sutures; the seed-capsules often pointed and cuspidate.

Pentapetes phoenicea L., Sp. Pl. 698. 1753 [STERCULIACEAE].

Naga-pou Rheede, Hort. Malab. 10: 111, t. 56. 1690.

The name Nagappoo [Malayalam script on t. 56] is probably not used for this species now (it is currently used for *Mesua ferrea*); naga means snake and poo means flower. It has not been recollected during recent years.

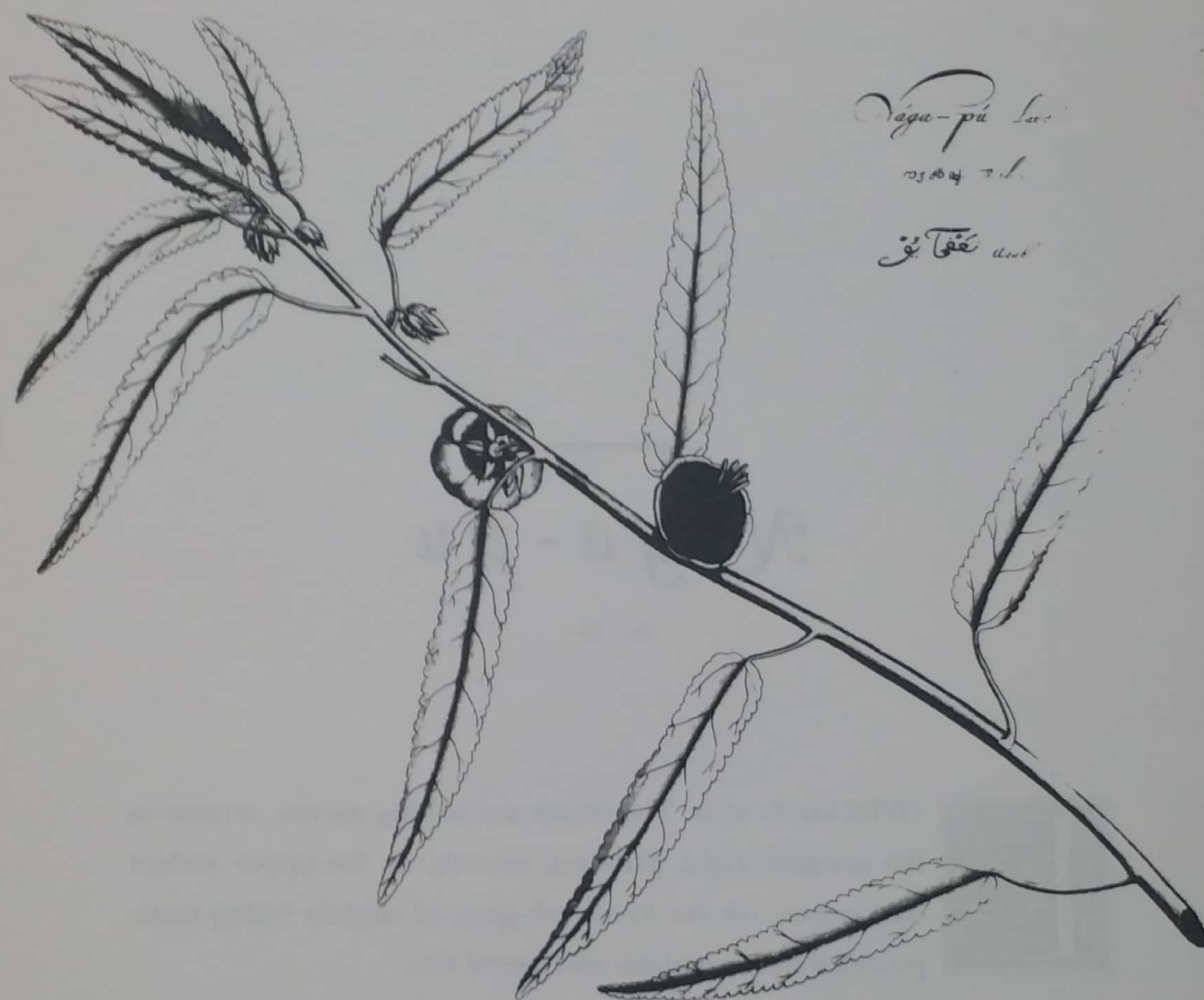


Fig. 56



Kilckola-tsjetti

FIG. 57



LIVES rocky and sandy soils. Root fibrous, with white wood without a core (pith), with a fleshy, white - aqueous, somewhat humid bark. Branches are with green bark, white wood.

Leaves arise in pairs, are oblong - narrow, somewhat rigid, dense, solid, glabrous, dark-green. The rib (mid) with rib-lets stands out on both sides, chiefly on the lower side.

Flowers in umbels, guarded below the origin by two oblong leaflets, are attached to fruits, are four petalled, erect, oblong-narrow, rigid, dark-green.

Fruits are round berries with a jutting out outgrowth (projection), formed of the petals of flowers, with a dark green rind, (bark) with the inner part white, cartilaginous, tender, with aqueous green pulp; within the pulp are contained a single and also two white kernels.

(Its Uses)

Cold fevers are either driven away or prevented by apozema (decoction) from each part of this plant, mixed with *sandal* wood, *pepper* or also by a

smear from root of the same, with oil added. Crushed leaves are put into wounds. A vulnerary (useful in healing wounds) ointment is moreover prepared from the bark of the root, with butter, which is also employed in ulcers.



Fig. 57

Ixora malabarica (Dennst.) Mabb., Taxon 26: 539. 1977; Manilal & Sivar., Fl. Calicut 146. 1982; Sasidh. & Sivar., Fl. Thrissur 225. 1996; Sivar. & Philip, Fl. Nilambur 331. 1997. - *Chiococca malabarica* Dennst., Schlüssel 12, 19, 37. 1818. *Ixora lanceolarus* Colebr. in Roxb., Fl. Ind. 1: 397. 1830. *Ixora alba* L., Sp. Pl. 110. 1753; Ridsdale in Manilal, Bot. Hist. Hort. Malab. 133. 1980. *Ixora leucantha* Wall. ex G. Don, Gen. Hist. 3: 572. 1834. *Bensetia paniculata* Raf., Sylva Tellur. 12. 1838, nom. illeg. (incl. type of *Ixora barbata* Roxb. 1814) [RUBIACEAE].

Kilcola-tsjetti Rheede, Hort. Malab. 10: 113, t. 57. 1690.

No Malayalam script appears on t. 57. The Malayalam name is better rendered as kiz (low) kola (bunch of flowers) chetthi (*Ixora*), denoting a tendency for the inflorescence to hang down. The name Kizkolachetthi is still used in parts of Malabar, where it is found growing in protected sacred groves.



Ben-pala

FIG. 58



LOVES sandy soil. Root fibrous. Branches round, jointed, light green. Leaves arise in pairs, are oblong-round, thick, fleshy, smooth, light green, the rib of which is pronounced on the lower part and striates the upper side.

Flowers arise in umbels along with the fruits, are in the shape of starlets, five-petalled, round, white, the pith (core) of which is light green.

Fruits are three-sided berries, bearing an outgrowth at the top, are green-white; in these are three seeds, separated by partition walls, a bit oblong, white.

Euphorbia articulata Dennst., Schlüssel 10, 21, 37. 1818, non Aublet 1775. -*Euphorbia halophila* Miq., Anal. Bot. 3: 16. 1852. *Euphorbia pallens* Dillwyn, Rev. Hort. Malab. 54. 1839. *Euphorbia atoto* sensu Hook. F., Fl. Brit. India 5: 248. 1887, non G. Forster. *Chamaesyce atoto* (G. Forster) Croizat in Degener, Fl. Hawaii, Fam. 190, Chamaesyce Lft. 4. 1936. [EUPHORBIACEAE].



Fig. 58

Ben-pala Rheede, Hort. Malab. 10: 115, t. 58. 1690.

The name Venpala [Malayalam script on t. 58] is still used; ven means white (from veluttha); and pala means a plant with milky latex or sap. The reference to white may be to its white flowers. It is very common on beaches of northern Malabar.



Wellia-codiveli

FIG. 59



LIKES any soil; shoots, a bit woody, round, glabrous, jointed, bulging out at the joints with a reddish swelling at the origin of internodes; with a green-brown bark, giving out from the nodes new shoots in pairs, which while young are reddish.

Leaves come out on short peduncles, plain on the inside and reddish, are oblong-round, soft, flaccid, thick, smooth, glabrous, of dark-shining greenness, those that are tender are reddish. The rib standing out on both sides, is reddish on the upper side in tender leaves.

Flowers arise on striated shoots, and are cuspidate spikes, joined together and united in threes, initiating three tipped shoot-lets, the open ones however initiating globules attached around red-lead-red-purple, shining spikes; consist of five green, cuspidate petals, downy on the inside, striated with dark green veins inside; in these is a long, white globule, giving out a small style from the top; stamens are five, red-purple-lead-red.

In each spike is hidden a single, a bit oblong, plain bean-like, brown-black and shining seed. It is to be noted moreover that, each spike is surrounded

below by five cuspidate leaflets smaller than leaves, from which there arise thick brushes of lead-red spines which spikes on getting ripe, spread out in any direction, rendering the spikes like those of *Bardana* or *Lappa*, which are larger on the lower side, smaller and more slender towards the apex, where first germinating is red-purple, then green.



Fig. 59

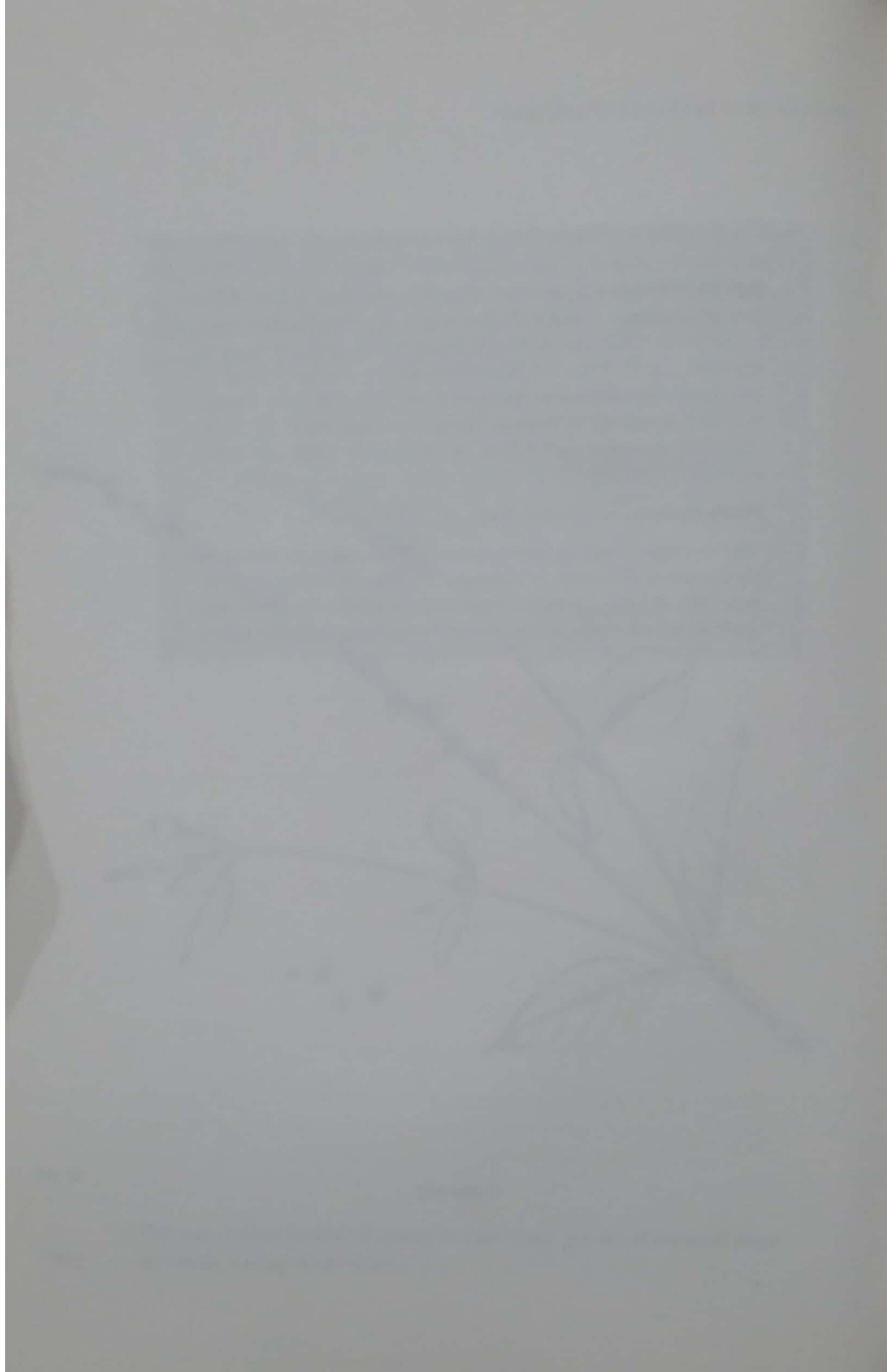
(Its Uses)

The root crushed in whey is against haemorrhage; powder of the same stops and heals tearing of intestines.

Pupalia lappacea (L.) Juss., Ann. Mus. Hist. Nat. Paris 2: 132. 1803; Townsend in Dassan., Rev. Handb. Fl. Ceylon 1: 28. 1980; Manilal & Sivar., Fl. Calicut 244. 1982; Sivar. & Philip, Fl. Nilambur 563. 1997. - *Achyranthes lappacea* L., Sp. Pl. 204. 1753. *Achyranthes atropurpurea* Lam., Encycl. 1: 546. 1785. *Desmochaeta atropurpurea* (Lam.) DC., Cat. Hort. Monsp. 102. 1813. *Syama lata* W. Jones ex Dillwyn, Rev. Hort. Malab. 34. 1839. *Pupalia atropurpurea* (Lam.) Moq. in DC., Prodr. 13(2): 331. 1849 [AMARANTHACEAE].

Wellia-codiveli Rheede, Hort. Malab. 10: 117, t. 59. 1690.

The name Vallikodiveli [Malayalam script on t 59] is not used now; valli means climber and kodiveli refers to *Plumbago*. Today it is known as pupalvalli; pupal refers to fungus (probably a reference to the appearance of its flowers and fruits) and valli means climber. It occurs in elevated lands near the coasts.



Kalengi-cansjava

FIG. 60



HERE are two plants of the same name of the same species, one male and the other female; the male is called *Bangi* in the language of the Brahmins, grows in sandy soils. Root white, fibrous, hairy. Stems with branches are with green bark, covered with very fine hairs; shoot somewhat angular.

Leaves arise on one petiole, in fives, in sevens, or nine; quite alike, oblong-narrow, equally serrate in the margin, with the tips of the teeth bent anteriorily (towards the anterior part), are thin, soft, smooth, glabrous; of slightly sharp taste. The white rib stands out on the lower side.

Flowers arise many together, are small, five petalled, from light green to whitish. In these are five very fine stamens, provided with slender foliaceous, light green apices, twisted in a curled manner. Lacks calyx and fruits.

(Its Uses)

The leaves dried in sun and reduced to powder stop diarrhoea, corrects the weakness of stomach, cures the endemic disease called *Pitao**, controls bile;

which powder, also inebriates, when smoked instead of *Tobacco*; mixed with it and used in fumigation heals hernia. The leaves eaten, inhibit productive semen in copulation, weakens the poison of *auripigment* (leucoderma?). The flowers are of the same power, which mixed with other strengthening things, in the form of pills, are given for strengthening of the parts of genitals.

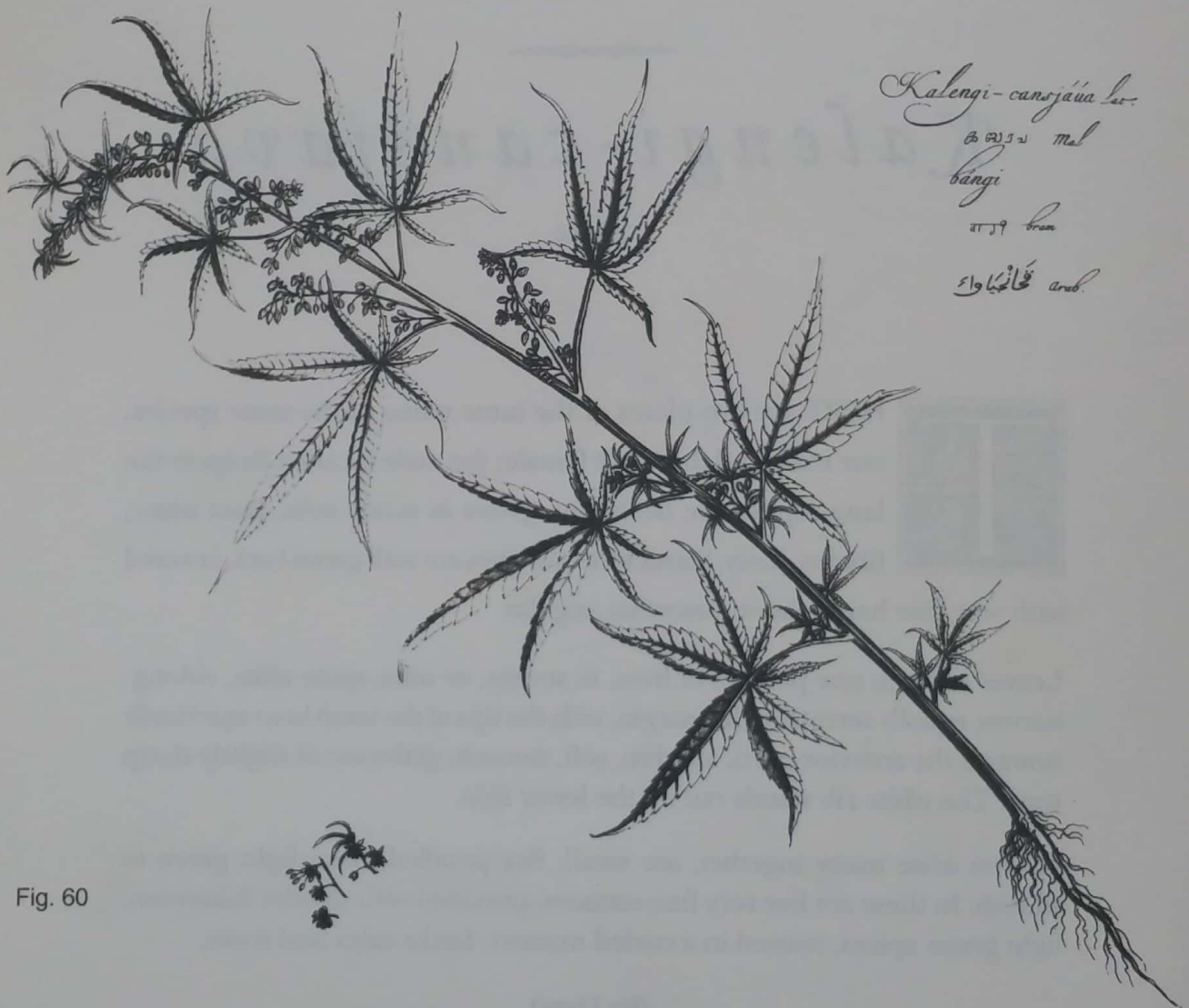


Fig. 60

**Pitao* is an endemic sickness of the Malabar region (coast); its origin is very much directly due to wrong physical practices leading to the danger, for the fact of excessive eating (gluttony) of *raw Rice*, pungent fruit *Araka* and the herb *Betel* for generous and repeated mastication with stone (lime) to let out blood (to spit red coloured saliva), of leading to the promotion of phlegm by indulging in mid-day sleep; in this manner becoming sick by weakening the strength and energy, becoming noticeably jaundiced to look at, as meant in the language; feet and general shape of the body appearing (as if) swollen; this (I mean) altogether indicative of a lack of safety (from good health) to observe.

Cannabis sativa L., Sp. Pl. 1027. 1753 [CANNABINACEAE].

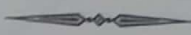
Kalengi-cansjava Rheede, Hort. Malab. 10: 119, t. 60. 1690.

The name Kanchavu [Malayalam script on t. 60] is still used. Kalenji is from Kalasi, meaning sailor. The Arab sailors coming to Malabar used to buy quantities of this (as mentioned in several ancient records) for their consumption and export. [Also see the *Uses* under t. 61 below]. Kanchaavu is *Cannabis sativa*. Kalenji Kanchaavu means *Cannabis* sought after by [Arab] sailors. It occurs wild along some forest margins and is also [illegally] cultivated in remote forest lands in Malabar by smugglers and criminals.

The second part of the document provides a detailed overview of the company's financial performance over the past year. It includes a comprehensive analysis of the revenue, expenses, and profit margins. The document also discusses the various factors that have influenced the company's financial results, such as market conditions, operational efficiency, and strategic initiatives.

The third part of the document outlines the company's financial goals and objectives for the upcoming year. It includes a detailed budget and a plan of action for achieving these goals. The document also discusses the various risks and challenges that the company may face and provides strategies for mitigating these risks.



Tsjeru-cansjava

FIG. 61



THE female (of the above) is called *Tsjada Bangi* by the Brahmins, differs from the first in that the leaves arise only in threes, and bears no flowers but only fruits, which are green oblong-round buds, pronounced with a twisted foliaceous tip at the apex, covered with very minute hairs, on the outside striated with rib-lets, containing a single, dark ash-grey seed. The leaves of both liberally eaten move the mind, and have the power of inebriating; in the male plant however, the power is greater.

(Its Uses)

The fruits and seeds are sought after by the Mohammedans.



Fig. 61

Cannabis sativa L., Sp. Pl. 1027. 1753 [CANNABINACEAE].

Tsjeru-cansjava Rheede, Hort. Malab. 10: 121, t. 61. 1690.

The name Chadakanchavu [Malayalam script on t. 61] is not used. Chada [from chadacha] means weak or lean, alluding that its leaves have lesser inebriating power than the former, Kalenji Cansjavu. Chadacanchavu means "weaker *Cannabis*". Only the name Cansjavu is used for this also now.



Nari-patsja

FIG. 62



species of this plant is *Beena Patsja*, in the language of the Brahmins *Vasini*, grows in sandy and rocky soils. Root white, slightly red, woody inside, of not unpleasant smell, with a slightly sharp bark. Stalks are round, green, hairy, covered with leaves here and there, provided with a pith.

The leaves are oblong-round, hairy in the margins, not thus at the origin, acutely serrate soft; of pleasing smell. The rib is pronounced on both sides.

Flowers arise in fascicles, are round heads, consisting of purple-red filaments, which spring up from the calyx like a brush, in the middle with cyathiform florets equipped with five tips, from which a small purple stamen comes out, with a white slender tip. The calyx is hairy, with cuspidate and angular leaflets.

Minute, oblong seeds are attached to the plain disc of the calyx receiving in themselves the neck in the upper tip of the florets, in the margin of the tip, surrounded by white hairs, first yellowish, then turning red.

(Its Uses)

The juice pressed out together with that of *mammæ* herb, gives an ointment against haemorrhage. The leaves are crushed with the milky juice of coconut, which when taken, stops punching gas of intestines.

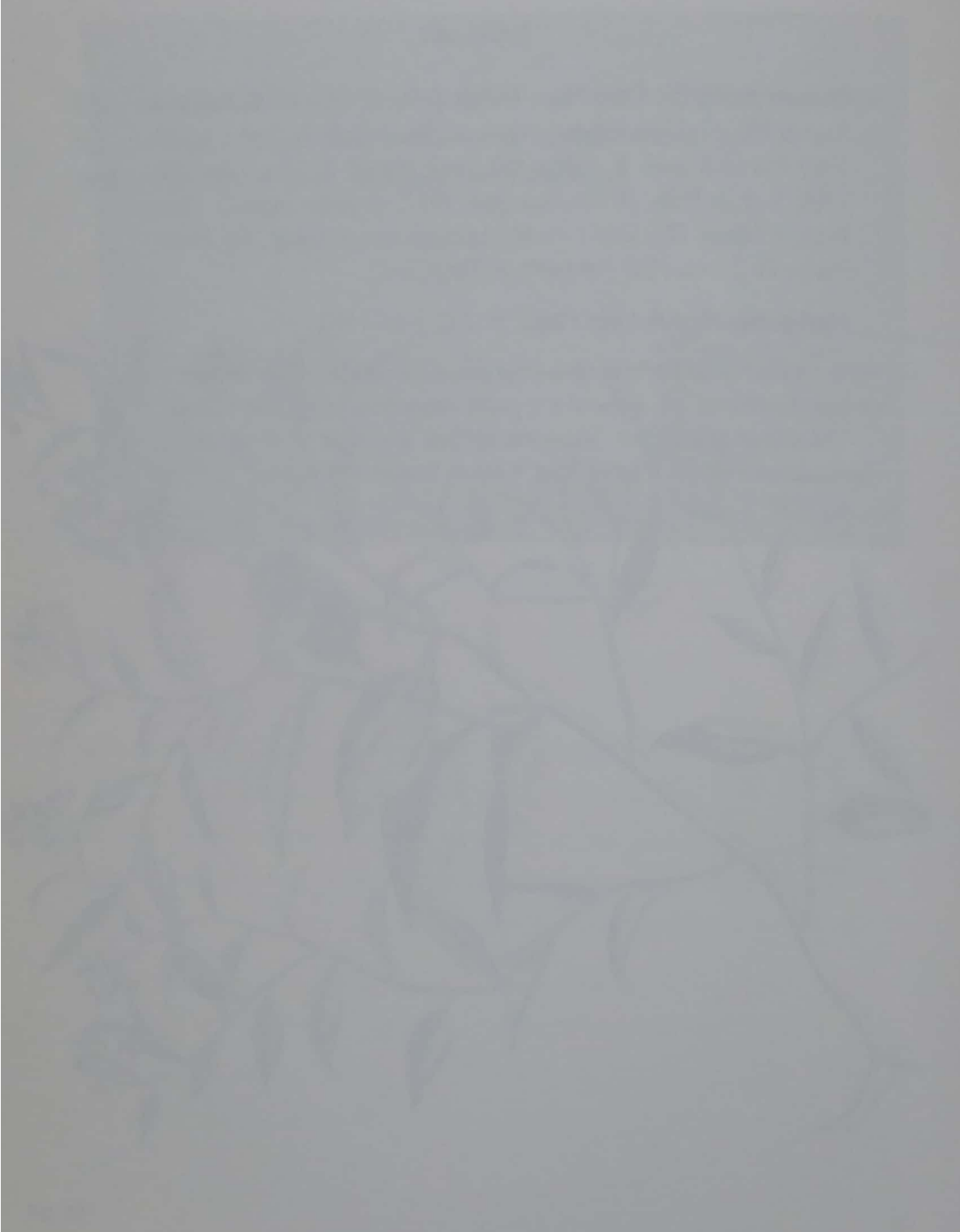


Fig. 62

Blumea mollis (D. Don) Merr., Philipp. J. Sci. 5: 395. 1910; Randeria, Blumea 10: 261. 1960; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 169. 1980; Manilal & Sivar., Fl. Calicut 150. 1982; Manilal, Fl. Silent Valley 152. 1988; Sivar. & Philip, Fl. Nilambur 364. 1997. -*Erigeron mollis* D. Don, Prodr. Fl. Nepal. 172. 1825 ("molle"). *Vernonia rheedei* Kostel., Allg. Med.-Pharm. Pl. 2: 641. 1833 ("rheedii") [ASTERACEAE].

Nari-patsja Rheede, Hort. Malab. 10: 123, t. 62. 1690.

The name Naripacha [Malayalam script on t. 62] is not used now; nari means tiger (sometimes also leopard) and pacha means herb (or succulent plant). The allusion is not clear. Today this species, as well as other common Asteraceous weeds, is called Appa. It occurs throughout Malabar.





P u - t u m b a

FIG. 63



ROWS in sandy soils. Root white, fibrous. Stalks light green, white, slender, hairy.

Leaves oblong-narrow, in the margins subtly crenate, thin, covered with white hairs, on the lower side furnished with ribs.

Flowers are flat heads, which consist of numerous light blue florets, each of which opens itself into five, narrow petals. In these a white-blue style springs up, provided with an oblong, deep-blue head, which is white at the top, later giving out a white-bluish, bifurcated stamen, but later turning blue-green. The calyx is hairy, green, of many leaves.

The seeds to the top of which are attached florets, are oblong, and implanted to the base of the calyx.

(Its Uses)

The juice relieves the pains of stomach; the liquid pressed out from the leaves, with *Pepper* is prepared into an errhinum (sternuatory, that causes sneezing) for the maniacs.

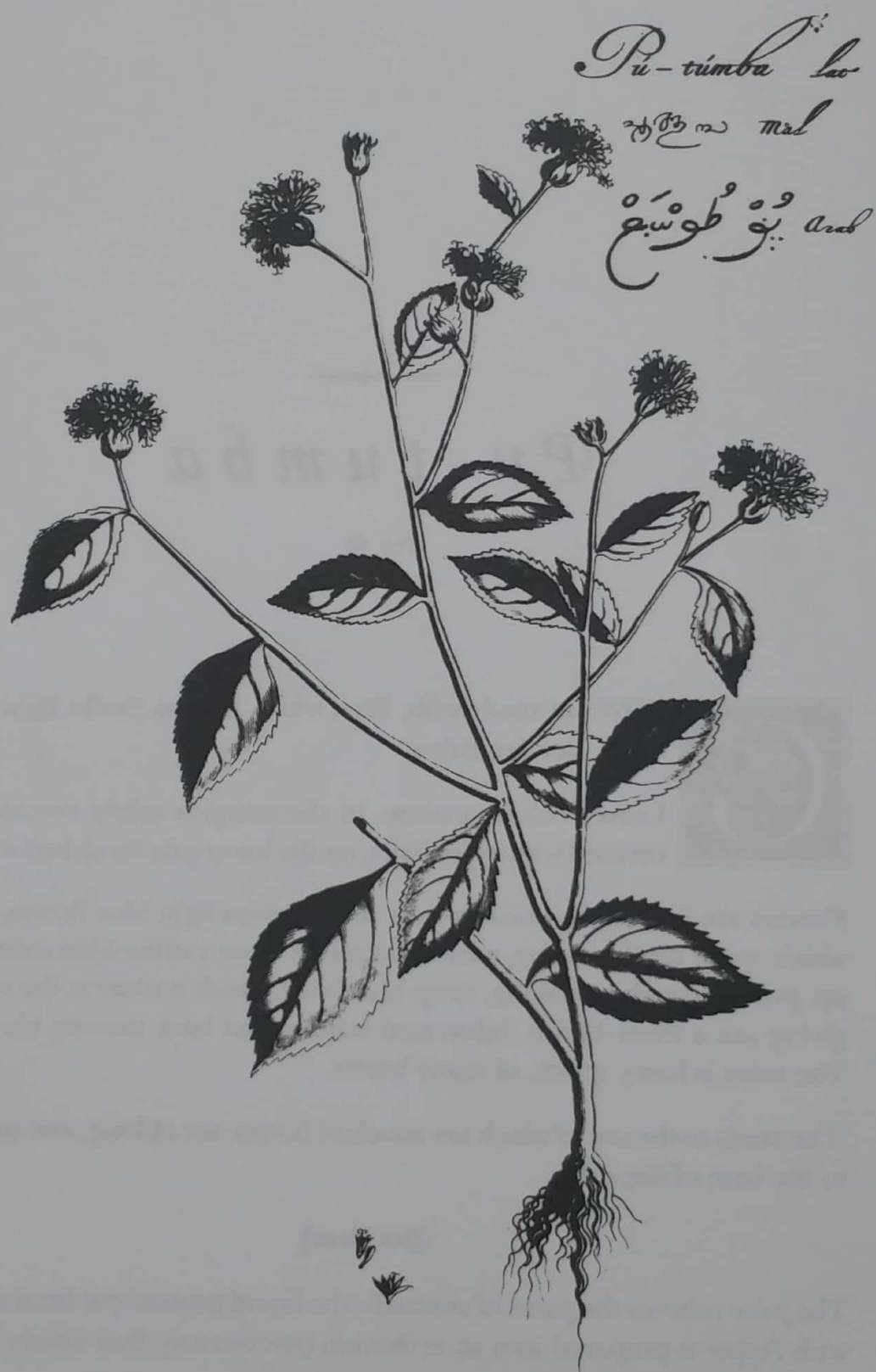


Fig. 63

Phyllocephalum indicum (Less.) Kirkman, Rhodora 83: 12. 1981; Manilal, Fl. Silent Valley 156. 1988. - *Ampherephis indica* Less., Linnaea 6: 686. 1831. *Decaneurum reticulatum* DC. in Wight, Contrib. Bot. India 8. 1834. *Centrathemm reticulatum* (DC.) Benth. in Benth. & Hook., Gen. Pl. 2: 225. 1876. *Centrathemm indicum* (Less.) Fischer, Kew Bull. 1940: 44. 1940 [ASTERACEAE].

Pu-tumba Rheede, Hort. Malab. 10: 125, t. 63. 1690.

Poothumba [Malayalam script on t. 63] is not used; poo means flower and thumba refers to *Leucas aspera*. No Malayalam name is used currently. It occurs along forest margins of the uplands.

The second part of the document describes the various methods used to collect and analyze data. It highlights the importance of using reliable sources and the need for regular updates to the data. The document also discusses the challenges of data collection and the strategies used to overcome them.

The third part of the document provides a detailed overview of the organization's financial performance. It includes a breakdown of revenues, expenses, and profits, as well as a comparison of the current year's performance with the previous year's. The document also discusses the factors that have contributed to the organization's success and the areas that need improvement.





P u a m - c u r u n d a l a

FIG. 64



L IKES sandy, rocky and earthy soil, wholly hairy. Root woody, fibrous, slightly red-dark; of slightly sharp taste, stalks round, slender, dark-green, lightly striate a bit woody covered with very small, loose hairs.

Leaves are oblong, on the margins incised by conspicuous angles (corners), thin, large, soft, on the upper side hairy, and of deeper greenness, on the lower, striated with pronounced ribs.

Flowers arise in fascicles, are oblong buds, on the upper part of blue-purplish colour, formed of numerous five-petalled florets, from the middle of which springs forth a thin style, curled in a bifurcate manner above. The calyx formed of many cuspidate leaflets, holds the florets tightly.

The seeds are pappous, with erect hairs in the periphery of the eye, which later initiate pappus hairs, first green, then black.



Fig. 64

(Its Uses)

The juice, well shaken in a dish and spread (smeared) over the eye, prevents (resists) jaundice; from it is prepared an anti-maniac bath; with the addition of medicines of the same power, drives out fever; from it is also prepared a pill against ophthalmia (inflammation of the eye, especially conjunctiva).

Vernonia cinerea (L.) Less., Linnaea 4: 291. 1829; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 133. 1980; Manilal & Sivar., Fl. Calicut 149. 1982; Sasidh. & Sivar., Fl. Thrissur 256. 1996; Sivar. & Philip, Fl. Nilambur 382. 1997. - *Conyza cinerea* L., Sp. Pl. 862. 1753. *Conyza heterophylla* Lam., Encycl. 2: 84. 1786. *Cacalia rotundifolia* Willd., Phytogr. 11, t. 6, f. 1. 1794. *Vernonia cinerea* var. *rotundifolia* (Willd.) DC. in Wight, Contrib. Bot. India 6. 1834; DC., Prodr. 5: 24. 1836 [ASTERACEAE].

Puam-curundala Rheede, Hort. Malab. 10: 127, t. 64. 1690.

The name Poovankurundila [Malayalam script on t. 64] is still used; poovam means with flowers [or flowering]; and kurundila means tender leaves, the allusion of which is not clear. It grows throughout Malabar.



Manam-podam

FIG. 65



ROWS in wet places. Branches are jointed, angular, bent at swellings, dark-green, covered with hirsute, rough hairs.

The leaves, which arise at random, are large, oblong, serrate, beset with hairs; the ribs pronounced on the lower side.

Flowers arise in two series, which joined together, come forth from oblong, hairy and green calyces, each one, accompanied towards the side, by a wing of small, cuspidate, hairy and green leaves mutually bending on themselves in a shield-like manner; for the rest are small, four-petalled, white-purple; in them are four oblong, downy, purple stamens; furnished with white buds (heads); of pleasing and aromatic smell as is the whole plant.



Fig. 65

Pogostemon paniculatus (Willd.) Benth. in Wall., Pl. As. Rar. 1: 30. 1830; Mukh., Rec. Bot. Surv. India 14: 68. 1940; Manilal & Sivar., Fl. Calicut 240. 1982; Manilal, Fl. Silent Valley 222. 1988; Sasidh. & Sivar., Fl. Thrissur 364. 1996; Sivar. & Philip, Fl. Nilambur 553. 1997. -*Hyssopus cristatus* Lam., Encycl. 3: 187. 1789, non *Elsholtzia cristata* (Willd.) Willd. 1800, non *Pogostemon cristatus* Hassk. 1843. *Elsholtzia paniculata* Willd., Sp. Pl. 3: 59. 1800 [LAMIACEAE].

Manam-podam Rheede, Hort. Malab. 10: 129, t. 65. 1690.

The name Manam-potham [Malayalam script on t. 65] is not in use now. The meaning of the word is also not clear. No other Malayalam name is currently known either. It occurs in hills near the coastal regions.



Katunailosina

FIG. 66



LOVES sandy soils. Root woody, rather yellow. Shoots round, jointed, clothed with a hairy down which can be easily rubbed off by hand, with a green or also reddish bark, which later becomes blood-red; at the nodes marked with red rings.

Leaves cover the shoots at the nodes; are very oblong-narrow, a bit hairy, thick, dense, on the upper side a bit striated with pronounced veins; on the lower side furnished with a rib; of biting taste.

Flowers arise in fascicles, are small cuspidate, five petalled, silvery spikes; in each one, inside the gaping mouth, towards the bottom, somewhat angular and cuspidate seed-capsule is seen, which first is green, but when the seeds mature, loosened into three sides or leaves, reddish with a lustre, the redness passing through the silvery petals of the spikes, divided into three parts, in which are contained very minute seeds, which are first white, then turn black.

(Its Uses)

Levigated with the juice of coconut, it gives (a medicine) with alexipharmic power (antidote to poison) in the sting of snake; from it is prepared an apozema (decoction) against hypochondria.

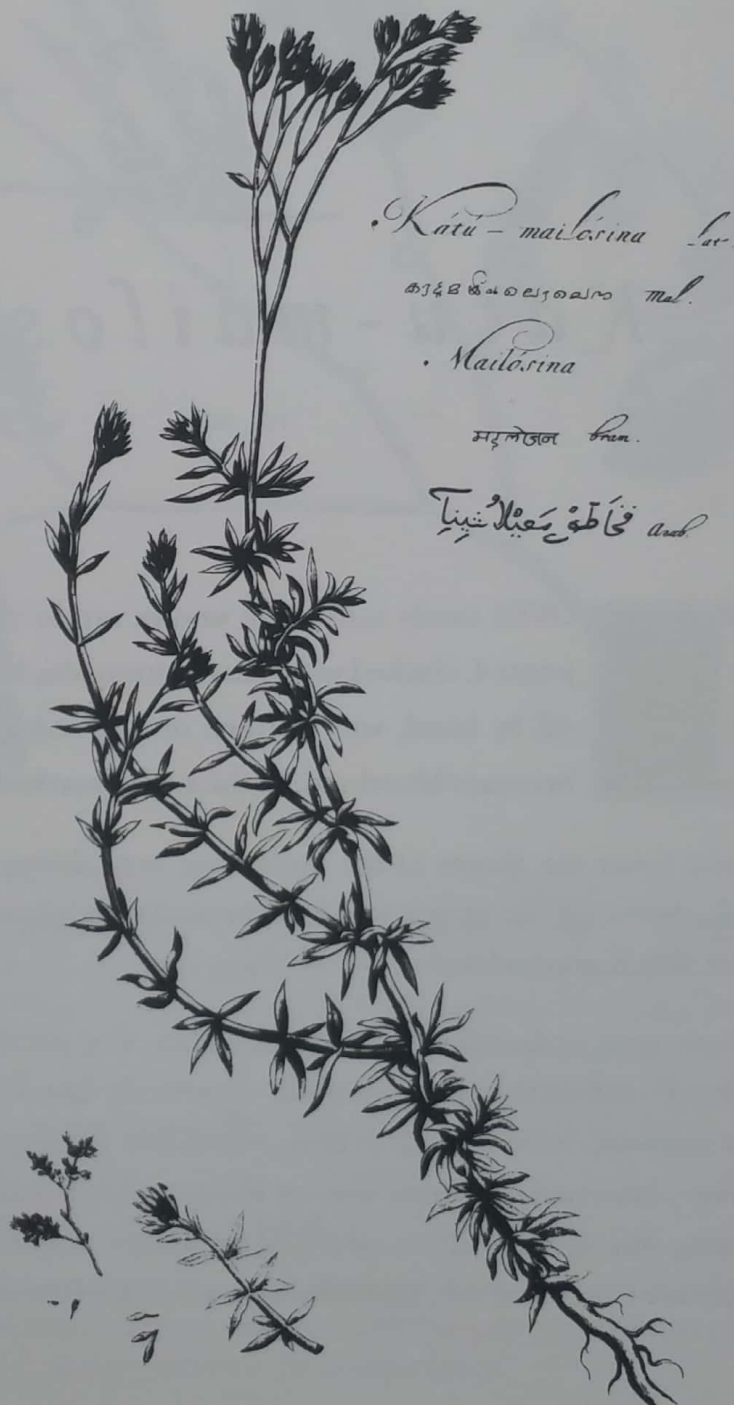


Fig. 66

Polycarpaea corymbosa (L.) Lam., Tabl. Encycl. 2: 129. 1797; Manilal & Sivar., Fl. Calicut 38. 1982; Eswar & Rao in Sald., Fl. Karnataka 1: 152. 1984; Sasidh. & Sivar., Fl. Thrissur 49. 1996. -*Achyranthes corymbosa* L., Sp. Pl. 205. 1753. *Polycarpaea spadicea* Lam., Tabl. Encycl. 2: 129. 1797. *Mollia spadicea* (Lam.) Willd., Hort. Berol. sub. t. 11. 1803. *Lahaya spadicea* (Lam.) Roem. & Schult., Syst. Veg. 5: 404. 1819 [CARYOPHYLLACEAE].

Katu-mailosina Rheede, Hort. Malab. 10: 131, t. 66. 1690.

The name Kattumayilochena [Malayalam script on t. 66] is not used now; kattu means wild but the meaning of mailochena is not clear. No Malayalam name is currently known. It is very common along the coasts of Malabar.

The teacher is a professional who is responsible for the learning and development of their students. They are expected to have a deep understanding of their subject matter and to be able to communicate this knowledge effectively. The teacher is also responsible for creating a positive and supportive learning environment for their students. This involves setting clear expectations, providing feedback, and encouraging students to take ownership of their learning. The teacher is also responsible for assessing student progress and adjusting their instruction accordingly. This requires a high level of self-reflection and a willingness to learn from experience. The teacher is a role model for their students and is expected to demonstrate high levels of integrity, honesty, and professionalism. They are also responsible for staying current in their field and for seeking out opportunities for professional development. The teacher is a key figure in the education system and plays a vital role in shaping the future of our society.





Pee-coipa

FIG. 67



NJOYS sandy soil. Root white, fibrous. Stalks reddish.

Leaves are attached to stalks, are oblong-narrow, some green, some either partly or wholly turning red, are thick, crowded. The rib stands out on both sides.

Flowers are five petalled, cuspidate, white, slightly reddish, shining, somewhat rigid spikes, in the middle striated by vein. In them are white, erect stamens, capped with five red-purple knobs, in the middle have the style, in each a green-white seed-capsule is seen, filled with a single, jet black, shining seed, of two convex sides.

(Its Uses)

Delirium arising from the endemic disease *Pitao* stops when the temples are smeared with this plant crushed with *sandal* wood, cow's milk and butter.

Pee-coipa la

പെരുകുഴൽ Mal.

Coipa

കാട്ടൻ തേൻ.

بوم فياضوينا Arab.

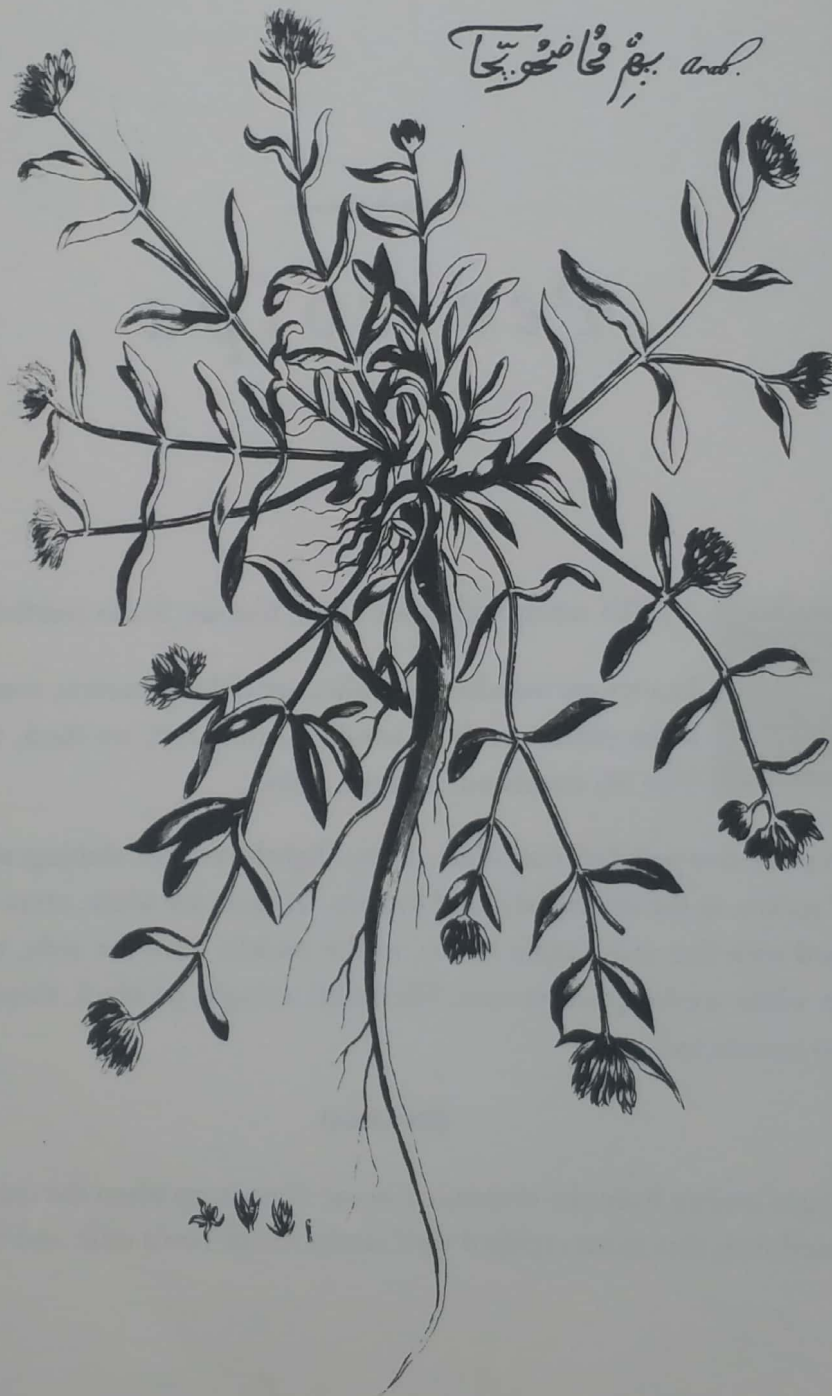


Fig. 67

Allmania nodiflora (L.) R. Br. ex Wight, J. Bot. (Hooker) 1: 226, t. 128. 1834; Mabb., Taxon 26: 533. 1977; Townsend in Dassan., Rev. Handb. Fl. Ceylon 1: 7. 1980; Manilal, Fl. Silent Valley 225. 1988; Sasidh. & Sivar., Fl. Thrissur 368. 1996; Sivar. & Philip, Fl. Nilambur 558. 1997. - *Celosia nodiflora* L., Sp. Pl. 205. 1753 [AMARANTHACEAE].

Pee-coipa Rheede, Hort. Malab. 10: 133, t. 67. 1690.

The name Peekozhuppa [Malayalam script on t. 67] is not used; pee means wild and kozhuppa refers to *Alternanthera sessilis*. No Malayalam name is currently in use. It occurs throughout Malabar.

Muel-schevi

FIG. 68



In the language of the Brahmins *Udiram-Panum*, grows in sandy soils. Root fibrous, white, when dry of sharp but not displeasing smell. The stalks are slender, light green, somewhat hairy, especially the tender ones, a bit woody, separated (divided) by nodes, from the nodes going out at random shoot-lets in twos.

Leaves are attached to the stalks without petiole, are oblong narrow both lobes extended towards the posterior part, hairy, chiefly while young, of slightly sweet taste and very subtly pungent. The rib stands out on the lower side.

Flowers arise in fascicles, are with very narrow and hair like petals, from oblong-round heads, hairy, of purple-red colour on the upper part, the rest of white colour; without smell; in the heads opened into five narrow leaves, are placed (remain) numerous, red-dark, oblong-round, striated seeds, erect around the base, each one giving out from the eye a brush of fine, white filaments, from the middle however a single, narrow leaf, the flower having faded away.

The seeds with the brushes, imitate pappus hairs; always flowers, is found in rainy season as well as in summer, also in places not irrigated and wet.

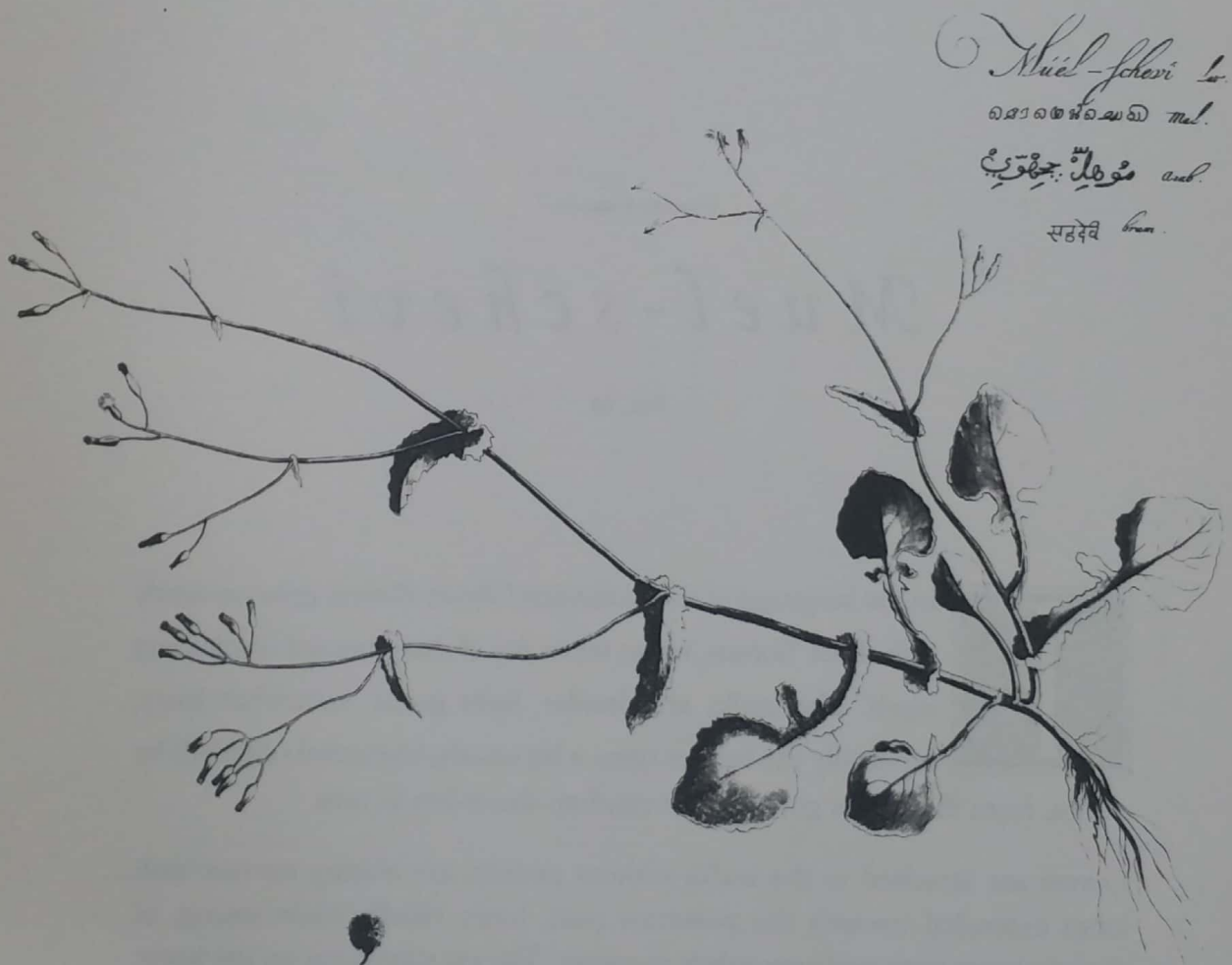


Fig. 68

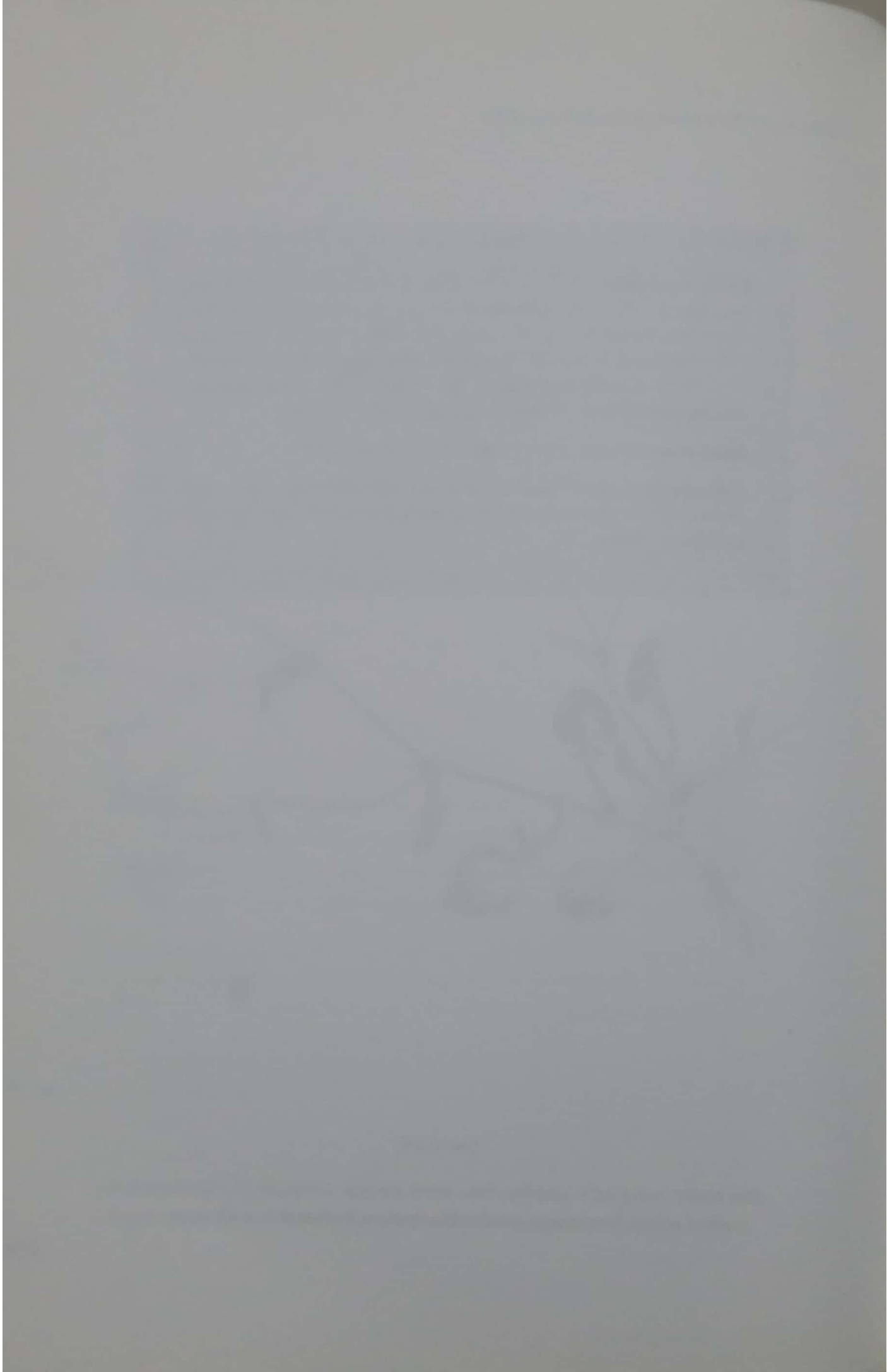
(Its Uses)

A decoction (is prepared) against fever and asthma. The juice, taken with *sugar* stops flow of bowels. Crushed with butter ripens and opens boils.

Emilia sonchifolia (L.) DC. in Wight, Contrib. Bot. India 24. 1834; Nicols., Syst. Bot. 5: 398. 1980; Grierson in Dassan., Rev. Handb. Fl. Ceylon 1: 251. 1980; Manilal & Sivar., Fl. Calicut 149. 1982; Manilal, Fl. Silent Valley 154. 1988; Sasidh. & Sivar., Fl. Thrissur 251. 1996; Sivar. & Philip, Fl. Nilambur 371. 1997. - *Cacalia sonchifolia* L., Sp. Pl. 835. 1753. *Crassocephalum sonchifolium* (L.) Less., Linnaea 6: 252. 1831 [ASTERACEAE].

Muel-schevi Rheede, Hort. Malab. 10: 135, t. 68. 1690.

The name Moyalchevi [Malayalam script on t. 68] is still in use; moyal means rabbit and chevi means ear, a reference to the shape of the leaves. It occurs throughout Malabar.





Nelavaga

FIG. 69



LS a creeping plant, with numerous shoots spread in all directions, which here and there attach themselves with rootlets. Root is woody and thick, with a white bark, covered with fibres. Shoots are round, slender, green, older ones ash coloured, provided with white hairs, inside woody.

Leaves are seen in hairy petioles, serrate in the margin, on both sides beset with white, long hairs, thin, soft, the ribs of which are pronounced on both sides, mostly on the lower.

Flowers hang from fine petioles, five petalled, some what transparent, incised, contracted by claws, striated by white, shining veins; a yellow style comes out from the centre, with the upper part surrounded by a brush of five filaments, each one of which is capped with saffron apex. The calyx is made up of five light-green and very hairy tips (lobes), which are striated with fine dark-green nerves, spreading over the margins of the lobes like a fringe.

Seed-capsules are round, five sided, whitish; in them are five seeds, in each side one, separated from each other by a thin membrane, are three sided, brown; of no taste.



Fig. 69

(Its Uses)

An anticephalic (for curing head ache or gout in the head) bath is prepared from this plant.

Sida cordata (N. Burm.) Borssum Waalkes, Blumea 14: 182. 1966; Manilal & Sivar., Fl. Calicut 43. 1982; Sivar. & Philip, Fl. Nilambur 90. 1997. - *Melochia cordata* N. Burm., Fl. Ind. 143. 1768. *Sida veronicifolia* Lam., Encycl. 1: 5. 1783 ("veronicaefolia"). *Sida radicans* Cav., Diss. 1: 9, t. 10, l. 2. 1785. *Sida humilis* var. *veronicifolia* (Lam.) Mast. in J. Hook., Fl. Brit. India 1: 322. 1875 [MALVACEAE].

Nela-vaga Rheede, Hort. Malab. 10: 137, t. 69. 1690.

The name Nilavaga [Malayalam script on t. 69] is still used; nilam means terrestrial and vaga refers to *Albizia odoratissima*. Vaga (*Albizzia*) is also used as a head shampoo. The allusion is to its use. No Malayalam name is currently found to be in use.

—◆—

Inota-inodian
or
Moetoe

FIG. 70



HERE are three species of this plant, *Inota-Inodien*, *Pee-Inodien*, *Inota-Inodien-Valli*; the first one is called *Zera-Puti* by the Brahmins; is unpleasant and bad smelling, liking sandy rocky and earthy soils. Root white, fibrous, hairy; of slight bitter taste.

Stalks angular, light green, swollen, where they give out new stalk-lets, beset with loose and minute hairs; with the flesh inside humid and green.

Leaves, the petioles of which are furrowed, hairy, arise one in number, or many together, very often accompanied by new shoots, pronounced with unequal teeth, are thin, soft, smooth, covered with loose and short hairs, of dark-dim greenness. The ribs stand out on the lower side, which, as also the leaves are bitter.

The petioles of flowers are red-dark, hairy, they (flowers) are monopetalous, five cuspidate, light yellow, pale, striated on the lower side with a vein; without smell. In them are five erect stamens, from white to light green, furnished with long, erect light yellow apices; the style is light-green, stretching itself out from a light-green calyx, projecting (protruding) above the apices of the stamens with a green knob.

Calyx is green, five cuspidate, which when the flowers have faded away, enlarge into green, five-sided follicles, on the upper part, drawing into a pointed tip, filled with much air, in each one a single round berry is connected to the base of the follicle by means of a short and thick peduncle, first green, then from green to light-yellow, filled inside with a succulent pulp, of a taste from acid to sweet, edible. In the berries there are numerous seeds, and among



Fig. 70

themselves mutually placed almost in a shield fashion, each one adhering to the bottom part in halved locules, the outside of which, because of the thin membrane of the fruits, are visible (transparent) outside; for the rest are plain, of white colour, light yellow.

(Its Uses)

The root is used in the concoction of oil. The juice diminishes swellings of testicles. The root helps those suffering from "causone", fried with oil, heals that endemic disease called *Pitao*.

Physalis angulata L., Sp. Pl. 183. 1753; O. E. Schultze in Urban, Symbol. Antill. 4: 141. 1909; Heine in Hepper, Fl. W. Trop. Afr. ed. 2, 2: 29. 1963; Waterfall, Rhodora 69: 216. 1967; Hepper in Dassan., Rev. Handb. Fl. Ceylon 6: 394. 1988; Sasidh. & Sivar., Fl. Thrissur 316. 1996; Sivar. & Philip, Fl. Nilambur 462. 1997. - *Physalis minima* L., Sp. Pl. 183. 1753 [SOLANACEAE].

Inota-inodien Rheede, Hort. Malab. 10: 139, t. 70. 1690.

The name Peenjottanjodiyan [Malayalam script on t. 70] is not used but Njottanjodiyan is. The prefix "pee" [meaning wild] appearing in the Malayalam script in this is probably an error, since the following plant described under t. 71 is the wild(er) element, where also the prefix [pee] is used, there correctly. Njottanjodiyan denotes the sound of cracking of fingers, a reference to the still current practice (by children) of pinching the calyx and popping it. "Moetoe", given as an alternative name by Rheede is probably mottu, meaning bud (reference to bladdery calyces?). It occurs throughout Malabar.



Pee-inota-inodien

FIG. 71



WITH the former agrees greatly, but the branches are not so much spread in width, but more erect, of three feet in height, exceeding the first; which like the leaves which are a bit more oblong and larger, and more thickly hairy, and beset with longer hairs.

Flowers are a little smaller; towards the bottom inside, marked by five red-dark signs in all directions: the follicles are more narrow, the berries smaller, filled with somewhat smaller seeds.

(Its Uses)

The leaves are employed by Brahmins in ceremonies. Fruits are edible. Roots boiled in water suppresses diabetes, heals sores of mouth if they are chewed.

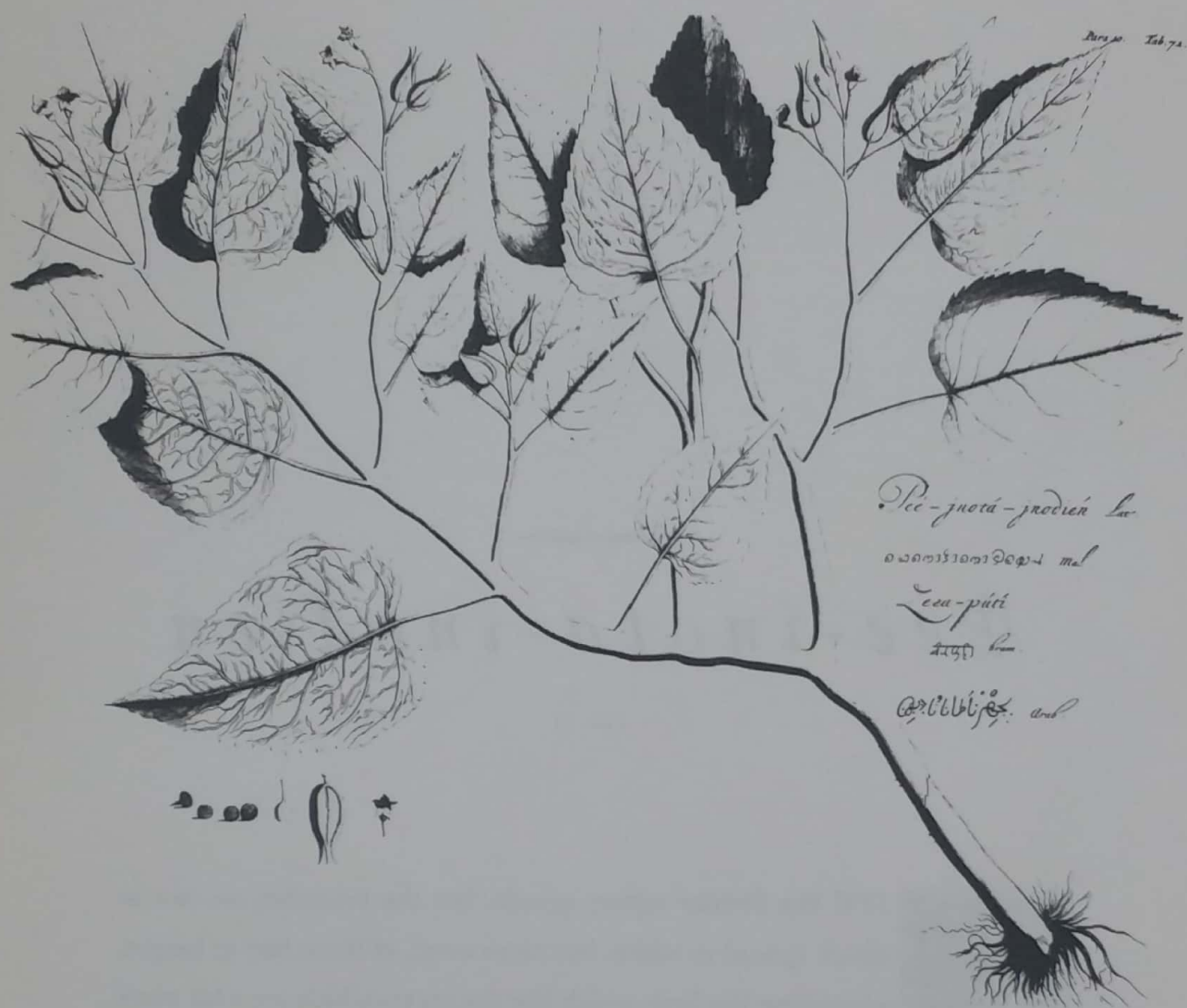


Fig. 71

Physalis angulata L., Sp. Pl. 183. 1753; O. E. Schultze in Urban, Symbol. Antill. 4: 141. 1909; Heine in Hepper, Fl. W. Trop. Afr. ed. 2, 2: 29. 1963; Waterfall, Rhodora 69: 216. 1967; Hepper in Dassan., Rev. Handb. Fl. Ceylon 6: 394. 1988; Sasidh. & Sivar., Fl. Thrissur 316. 1996; Sivar. & Philip, Fl. Nilambur 462. 1997. - *Physalis minima* L., Sp. Pl. 183. 1753 [SOLANACEAE].

Pee-inota-inodien Rheede, Hort. Malab. 10: 141, t. 71. 1690.

The name Peenjottanjodiyan [Malayalam script on t. 71] is not used but, the name Njottanjodiyan is used. Pee means wild and Njottanjodiyan denotes the sound of cracking of fingers, a reference to the still current practice (by children) of pinching the calyx and popping it. It occurs throughout Malabar.



Caca-mulſu

FIG. 72



ACA-TALY, according to the Brahmins; is a small, low plant, unpleasant and bad smelling, loving sandy soils. Root fibrous, on the outside saffron, on the inside white and woody. In the lower part of the stalks, only around the roots, woody and hard, giving out knotted or simple shoot-lets, or from here and there in twos.

The leaves, whose petioles are striated with a furrow, are oblong, thick, soft, curled, incised with small teeth, light green. The ribs stand out on the lower part, are conspicuous also on the upper side.

Flowers are monopetalous, five-lobed, light yellow, without smell, residing in a small calyx. Their stamens are white, thin, a bit hairy, furnished with yellow, apices; the style springing forth from a round green globule, which is the rudiment of fruit, is capped with a knob.

The fruits which hang from a thick, small, hard and very woody base (foot), on the upper part more round, in the apex furnished with a short tip, in the lower part somewhat four sided, armed with four hard, woody sharp spines,

to each side one, are green-yellow, of aqueous taste, contain in themselves a single hard stone, covered all over on the outside with woody filaments reticulately interwoven and also glued to the outer rind of the fruits; the kernel is white.



Fig. 72

(Its Uses)

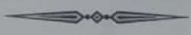
If this plant is shaken in water, renders it thick, viscous and mucilaginous, so that it may look like the albumen of egg. Given in decoction, is used in hot fevers. The juice pressed out with *sugar* removes dysuria (difficulty or pain in

passing urine), pains of stone as also pain of chest and burning of hands. Leaves dried and powdered stop gonorrhea; with *sugar* and freshly milked milk help in every bad disposition of members (limbs). The juice of leaves, so also the viscous water mitigates the preternatural heat in the loins, restrains the ardor (burning) of urine, removes painful discharge of urine, breaks up stone.

Pedaliium murex L., Syst. Nat. ed. 10, 1123. 1759; Theob. & Grupe in Dassan., Rev. Handb. Fl. Ceylon 3: 322. 1981; Manilal & Sivar., Fl. Calicut 212. 1982 [PEDALIACEAE].

Caca-mullu Rheede, Hort. Malab. 10: 143-144, t. 72. 1690.

The name Kakkamullu [Malayalam script on t. 72] is not used for this species now but is used for *Caesalpinia cristata*; Kakka means crow and mullu means thorn. No Malayalam name is currently known. It is found growing along the beaches of Malabar.



Nelen-Tsjunda

FIG. 73



ROWS in sandy soils. Shoots are brown, green, a bit woody, with a green pith, which when dry turns white.

Leaves, which arise here and there, are cuspidate, of round margin, insipid, covered with the rib-lets standing out on the lower side, which striate the upper side.

Flowers imitate very white stars, for the rest, are five-petalled, having in the middle one yellow apex, with a green calyx; of no smell.

Round berries succeed them, they are glabrous, covered over through the apex by a transparent vein, succulent, green, when mature of aqueous orange colour, six or seven joined together in a fascicle, filled with numerous, white, plain, reniform seeds, which adhere to the middle partition wall; of a taste not disagreeable.

Nothing is known about its powers.



Fig. 73

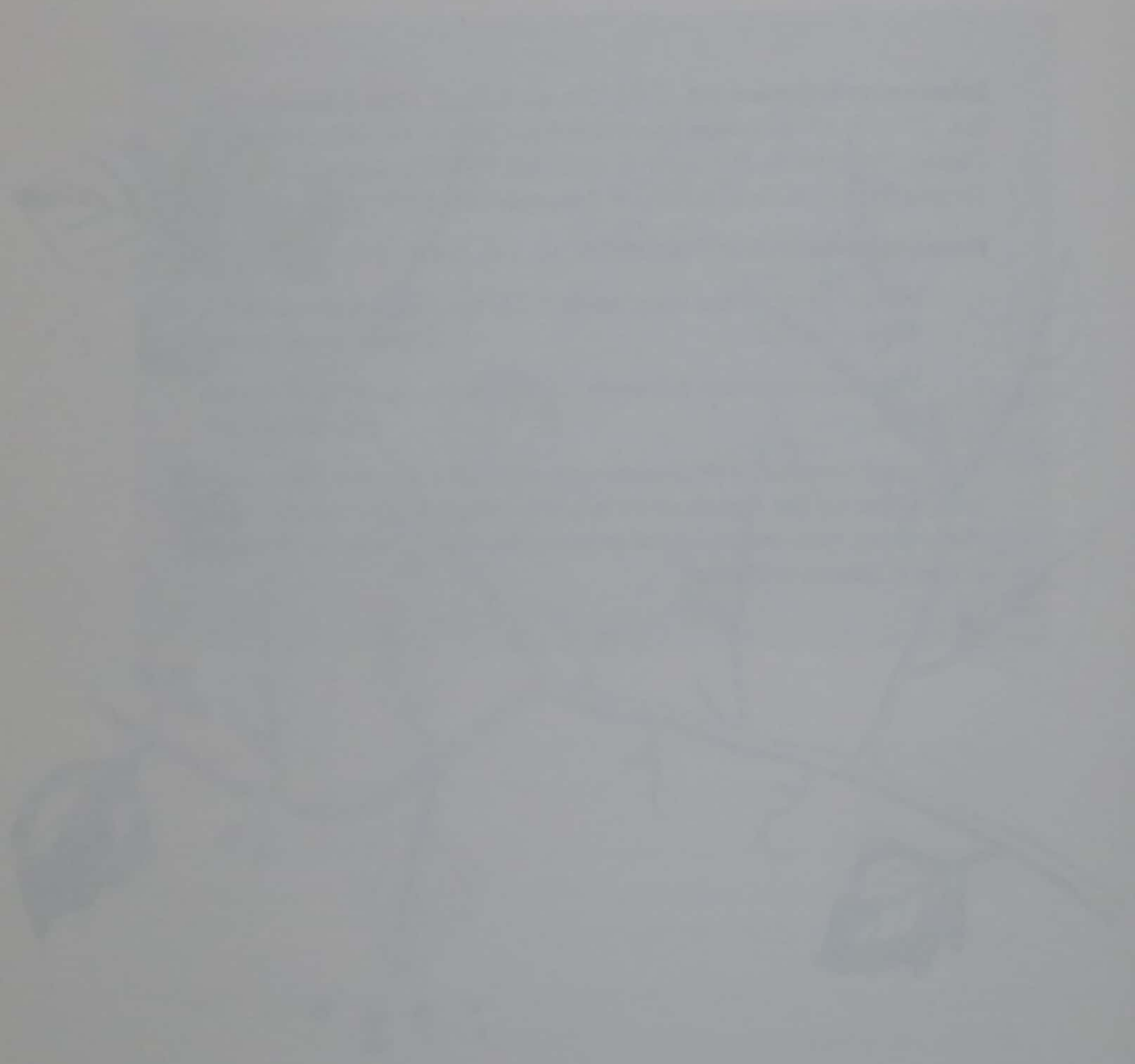
Solanum americanum Mill, Gard. Dict. ed. 8, no.5. 1768; Edmonds, Kew Bull. 27: 103. 1972; Symon, J. Adelaide Bot. Gard. 4: 46. 1981; Hepper in Dassan., Rev. Handb. Fl. Ceylon 6: 368. 1988 ("1988"); Sasidh. & Sivar., Fl. Thrissur 316. 1996; Sivar. & Philip, Fl. Nilambur 463. 1997 [SOLANACEAE].

Nelen-tsjunda Rheede, Hort. Malab. 10: 145, t. 73. 1690.

1. Mature berry surface shiny; seeds 1-2.8 mm long, usually many (> 40) in each fruit *Solanum americanum*

1. Mature berry surface dull; seeds 1.5-2 mm long, usually 20-40 in each fruit *Solanum nigrum*

The name Nilamchunda [Malayalam script on t. 73] is still used; nilam means land [terrestrial] and chunda refers to prickly *Solanum*. It is now also called Manithakkali; mani means a small globose object; and thakkali is tomato. It occurs in uplands of Malabar.





Nila-barudena

FIG. 74



N the language of Brahmins *Vaenna*, is a plant liking wet places. Branches woody. Leaves lobed, covered with spines, not dissimilar to those of *Schunda*.

Flowers, five petalled, slightly bluish, and slightly purplish; the same in colour and shape as those of *Schunda*.

The fruits are oblong-round, glabrous, red-dark purple, with aqueous and white flesh inside, are sought after among edibles. In them are seeds crowded together, situated within the flesh.

(Its Uses)

Oil (of this) taken over opium, is a potent poison, in which case as also in drunkenness, leaves levigated (pulverized) in water is given with success. The fruit punctured with a needle and boilded in the oil of *Sergelim*, heals odontalgia (tooth ache).



Fig. 74

Solanum melongena L., Sp. Pl. 186. 1753; C. B. Cl. in J. Hook., Fl. Brit. India 4: 235. 1883; Symon, J. Adelaide Bot. Gard. 4: 262. 1981; Hepper in Dassan., Rev. Handb. Fl. Ceylon 6: 373. 1988 ("1987"); Manilal & Sivar., Fl. Calicut 190. 1982; Sasidh. & Sivar., Fl. Thrissur 317. 1996; Sivar. & Philip, Fl. Nilambur 466. 1997. - *Solanum undatum* Poir. in Lam., Encycl. 4: 301. 1797. *Solanum insanum* L., Mant. 46. 1767. *Solanum melongena* var. *insanum* (L.) Prain, Bengal Pl. 746(555). 1903 [SOLANACEAE].

Nila-barudena Rheede, Hort. Malab. 10: 147, t. 74. 1690.

Only Bazhuthana appears in Malayalam script on t. 74, a colloquial variant of Vazhuthana, the name still used for this species. Its fruit is called Vazhuthananga (nga- or ka means fruit). It is widely cultivated as a vegetable.



Andi-malleri

FIG. 75



ACCORDING to the Brahmins *Eudraxe*; there are three or four species of this plant, differing only in the flower colour; this one enjoys sandy and earthy soil, the whole year luxuriant and heavy with flowers. Root thick, white, fibrous, hairy, filled with dense, white aqueous flesh. Stalks are light green, glabrous, thinly covered with hairs, knotted, swollen at the nodes with a belly-like bulging, inside aqueous, covered over by loose, woody filaments.

The leaves are spear-shaped, with the sides either uniform, or with one side extended more broad; with a tip either straight or bent, pale, smooth, furnished with a rib standing out on the lower side.

Flowers arise many clustered together at the tip of shoots, are five petalled, with an oblong neck, yellow, around the neck light yellow, striated from the neck by yellow, shining vein-let, which somewhat stands out on the outside, during day time closed and rolled round in a curled manner from the apex, open around (about) the evening. In them are five yellow stamens, jutting out from the mouth of the flower, furnished with red knob, inserted lower in

the neck. The style is yellow, and stands out higher, whose head (tip) is round, from red to yellow. The calyx is five foliate and loose.

When the flower has faded the single, globose seed is seen, residing deep and tightly in the centre of the calyx, is black, as if imbued with ink, rough with projecting pustules, also when green, bulging with five rib-lets, with a thick and hard bark; the kernel is white, covered with a yellow membrane.



Andi-malleri L.

അന്ദിമല്ലരി mal.

Eudruxa

ഇട്രുക്സ ബ്ര.

انطوخ مالفيري Arab.

Fig. 75

There is also *Andi-Malleri*, which is with white flowers, in which the stamens are white, capped with yellow apices; the style similarly white, furnished with a red head.

There is also a third *Andi-Malleri*, with flowers very intensely purple-red.

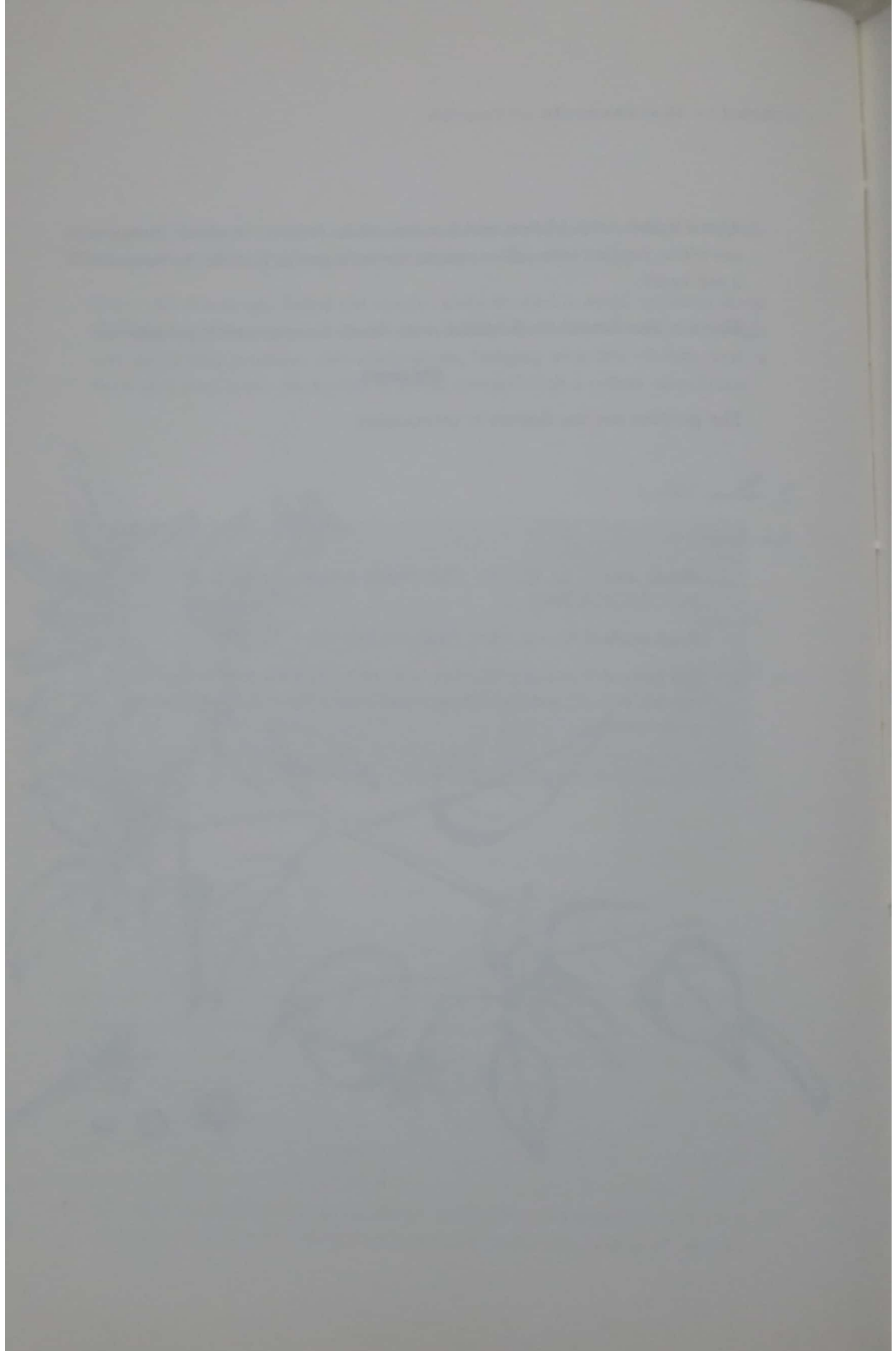
(Its uses)

The gentiles use the flowers in ceremonies.

Mirabilis jalapa L., Sp. Pl. 177. 1753; Manilal & Sivar., Fl. Calicut 241. 1982
[NYCTAGINACEAE].

Andi-malleri Rheede, Hort. Malab. 10: 149-150, t. 75. 1690.

The name Anthimalari [Malayalam script on t. 75] is still used; anthi means nightfall (or dusk) and malari [from malar] means flower. It is cultivated as a garden plant.





Naga-dante

FIG. 76



ROWS in sandy and rocky soils. The stem is thick. Branches green, furnished inside with a pith.

Leaves arise on oblong, round, hairy petioles, are oblong, drawn into an oblong tip, in the margins pronounced with teeth, on both sides beset with hirsute hairs, rough. The ribs very pronounced on both sides.

Flowers arise many clustered together, are small buds, whose petals are erect, which on the upper part turn yellow from green. The style is trifurcate, light green, the shoot-lets of which are more broad above and in the middle bifid. Fruits are three - sided, each side of which is round, in the middle striated with a suture, at the tip furnished with a trifurcate style of the flowers, whose shoot-lets receive the sutures of the sides; have a thin and dark-green cuticle, which envelops the cartilaginous, thick and hard rind, within which they contain, in separate locules, three seeds (which are) oblong, convex on the outside, of brown red colour, provided with a white knob at the top.

(Its Uses)

Leaves, roots and fruits have such purifying power that the smell alone provokes catharsis (purgation). The leaves applied externally heals diseases of joints.



Fig. 76

Baliospermum solanifolium (J. Burm.) Suresh, in Nicolson *et al*, Interp. Rheede's Hort. Malab. 106. 1988; Sasidh. & Sivar., Fl. Thrissur 395. 1996; Sivar. & Philip, Fl. Nilambur 607. 1997. -*Croton solanifolius* J. Burm., Fl. Malab. 6. 1769 ("*solanifolium*"). *Jatropha montana* Willd., Sp. Pl. 4: 563. 1805. *Croton solanifolius* Geiseler, Croton. Monogr. 74. 1807, non J. Burm. 1769. *Baliospermum axillare* Bl., Bijdr. 604. 1825. *Croton polyandrus* Roxb., Fl. Ind. 3: 682. 1832 ("*polyandrum*"), nom. illeg. (incl. type of *Jatropha montana* Willd. 1805). *Baliospermum montanum* (Willd.) Müll.-Arg. in DC., Prodr. 15(2): 1125. 1866; Manilal, Fl. Silent Valley 245. 1988 [EUPHORBIACEAE].

Naga-danti Rheede, Hort. Malab. 10: 151, t. 76. 1690.

The name Nagadhanthi [Malayalam script on t. 76] is still used; nagam means snake and danthi [from dantham] means tooth (fang). The allusion is not clear. It occurs along forest margins throughout Malabar.



Cottam

FIG. 77



HERE are three species of this plant, is called *Padso* in the language of the Brahmins, grows in sandy soils. Root fibrous, white, stalks green, woody, square, noddled.

Leaves arise two by two, are oblong round, in the margin slightly incised with small teeth, thin, soft; of slightly sharp and slightly bitter taste. The ribs stand out on both sides, especially on the lower side.

Flowers are verticillate, three petalled, white, subtle, somewhat curved towards the outside, tightly residing in the calyx, in them are four white, slender, downy stamens, furnished with very fine downy white hairs with light green apices, at the top; the style is bifurcate; smell is pleasing. Seeds are seen in oblong calyces, are small, round, a bit plain, red-dark-black.

(Its uses)

Root crushed and mixed with water gives a bath against swellings and pustules of mouth. Leaves, flowers and fruits crushed and mixed with oil give a smear against swellings.

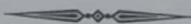


Fig. 77

Pogostemon heyneanus Benth. in Wall., Pl. As. Rar. 1: 31. 1830; Keng in Fl. t Males. 1, 8: 353. 1978; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 171. 1981; Sivar. & Philip, Fl. Nilambur 553. 1997. - *Pogostemon patchouly* sensu J. Hook., Fl. Brit. Ind. 4: 633. 1885 ('*patchouli*'), non Pellitier 1844 (= *P. cablin* (Blanco) Benth.) [LAMIACEAE].

Cottam Rheede, Hort. Malab. 10: 153, t. 77. 1690.

The name Kottam [Malayalam script on t. 77] is not used for this species now but is used for *Bridelia scandens*. No Malayalam name is currently known for this. It occurs along forest margins, mostly in northern Malabar.



Cadelari

FIG. 78



HERE are two species of this plant, one of the same name, the other *Cheru-Cadelari*; the former is called *Cante-Mogaro* by the Brahmins, growing in rocky soils. The root which goes down straight, is from red to white, covered with a thin bark, with white wood.

The stems and the branches are knotty, green and turning reddish, beset with short hairs, from the nodes, giving out at random, shoot-lets in twos, which are striated and slender.

The leaves, while young, are reddish in the margin, are attached to the nodes of shoots by means of very short petioles, are round, a bit oblong, hairy, thick, soft. The mid-rib with riblets stand out on both sides.

Flowers are small, oblong narrow, cuspidate, glabrous, green, shining spikes, bent towards the inside; without smell. The shoot-let, to which they are attached is of three cuspidate leaves, which on the lower part are purple-red and shining. In each spike is seen a single, oblong-round seed, first white then red.

(Its uses)

Decoction removes swellings and dysuria (difficulty or pain in passing urine), relieves the pains of stone; with the oil of *Sergelim* stops watering of blood. The root is cathartic (purgatory); crushed and boiled with butter heals dysentery; a decoction prepared from it fortifies the stomach, destroys gas,

Cadelari Lat.

കടലാരി മല.

خاضعيل ماضيج Arab.

കടലാരി മല.

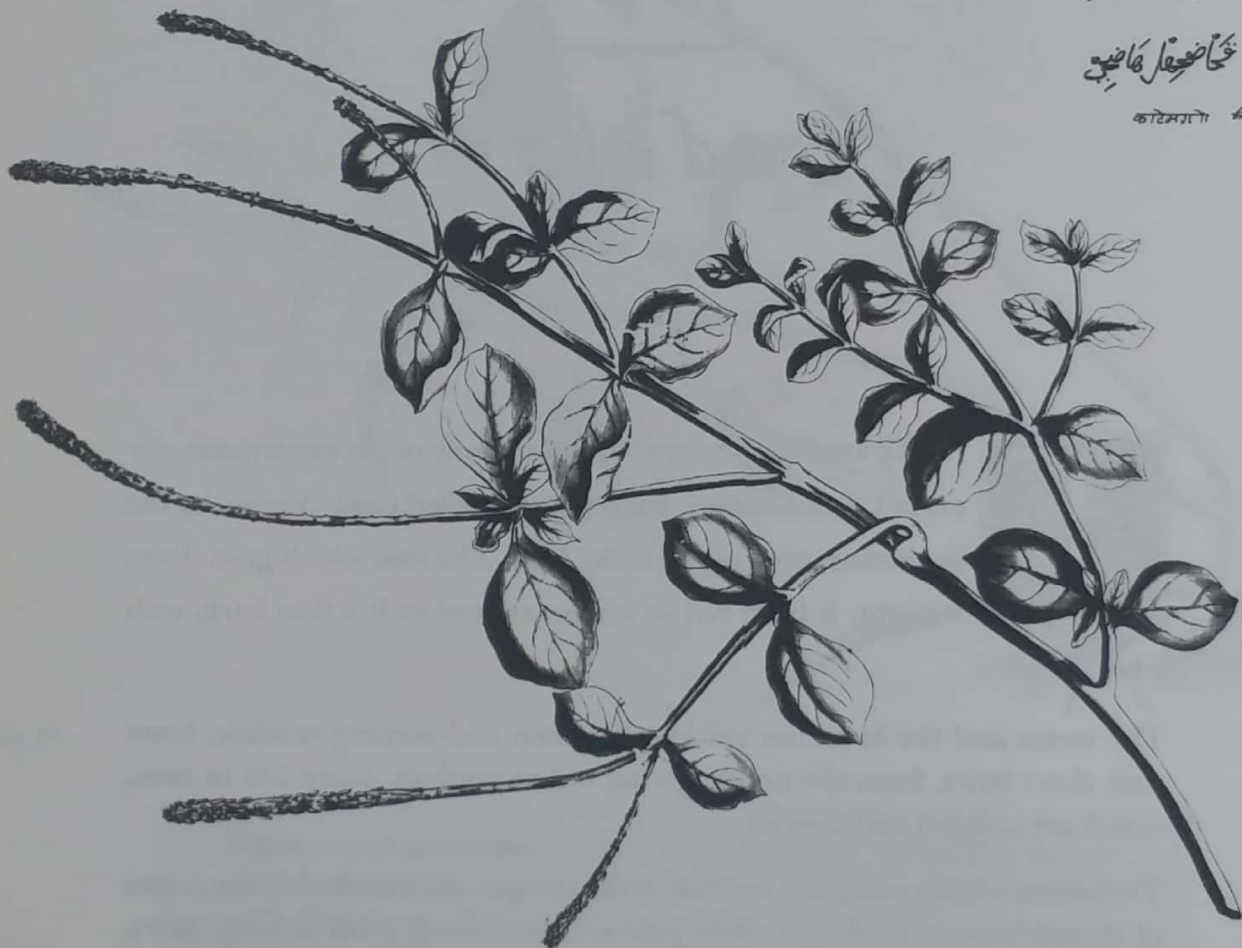


Fig. 78

corrects phlegm, breaks the stones in bladder; tied to arm, is against fever, provided it is intermittent and attacks with cold. Crushed and taken with pure wine is useful for those suffering from stone, promotes urination, especially in those suffering from dropsy (mild accumulation of watery fluid

in any part of the body); crushed with *lemon*, drives away giddiness, swellings originated below the chin and the jaw; the seeds crushed and put into the nostrils relieves head ache.

Achyranthes aspera L., Sp. Pl. 204. 1753; Townsend in Dassan., Rev. Handb. Fl. Ceylon I: 38. 1980; Manilal & Sivar., Fl. Calicut 245. 1982; Sasidh. & Sivar., Fl. Thrissur 367. 1996; Sivar. & Philip, Fl. Nilambur 557. 1997. - *Achyranthes obtusifolia* Lam., Encycl. I: 545. 1785 [AMARANTHACEAE].

Cadelari Rheede, Hort. Malab. 10: 155, t. 78. 1690.

The name Kadaladi [Malayalam script on t. 78] is still used. Kadal means sea (referring to its occurrence near the coast?). It now occurs in uplands near the coast of Malabar.



Scheru-cadelari

FIG. 79



HIS second species is called *Dacolo-Cante-Mogaro* by the Brahmins, growing in sandy soils. Roots fibrous, white, arising from the lower nodes of the stalk; are slender, angular, knotted, somewhat swollen at the origin around the nodes, green, or while tender reddish, covered with short hairs.

Leaves are smaller than those of the first species, are oblong-round, beset with sparse hairs on both sides, especially on the lower, slender, soft, in the margins somewhat reddish. The rib stands out on both sides, chiefly on the lower side.

Flowers arise in spikes, whose spikes are less oblong and less round, beset with short hairs, five-petalled, furnished with purple-red-shining filaments, with a somewhat cuspidate head, which is also the seed-capsule. In each spike is seen one single seed, very similar to that of the former species.

(Its Uses)

Crushed and mixed with oil, sets aright purulent urine, the other powers like those of *Cadelari*.

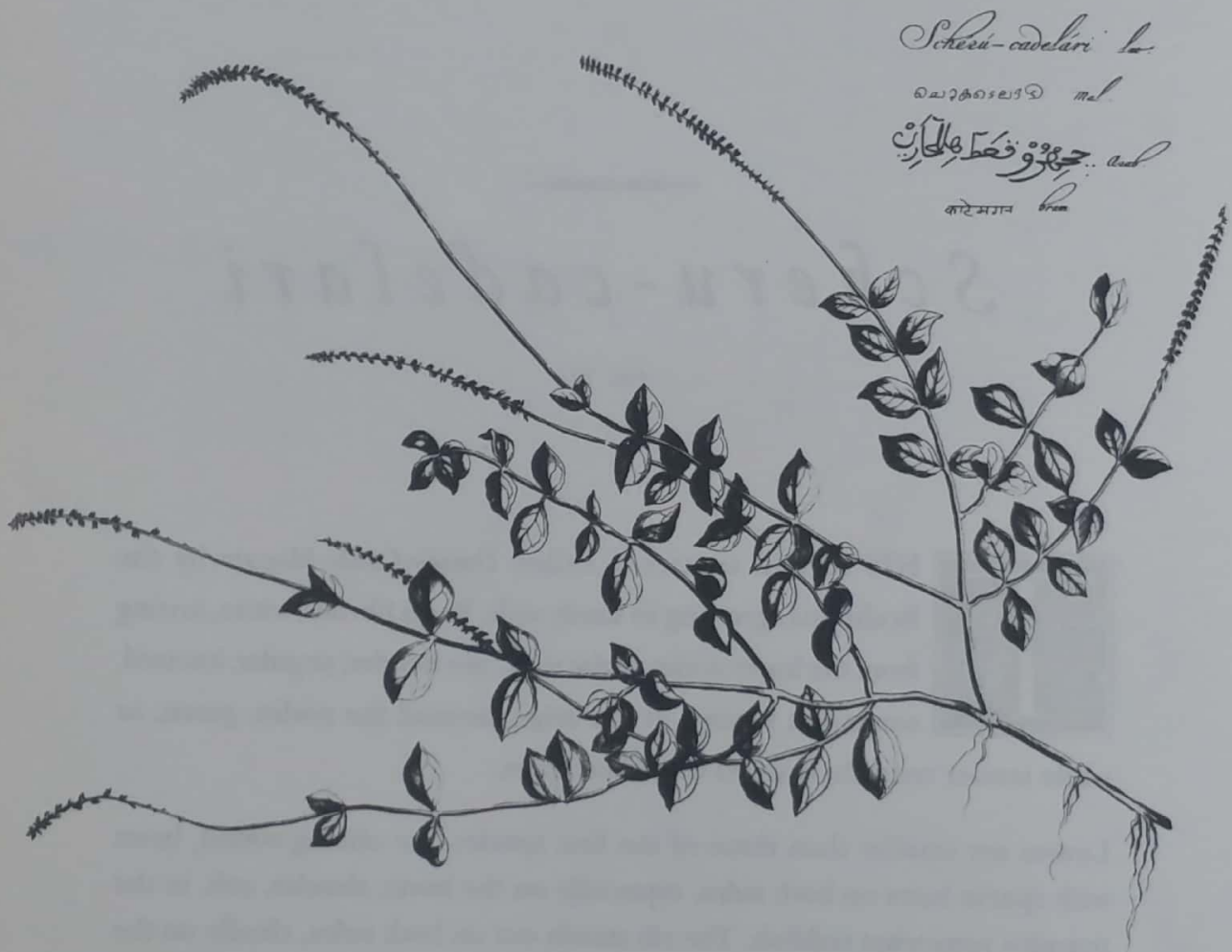
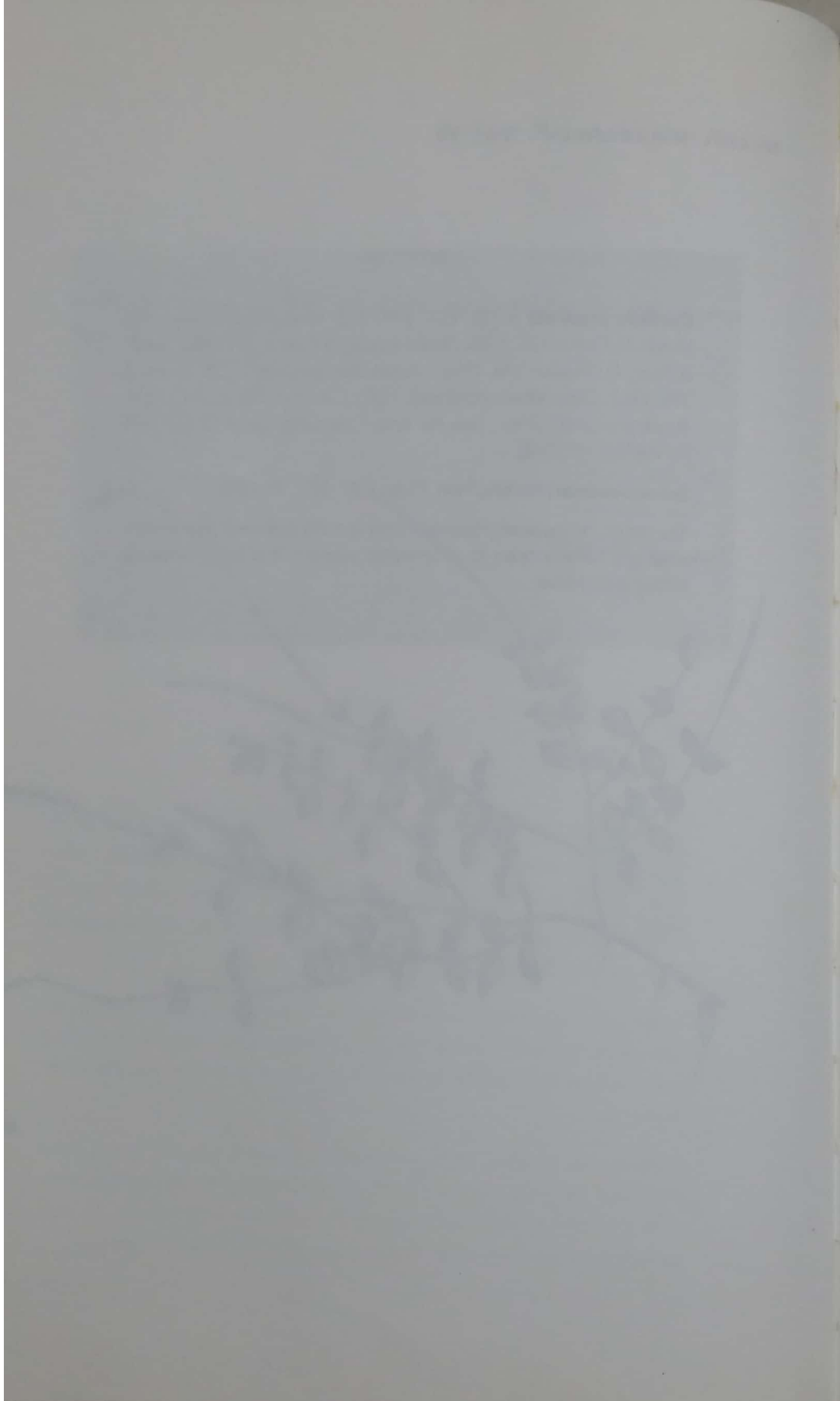


Fig. 79

Cyathula prostrata (L.) Bl., Bijdr. 549. 1825; Townsend in Dassan., Rev. Handb. Fl. Ceylon 126. 1980; Manilal & Sivar., Fl. Calicut 243. 1982; Sasidh. & Sivar., Fl. Thrissur 370. 1996. - *Achyranthes prostrata* L., Sp. Pl. ed. 2, 296. 1762. *Desmochaeta prostrata* (L.) DC., Cat. Hort. Monsp. 102. 1813. *Pupalia prostrata* (L.) Mart., Nov. Act. Acad. Caes. Leop.-Carol. 13: 321. 1826 [AMARANTHACEAE].

Scheru-cadelari Rheede, Hort. Malab. 10: 157, t. 79. 1690.

The name Cherukadaladi [Malayalam script on t. 79] is still used; cheru means small and kadaladi refers to *Achyranthes aspera* L. It is found occurring throughout Malabar.





Belutta-modela-muccu

FIG. 80



ROWS around the banks of rives. The stalks are jointed, from the nodes, which are covered with foliaceous wrappers (involucre), giving out new stalks.

Leaves, the peduncles of which are plain and white, arise in the nodes, are oblong-narrow, with an oblong narrow tip, thin, soft, adhering to hand, towards the lower nodes.

Flowers arise in spikes, are five petalled, white. In them just as many, thin, white stamens, tipped with red apices. In each spike is contained a single seed, from brown to black, furnished with a short tip at the top.

(Its uses)

The juice of the whole plant, if you except the root, boiled with the oil of *Sergelim*, gives a cephalic (for headache) ointment, also to be applied in the haemorrhage of nose. Very tender leaves, with the washings of rice, reduced to a small drink, diminishes the fluid called *Paddave*.

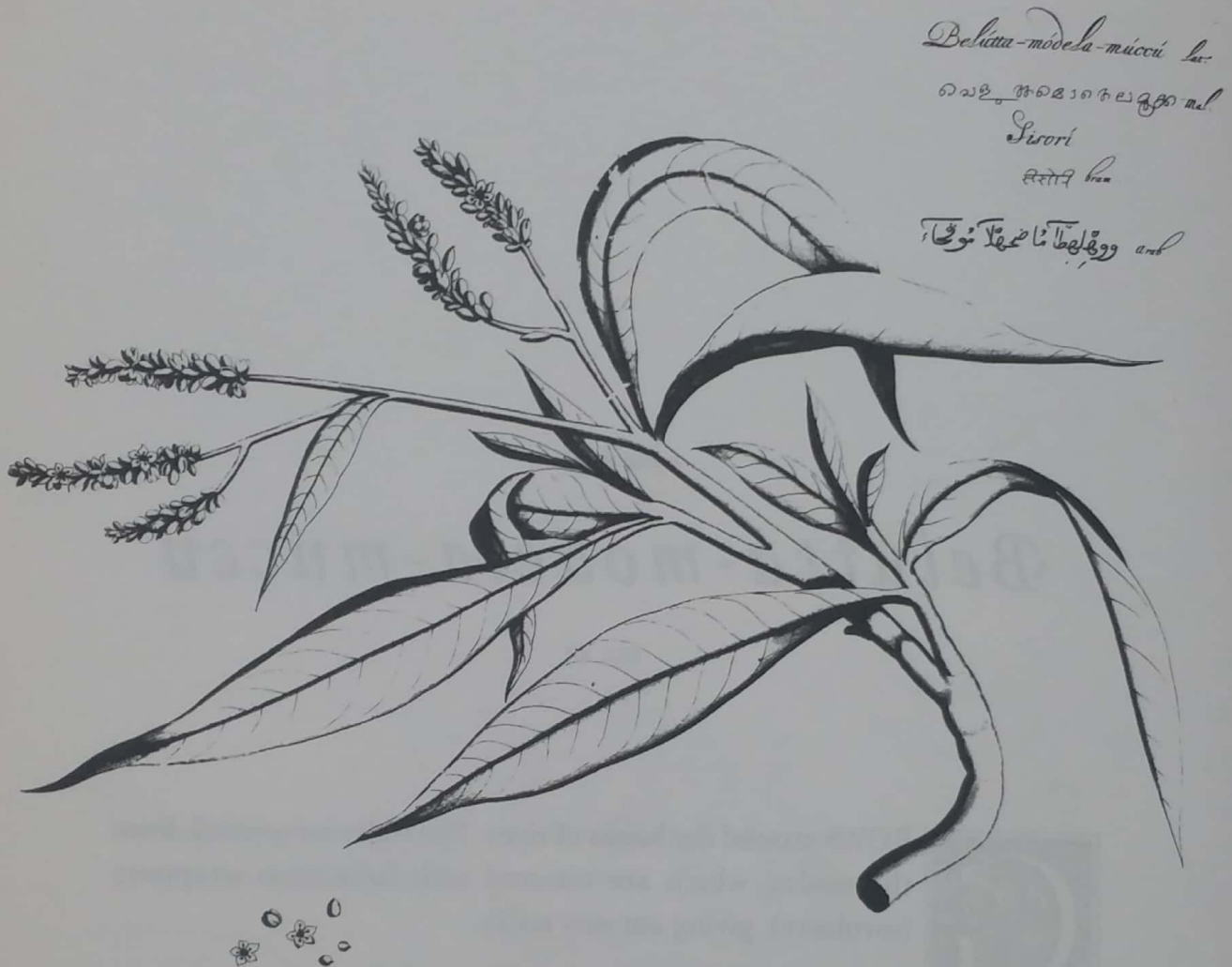


Fig. 80

Polygonum barbatum L., Sp. Pl. 362. 1753; Gage, Rec. Bot. Surv. India 2: 397. 1903; Manilal & Sivar., Fl. Calicut 247. 1982; Sasidh. & Sivar., Fl. Thrissur 371. 1996; Sivar. & Philip, Fl. Nilambur 564. 1997. - *Polygonum rivulare* Koenig ex Roxb., Hort. Beng. 29. 1814; Fl. Ind. 2: 290. 1832. *Persicaria barbata* (L.) Hara, Fl. E. Himal. 1: 70. 1966 [POLYGONACEAE].

Belutta-modela-muccu Rheede, Hort. Malab. 10: 159, t. 80. 1690.

The name Veluthamuthalamookku [Malayalam script on t. 80] is still used; velutha means white, muthala means crocodile and mookku means nose, referring to white floral spikes, as well as its habitat of the fringes of fresh water ponds and rivers. It occurs in fresh water ponds and along river banks of Malabar.



Cupameni

FIG. 81



HERE are three species of this plant, the first is called *Cuppameni*, the second *Pee-Cupameni*, the third *Welia-Cuppameni*; they are invested with the same name *Maserasesade* by the Brahmins; our present one grows in sandy soils to the height of three or four feet. Root is small and slender white, slightly red; of not displeasing smell, of slightly bitter taste. Stalks are slender, round, green, covered with very short hairs, with a slightly bitter bark.

Leaves are either large or small, the large ones arise on slender and green petioles, are round, pronounced with a short tip, serrate in margin, thin, a bit bitter. The rib, with rib-lets stands out somewhat also on the upper side.

Flowers in spikes go round the petioles, are round, small, light green, white buds, which open themselves into minute petals; a small two horned theca is attached to the tip of flower-bearing petioles.

The seed capsules are dark-green, three sided, gently hairy, formed as if from three globules, giving out filaments from the top and with these minute,

spoon-shaped, bent leaves, in the upper margin cut into projecting tips. Seeds in the capsule are three, separated by partition walls, are small, round, first white-yellow, then reddish, and finally black. Flowers the whole year, especially in the month of January.



Fig. 81

(Its Uses)

The juice boiled with oil is an anti-arthritic ointment, removes pains originating from venereal disease, as also giddiness; mixed with *lime* gives the same effect in skin diseases. Roots crushed and drunk with water loosen the bowels; their decoction put into the ears relieves their pain.

Acalypha indica L., Sp. Pl. 1003. 1753; Airy Shaw, Kew Bull. 26: 206. 1972; Manilal & Sivar., Fl. Calicut 269. 1982; Sivar. & Philip, Fl. Nilambur 602. 1997 [EUPHORBIACEAE].

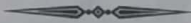
Cupameni Rheede, Hort. Malab. 10: 161, t. 81. 1690.

The name Kuppameni [Malayalam script on t. 81] is still in use. Kuppa is garbage dump and meni means crop. It occurs throughout Malabar.

The first part of the report discusses the background of the project and the objectives of the study. It also outlines the methodology used for data collection and analysis. The second part of the report presents the results of the study, which show that the proposed system is effective in reducing the number of errors and improving the overall quality of the work. The third part of the report discusses the conclusions of the study and the implications for future research.



The results of the study show that the proposed system is effective in reducing the number of errors and improving the overall quality of the work. The number of errors decreased significantly over time, and the quality of the work improved. The study also found that the proposed system was easy to use and did not require a lot of training. The results of the study have important implications for future research and for the development of similar systems.



Pee-cupameni

FIG. 82



S if you would say *Wild Pee*, with the first it agrees in almost every thing, but this is with more hairy stalks, with larger and more oblong leaves hanging.

Flowers, also in spikes, but the buds are a bit larger; as are the seed capsules, which however are more hairy, and the spoon-shaped leaves smaller, hairy, incised in the margin with more compact (close) teeth. Seeds the same. Taste like the preceding one's.

Acalypha racemosa Wall. ex Baill., étud. Euphorb. 443. 1858; Manilal & Sivar., Fl. Calicut 270. 1982; Sasidh. & Sivar., Fl. Thrissur 391. 1996; Sivar. & Philip, Fl. Nilambur 602. 1997. - *Tragia mercurialis* var. *minor* Dennst., Schlüssel 17, 25, 37. 1818. *Acalypha paniculata* Miq., Fl. Ned. Ind. 1(2): 406. 1859 [EUPHORBIACEAE].

Pee-cupameni L.
 പെക്കുപ്പമനി മല
 بچم قواميني
 मञ्जनाडा



Fig. 82

Pee-cupameni Rheede, Hort. Malab. 10: 163, t. 82. 1690.

The name Peekuppameni [Malayalam script on t. 82] is not used now; pee means wild and kuppameni refers to *Acalypha indica* L. No Malayalam name is currently known for this plant. It occurs in uplands near the coasts of Malabar.



Welia Cupameni

FIG. 83



GREES with the previous ones in every part.

(Its Uses)

Parts of this whole plant tied into a knot, applied hot to the infected part, draws out poison, like cucurbit; for the same reason, powder of the leaves levigated in rice-water, is applied to the temples by rubbing. The juice mixed with the oil *Sergelim*, heals erysipales (inflammatory disease, generally in the face, marked by a bright redness of the skin), haemorrhages, stomach-ache, called *guinao* by the Malabaris.

Acalypha racemosa Wall. ex Baill., étud. Euphorb. 443. 1858; Manilal & Sivar., Fl. Calicut 270. 1982; Sasidh. & Sivar., Fl. Thrissur 391. 1996; Sivar. & Philip, Fl. Nilambur 602. 1997. - *Tragia mercurialis* var. *minor* Dennst., Schlüssel 17, 25, 37. 1818. *Acalypha paniculata* Miq., Fl. Ned. Ind. 1(2): 406. 1859 [EUPHORBIACEAE].



Welia-cupameni L.
 വലിയകുപ്പമണി മല
 Mafasi
 مافاسي
 والبغوراميني and

Fig. 83

Welia-cupameni Rheede, Hort. Malab. 10: 165. t. 83. 1690.

The name Valiyakuppameni [Malayalam script on t. 83] is not used now; valiya means large and kuppameni refers to *Acalypha indica* L. No Malayalam name is currently known for this plant. It occurs in uplands near the coasts of Malabar.



Perim-tolassi

FIG. 84



HIS very same plant is *Tirtava*; in the language of the Brahmins *Gandarli*; growing in sandy soils. Root fibrous and black. Stalks quadrangular, striated in each side by a furrow, jointed, covered with sparse hairs, giving out at random two stalk-lets from the nodes.

The petioles of the leaves are striated, somewhat hairy; the leaves themselves are round, broad, of less keen smell, with sharp taste. The rib stands up on the lower side.

The flowers which arise here and there in threes from the upper nodes of the stalks, in a verticillaster manner surround the tender shoots, with small leaves interspersed, are bluish, two petalled, one of the petals incised into four leaves. In them are four bluish-white stamens, the apices of which similarly bluish-white, so also the style which is more over bifurcated.

Seeds are contained in the calyx, are round, red-dark like those of *Cattutritava*. Is found only in the rainy season.



Fig. 84

Plectranthus mollis (Aiton) Spreng., Syst. Veg. 2: 690. 1825; Hara et al., Enum. Fl. Pl. Nepal 3: 161. 1982. - *Ocimum molle* Aiton, Hort. Kew. 2: 322. 1789. *Plectranthus incanus* Link, Enum. Hort. Berol. Alt. 2: 120. 1822. *Plectranthus cordifolius* D. Don, Prodr. Fl. Nepal. 116. 1825 [LAMIACEAE].

Perim-tolassi Rheede, Hort. Malab. 10: 167, t. 84. 1690.

The name Perumthulasi [Malayalam script on t. 84] is not used for this species but sometimes is used for *Ocimum tenuiflorum* L.; perum (or perin) means large (or chief). No Malayalam name is currently known being used for this plant. It occurs along forest margins throughout Malabar.



Nala-tirtava

FIG. 85



ALASI in the language of the Brahmins, grows in sandy soils, and as *Cattu-tirtava* and *Soladi-tirtava* is a perennial, always flowering, chiefly in the rainy season; of pleasing smell. Root fibrous, blackish, giving out very many hairy fibres.

Stalks and shoots are square, striated, knotted, woody, with a red bark, tender ones green or reddish, hairy. The petioles, of leaves are red, hairy and pale; on which they arise two by two or many clustered together, are oblong narrow, smaller than other species, in the margin incised with small teeth, thin, soft, in the lower side, where the rib stands out, slightly hairy; of sharp taste.

Flowers surround the upper part of shoots like a verticillaster with small leaves interspersed, in each which are six, small flowers that are bi-petalled, one of which is divided into four leaves, are oblong-round, white and slightly purple-red. Stamens are purple; slender, standing out above the petals, the knobs of which are yellow; the style is purple-red and bifurcated. The calyx placed transversely to the stalk, is deep, projecting at the mouth with four

tips. Stamens in the bottom of the calyx are four, five or many, placed around, small oblong-round, first whitish, then yellow finally black.

There is a species of *Tirtava*, which is with stalks, shoots and leaves that are light green, the new shoots of which do not turn red.



Fig. 85

(Its Uses)

Flowers given in decoction, with *onion* added, cures hot fever; crushed together with seeds, with the addition of rose-water and a bit of *Muscati*, suppresses gas.

Ocimum tenuiflorum L., Sp. Pl. 597.1753; Domin, Bibl. Bot. 22 (Heft 89): 1116. 1929 (not seen); Keng in Fl. Males. I, 8: 378.1978; Hara et al., Enum. Fl. Fl. Nepal 3: 160.1982; Rani & Matthew in Matthew, Fl. Tamilnadu Carn.1(3): 1271.1983; Sivar. & Philip, Fl. Nilambur 551. 1997. -*Ocimum sanctum* L., Mant. 85.1767; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 116.1981; Manilal & Sivar., Fl. Calicut 236. 1982. *Ocimum inodorum* N. Burm., Fl. Ind. 130. 1768. *Ocimum nutans* Koen. ex Rottb., Pl. Hort. Univ. Rar. Prog. 22. 1773, nom. illeg. (incl. type of *Ocimum sanctum* L. 1767). *Geniosporum tenuiflorum* (L.) Merr., Philipp. J. Sci.19: 379.1921, as to lectotype [LAMIACEAE].

Nala-tirtava Rheede, Hort. Malab. 10: 169, t. 85. 1690.

The name Nallathrithuva [Malayalam script on t. 85] is not used for this plant now. Nalla means good and thrithavu [from Thrithoova] refers to *Ocimum*. Today it is called Perinthulasi, Nallathulasi or Krishnathulasi; Perin means large, Nalla means good; and Krishna here means dark. The name Thrithoova, and its variant Thrithavu, are still used in certain restricted areas of Malabar to denote *Ocimum tenuiflorum*. It is cultivated as a sacred plant in Malabar.

1. The first part of the paper discusses the importance of the study and the objectives of the research. It highlights the need for a comprehensive understanding of the subject matter and the role of the researcher in this process.

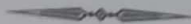
2. The second part of the paper presents the methodology used in the study. It details the data collection methods, the sample size, and the statistical tools employed to analyze the data.

3. The third part of the paper discusses the results of the study. It presents the findings of the research and compares them with the existing literature in the field.

4. The fourth part of the paper discusses the conclusions of the study. It summarizes the key findings and provides recommendations for future research.

5. The fifth part of the paper discusses the limitations of the study. It identifies the weaknesses of the research and suggests ways to improve the study in the future.





Cattu-tirtava

FIG. 86



IS the second species of *Tirtava*; in the language of the Brahmins *Rana-tolasi*; is a plant five or six feet in height, growing in sandy soils. Root fibrous, black. Stalks quadrangular, slightly hairy, striated with a furrow, knotted.

Leaves arise both in twos and threes or also solitarily, are very broad, round, somewhat oblong, serrate in the margin, thin, larger than those of the first species, of very strong and pleasing smell, of sharp taste. The rib with veinlets conspicuous on the upper surface, slightly covered with hairs.

Flower the same, but white, and in the incised petal from white to light green. Their stamens are four, white, whose apices as also the bifurcate style also are white. Calyces are large, and bent, in the apex striated with the nerve of the tongue-shaped petal. Seeds are round, dark red, verging on brown.

(Its uses)

The oil extracted from the root by distillation is very light, clear and a bit greenish; of very sharp taste, rises up with water and swims (floats) over it. A

bath is prepared from the decoction for stomach ache. Root boiled heals fever with cough, the oil extracted from root is pectoral (expectorant ?) promotes the digestion of food, prevents the spoiling of liver, promotes urine,

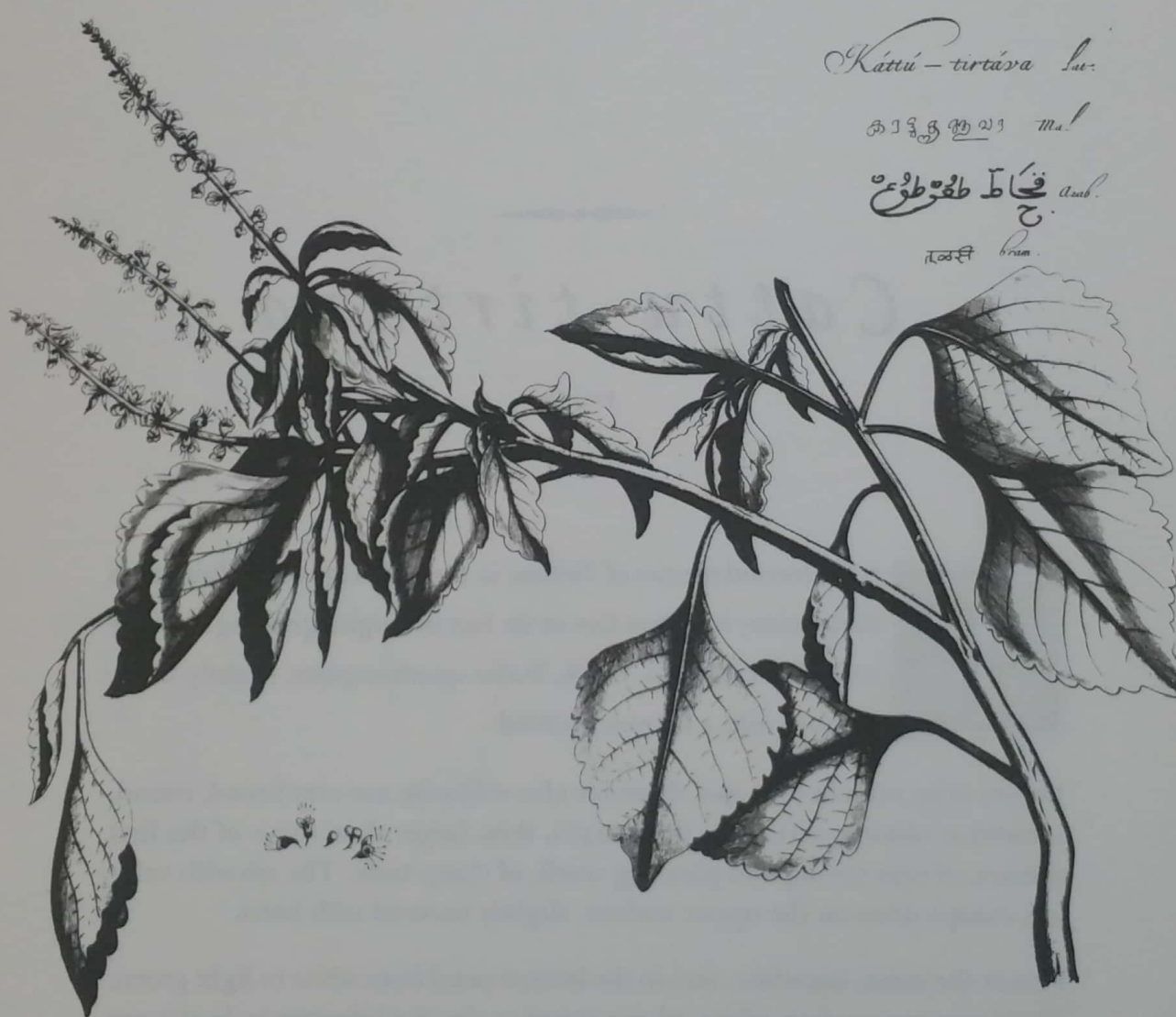


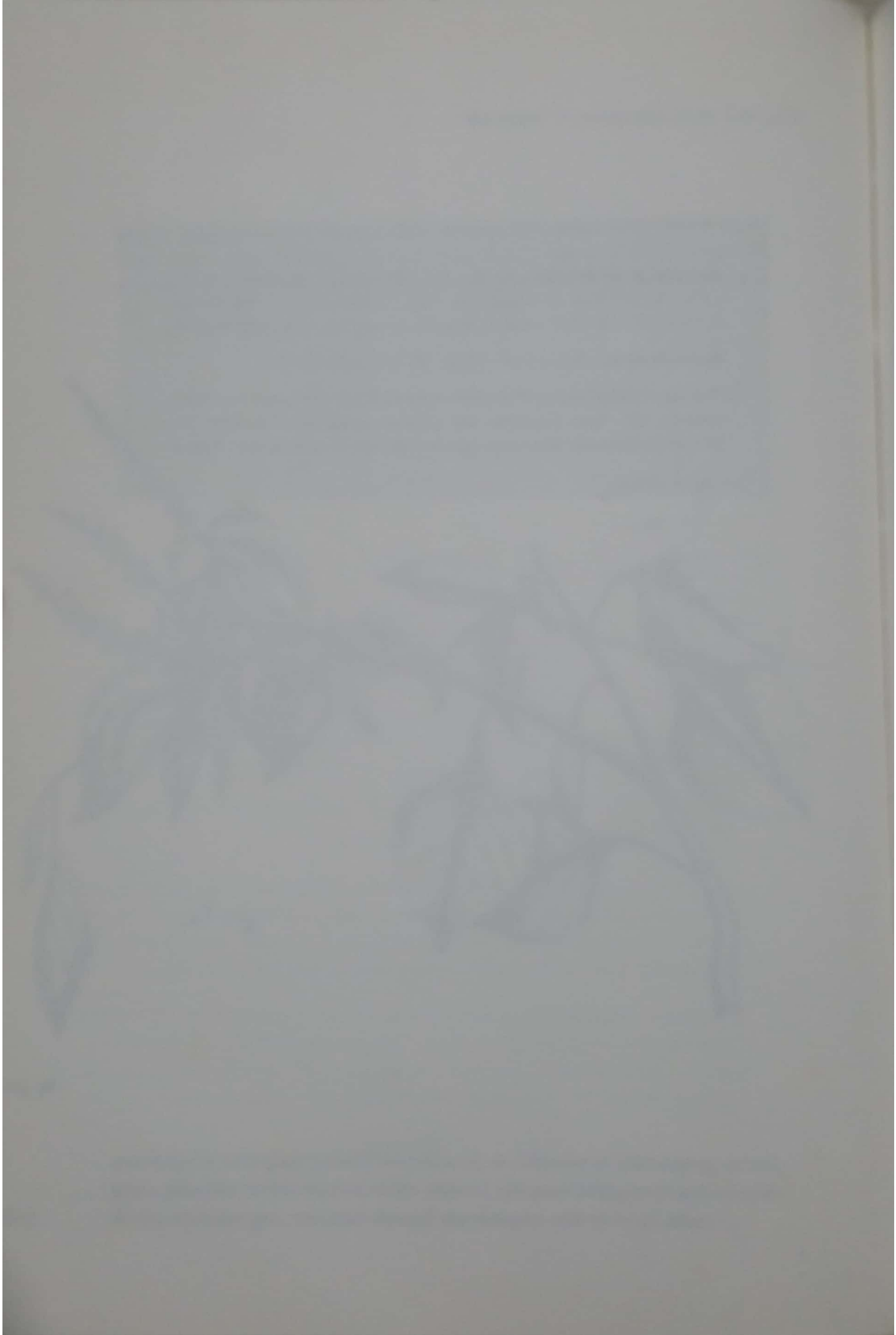
Fig. 86

and helps in strangury (painful retention of, or difficulty in discharging, urine), gout, pleuritis (inflammation of the pleura), cleanses phlegmatic and coughly fluids, destroys gas; smeared around the temples relieves head ache.

Ocimum gratissimum L., Sp. Pl. 1197. 1753; Keng in Fl. Males. I, 8: 377. 1978; Manilal & Sivar., Fl. Calicut 236. 1982; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 112. 1983; Sasidh. & Sivar., Fl. Thrissur 362. 1996 [LAMIACEAE].

Kattu-tirtava Rheede, Hort. Malab. 10: 171, t. 86. 1690.

The name Kattuthrithavu [Malayalam script on t. 86] is not used now; kattu, meaning wild. Kattu is omitted and it is now simply called thrithavu. It is sometimes cultivated as a hedge plant and also occurs as escapes in Malabar.





Soladi-tirtava

FIG. 87



IN the language of the Brahmins *Bui-Tolasi*; agrees with the first species practically in all. Stem slightly round, wooden, red, and on the upper (top) part covered with whitish hairs, nodulous, more tender, green, quadrangular, grooved, more fibrous.

Leaves slightly broader, curled, and subtle on the adverse part, with slightly grooved ribs, fibrous.

Flowers the same, but the apices of the stamens bright. Styles purple-red, white where it is bifurcating. Calyces more curved towards the inner side and fibrous. Seeds like those of *Nala Tirtava*, colour like *Cattu-Tirtava*.

It and other species not different except that the stem is blackish-red, leaves dark green and flowers bright reddish. Is found the whole year round, always flowering.

Of all the species, (this is the) only sacred one and dedicated to God *Vistnu*, held in great honour to such an extent that there is no Brahmin who does not carry the plant with him.

(Its Uses)

As those of *Cattu-tirtava*.



Fig. 87

Ocimum basilicum L., Sp. Pl. 597. 1753; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 112. 1981; Sivar. & Philip, Fl. Nilambur 550. 1997 [LAMIACEAE].

Soladi-tirtava Rheede, Hort. Malab. 10: 173, t. 87. 1690.

The name Tholarthiruthuva [Malayalam script on t. 87] is not used. Tholarthi is a colloquial form of Thulasi, the general term for *Ocimum*; and thrithuva refers to *Ocimum gratissimum* L. Today it is called Ramathulasi [Rama is an incarnation of God Vishnu]. Thulasi generally refers to *Ocimum tenuiflorum*. It is widely cultivated as a sacred plant in Malabar.

Tsjadaen

FIG. 88



ROWS in sandy soils. The root is covered with very many hairy fibres, white. Stems and shoots are jointed, quadrangular (four sided), in the sides striated with lyre, clothed with a green and hairy bark.

Leaves are seen on hairy petioles two by two from the nodes here and there, the lower ones are larger than the other, for the rest are oblong, very soft, smooth, downy, crenate; of sharp taste, of pleasing smell.

Flowers are verticillate, irregular, small erect, three petalled, mutually turned to each other, with an oblong neck, a deep calyx, the anterior one of which is of purple-red-pale colour in the lobes, below them of white colour, inside is hairy and very near under the lobes, purple-pale, the third one which is the smallest is somewhat cuspidate, spoon shaped, light green and white. In them are four, white, slender, hairy, stamens, lying adjacent to the spoon-shaped petal and inserted into its claws, furnished with small, round, purple-red apices, later turning black; the style is white and bifurcate. The calyx is deep and hairy or downy.

The seed-capsules are oblong, downy, five cornered. The seeds which are seen in the open calyx, are contained in its bottom, are four, small, round, compressed, three-sided, shining, first bright green then black. Once a year flowers and bears fruits, namely in the rainy season; of wholly sweet and aromatic smell.



Fig. 88

(Its uses)

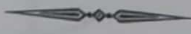
The whole plant, except the root, is used for bath against cold fever, is useful either as a drink or as a bath, both for the whole or cephalic disease (pertaining

to head), also for mania. Boiled in water, it gives a mouth-wash, which removes eruptions in the mouth of children.

Anisomeles indica (L.) Kuntze, Rev. Gen. Pl. 2: 512. 1891; Keng in Fl. Males. 1, 8: 329. 1978; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 176. 1981; Manilal & Sivar., Fl. Calicut 240. 1982; Manilal, Fl. Silent Valley 216. 1988; Sasidh. & Sivar., Fl. Thrissur 359. 1996; Sivar. & Philip, Fl. Nilambur 544. 1997. -*Nepeta indica* L., Sp. Pl. 571. 1753. *Ballota disticha* L., Mant. 83. 1767. *Nepeta amboinica* L.f., Suppl. Pl. 273. 1782. *Anisomeles ovata* Aiton f., Hort. Kew. ed. 2, 3: 364. 1811, nom. illeg. (incl. type of *Nepeta indica* L. 1753). *Ajuga disticha* (L.) Roxb., Fl. Ind. 3: 2. 1832 [LAMIACEAE].

Tsjadean Rheede, Hort. Malab. 10: 175, t. 88. 1690.

The name Chadayan [Malayalam script on t. 88] is still used. It occurs throughout Malabar.



Tsjeria-manga-nari

FIG. 89



ALMOST the same as *Vallia-Mango-Nari*; grows in cultivated fields.

The leaves which come out in the nodes of the stalk, and attached to the stalks, which are more slender and reddish, (the leaves) are more oblong and more narrow, crenate in the anterior part up to the middle with acute corners, so much that they are often separated into two or three leaves.

Flowers are small, white, four petalled, with an oblong and broad neck, with a venter somewhat plain and bent, three of the petals are oblong narrow and narrower, totally white, the fourth one, doubly more broad, more round, marked with two red spots, covered with yellow down around the neck, on the outside striated with reddish veins. In them are four white stamens, capped with apices, two of which stand out high, two are lying down deeper. The style is white, anteriorly level (plain). The calyx is five cuspidate, surrounded by two, cuspidate leaves and is beset in a hairy manner with abundant, white, shining hairs.

The seed-capsules are round-oblong, totally enclosed in the calyx as in a small sac, furrowed with two sutures, very subtly striated. In them are numerous stamens, placed around the middle style, first dark-green, then very black and shining.

Kata-igeria-manga-nasi L.

കാതാമുള

Ambuli

അമ്പുലി

جوز مانج نارنگی



Fig. 89

The whole plant is of very sharp and fragrant smell, especially in the leaves emulating the smell of the *Mango* fruit, similarly as *Vallia-Manganri*, which however it exceeds (excels).

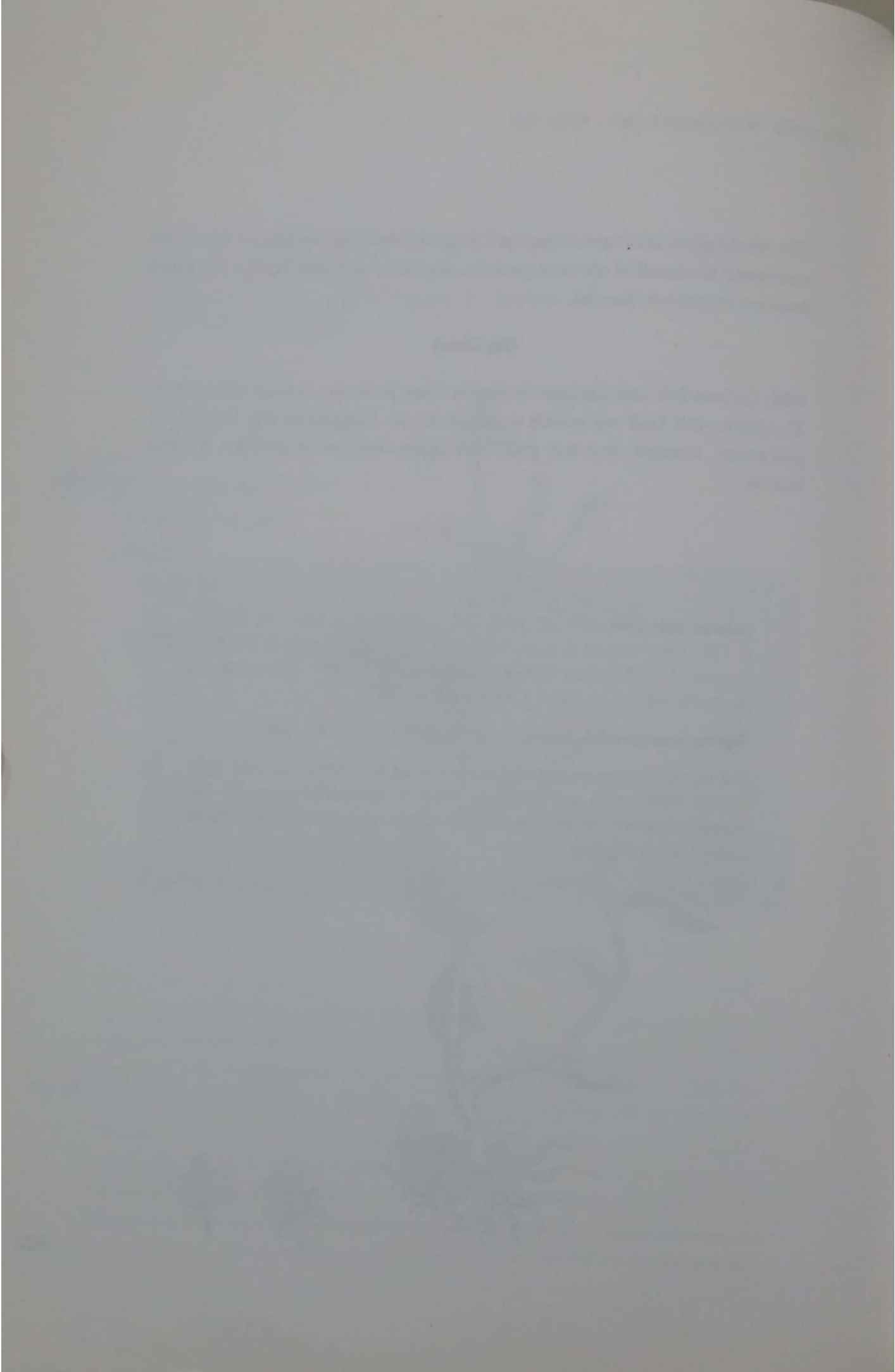
(Its Uses)

With *Carinta-Tali*, and *Codagen* boiled in whey, heals the disease called *Pitao*. The juice, with *Gall nut* (which is called *Ari de Bengala* by the Malabaris), pulverised, roasted over the grill, and again reduced to powder, loosens bowels.

Lobelia alsinoides Lam., Encycl. 3: 588. 1792; Moel. & Tuyn in Fl. Males. I, 6: 126. 1960; Manilal & Sivar., Fl. Calicut 155. 1982; Sasidh. & Sivar., Fl. Thrissur 257. 1996; Sivar. & Philip, Fl. Nilambur 385. 1997. - *Lobelia trigona* Roxb., Fl. Ind. 2: 111. 1824 [CAMPANULACEAE].

Tsjeria-manga-nari Rheede, Hort. Malab. 10: 177, t. 89. 1690.

The name Cheriyamanganari [Malayalam script on t. 89] is not used now; cheriya means small and Manganari refers to *Limnophila aromatica*. No Malayalam name is currently known for this plant. It is common in abandoned paddy fields of Malabar.





K a t u - k u r k a

FIG. 90



ROWS in sandy soils. Root white, fibrous; of sharp, pleasing smell. Stalks green-white four cornered, jointed, the tender ones more round, inside aqueous.

Leaves are oblong, broad, crenate in the margins, thick, hairy, smooth, aqueous inside, on the lower side striated with thick ribs, similar to the leaves of *Nepeta*.

Flowers come forth in the apex of the stalks, clustered together in an oblong capitulum; surrounded (girded under) by a green, cuspidate, curved leaf, are monopetalous, spoon-shaped, placed around (surround) towards the side by two short-ears, pale with golden colour; of pleasing smell, like *Nepeta* of the same genus, but wild.

(Its Uses)

From this plant pulverised (levigated) with the juice of the bark of *Lanjae*, a universal ointment of the body is prepared to check the poison of the snake, called *Polega* by the Malabaris; if however the body infected with poison gets

so swollen and agitated that it jumps out of the vessel, sitting in the decoction of this plant is employed.

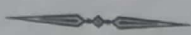


Fig. 90

Anisochilus carnosus (L.f.) Wall. ex Benth. in Wall., Pl. As. Rar. 2: 18. 1831; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 152. 1981; Manilal & Sivar., Fl. Calicut 235. 1982; Sasidh. & Sivar., Fl. Thrissur 358. 1996; Sivar. & Philip, Fl. Nilambur 543. 1997. - *Lavendula carnosus* L.f., Suppl. Pl. 273. 1782. *Plectranthus strobilifer* Roxb., Hort. Beng. 45. 1814. ("*strobiliferus*"); Roxb., Fl. Ind. 3: 23. 1832. *Plectranthus carnosus* (L.f.) Sm. In Rees, Cycl. 27: no. 7.1819 [LAMIACEAE].

Katu-kurka Rheede, Hort. Malab. 10: 179, t. 90.1690.

The name Kattukoorka [Malayalam script on t. 90] is not used; kattu means wild and koorka refers to *Coleus rotundifolius*. No Malayalam name is currently known for this plant. It is very common on lateritic slopes of northern Malabar.



T u m b a

FIG. 91



HERE are three species of *Thumba*; one of the same name, the others *Kattu-Thumba*; *Carim-Thumba*. The first one is given the same name by the Brahmins. The root is formed of very many, long, hairy fibres, of not unpleasant colour; of bitter taste.

Stalks and shoots slender, green, slightly rough, somewhat hairy, quadrangular, striated, knotted, furnished with pith, which is aqueous in the upper or tender ones, white in the lower or older ones.

The leaves are attached to the nodes of stalks in twos or singly, are oblong-narrow, slightly rough, in the margin incised with small teeth, on the lower side striated with rib-lets; with strong smell, with very sharp and slightly bitter taste.

Flowers come out from spiked heads, or also surround the stalk intermingled with leaves, and are always attached around the apex of stalks, from which, at random stand out four leaves, are (flowers) two petalled, irregular, very white, one of which is more long and plain the other more short, hood-like, downy

on the outside, with the orifice facing the open (petal). In them are four stamens, short slender, white, the apices of which are round, the style thin and white.



Fig. 91

Four seeds are found in the calyx, mutually adjacent to each other, are oblong, conical in some way, and three sided, with two sides plain and even, the third round, of very black colour. Is found the whole year, always flowering.

(Its Uses)

From the foot of the flowers a honey like liquid is extracted. Boiled in oil, heals scabies; the juice kills worms in ulcers; with *lime* heals the bite of dogs; put into nostrils relieves head ache; root given in decoction removes leprosy; the roots chewed or also the breath of chewed leaves removes "dark spot".

Leucas aspera (Willd.) Link, Enum. Pl. Hort. Berol. 2: 113. 1822; Spreng., Syst. Veg. 2: 743. 1825; Keng in Fl. Males. 1, 8: 337. 1969; Matthew, Fl. Tamilnadu Cam. 3(1): 1259. 1983; Manilal & Sivar., Fl. Calicut 239. 1982; Sivar. & Philip, Fl. Nilambur 548. 1997. - *Phlomis aspera* Willd., Enum. Pl. Hort. Berol. 2: 621. 1809. *Phlomis plukenetii* Roth, Nov. Pl. Sp. 261. 1821. *Leucas plukenetii* (Roth) Spreng., Syst. Veg. 2: 743. 1825; J. R. Press in Hara et al., Enum. Fl. Pl. Nepal 3: 157. 1982. *Leucas obliqua* Ham. ex Dillwyn, Rev. Hort. Malab. 57. 1839 [LAMIACEAE].

Tumba Rheede, Hort. Malab. 10: 181, t. 91. 1690.

1. Calyx tube tubular, 8-9 mm long (in flower); calyx teeth 10. Bracts lanceolate, as long as the calyx *Leucas aspera*

1. Calyx tube turbinate, 5-7 mm long (in flower). Bracts linear, shorter than the calyx 2

2. Plants usually finely puberulous. Leaves generally linear-lanceolate. Calyx mouth often constricted, especially in fruit; teeth 7-10, very unequal, the posterior one much larger than the others

Leucas lavandulifolia

2. Plants usually hispidulous. Leaves elliptic or narrowly lanceolate. Calyx mouth open; teeth 8, subequal, the posterior one only slightly larger than the others *Leucas zeylanica*

The name Thumba [Malayalam script on t. 91] is still used for all the three, locally common species of *Leucas*, viz., *L. aspera*, *L. lavandulifolia* and *L. zeylanica*. Of these, *L. aspera* is the most common and popular species (its flowers are the favourites for floral decorations during Onam, the national festival of Malabar).



K a t t u - t u m b a

FIG. 92



LS a small plant of two feet in height, growing in sandy soils. Root red-white, fibrous, woody; of fragrant and pleasing smell. Stalks are slender, four sided, striated, covered with rather long, white hairs.

Leaves are oblong-round, narrow, serrate, hairy, on the lower side covered with ribs which striate the upper side; slightly bitter.

Flowers are spiked, surrounded by small leaflets, are small, five petalled, purple, coming forth from transverse, oblong, a bit hairy calyces; when dry turning red with the calyx, containing three, four or five quite black and somewhat shining seeds in the interior of the orifice.

(Its Uses)

Fried in oil and poured on to the edge of ears, relieves intolerable head aches.

Katú-tumba Lat.
കടുംമംബ Mal.
Boin-túlasi
ബോയിന തുലസി

Part 10. Tab. 92

قحطوطونبيا Arab.

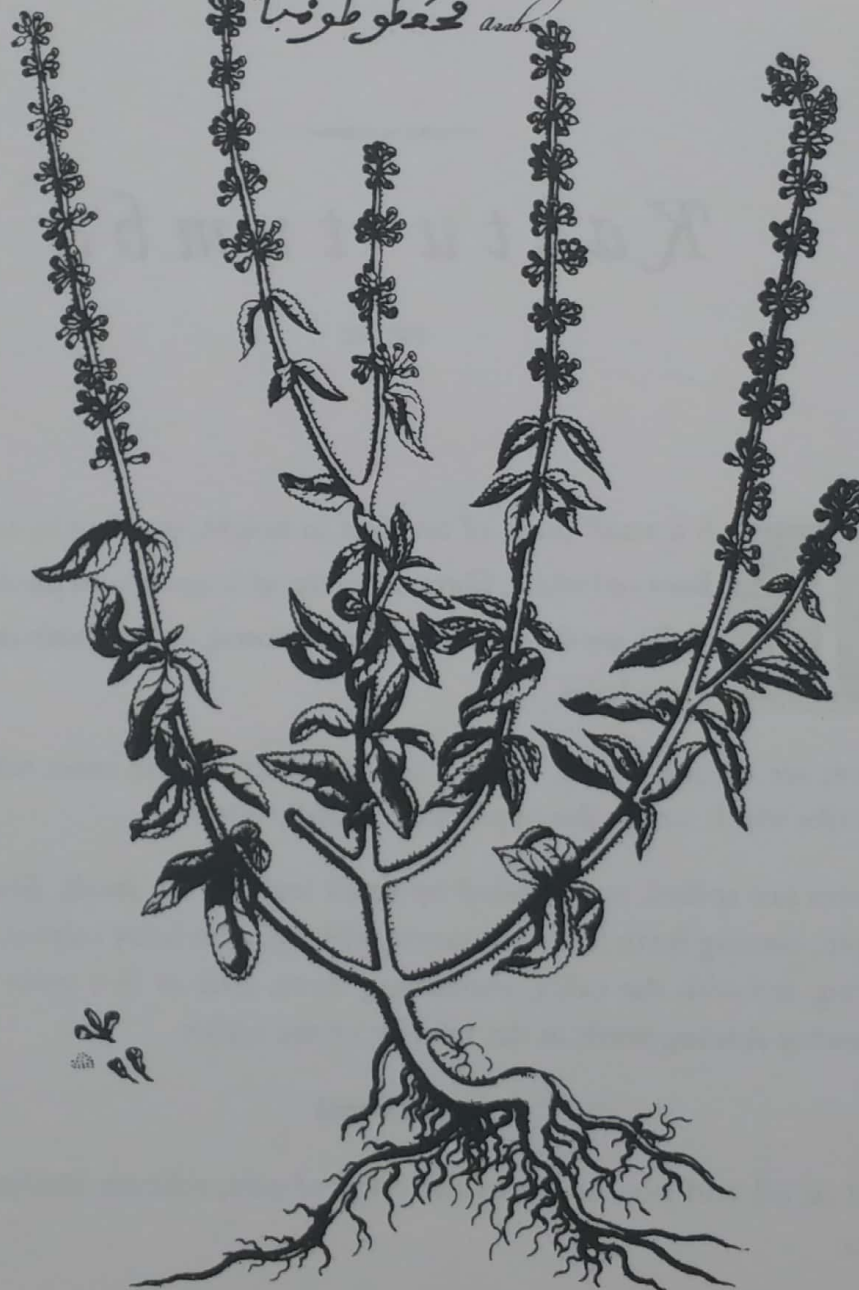
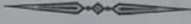


Fig. 92

Geniosporum methoides (L.) Druce var. **prostratum** (L.) Press & Sivaraj., Bull. Mus. Nat. Hist. (Bot.) 19: 116. 1989. - *Ocimum prostratum* L., Mant. 2: 566. 1771. *Geniosporum prostratum* (L.) Benth., Edwards' Bot. Reg. 15: sub. t. 1300. 1830. *Geniosporum tenuiflorum* sensu auct. not as to lectotype of basionym, *Ocimum tenuiflorum* L. 1753; Merr., Philipp. J. Sci. 19: 379. 1921; Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 119. 1981 [LAMIACEAE].

Katu-tumba Rheede, Hort. Malab. 10: 183, t. 92. 1690.

The name Kattuthumba [Malayalam script on t. 92] is not used now; kattu means wild and Thumba refers to *Leucas aspera*. No Malayalam name is currently known for this plant. It is very common along the coast of northern Malabar.



Carim-tumba

FIG. 93



ACO-TUMBA in the language of the Brahmins; is wholly aromatic. Root like that of the preceding one, stalks the same but thicker, round, not striated, covered with longer and more numerous hairs, green-white above, here and there reddish below, the pith of which is green and aqueous.

Three or four leaves with very short petioles surround the stalk in every node, are less oblong and more broad, in the margin more deeply and copiously incised, on the lower side striated with thicker ribs, leaving their markings (vestiges) on the upper side also, more hairy, of dark greenness, of strong, keen (lively) and more pleasing smell, of very sharp and slight-bitter taste.

Flowers are spiked, blue, two-petalled, the one opposite to the base of the head is more broad, tri-fid, in the middle, below the white and slightly bluish stamens, furnished with whitish apices. The style is slender, at the tip extenuated in width. Seed-capsules are cuspidate; in them are numerous, dark-red seeds.

Oil extracted by distillation is clear and yellowish or reddish, transparent, of unpleasant smell; of sharp and slightly bitter taste.



Fig. 93

(Its Uses)

The juice with the addition of a bit of *sugar* called *Jagra*, drives out phlegm. The decoction is against arthritis, if the body is washed with it; flowers are pickled for the same object.

Adenosma indiana (Lour.) Merr., Trans. Amer. Philos. Soc. 24: 351. 1935 ("indianum"); Cramer in Dassan., Rev. Handb. Fl. Ceylon 3: 448. 1981. - *Manulea indiana* Lour., Fl. Cochinch. 386. 1790. *Stemodia capitata* Benth., Bot. Reg. 17: no.4 sub t. 1470. 1832. *Erinus bilabiatus* Roxb., Fl. Ind. 3: 92. 1832. *Adenosma capitata* (Benth.) Benth. ex Hance, J. Linn. Soc. Bot. 13: 114. 1873. *Adenosma bilabiata* (Roxb.) Merr., Enum. Philipp. Pl. 3: 454. 1923 ("bilabiatum"); Backer & Bakh., Fl. Java 2: 507. 1965; Manilal & Sivar., Fl. Calicut 205. 1982 [SCROPHULARIACEAE].

Carim-tumba Rheede, Hort. Malab. 10: 185, t. 93. 1690.

The name Karimthumba [Malayalam script on t. 93] is not used now; karim means black and Thumba refers to *Leucas aspera*. No Malayalam name is currently found to be available for this plant. It is rare and occurs on lateritic soils of northern Malabar.

The first of these is the fact that the patient is not in a position to give a reliable history of his symptoms. The second is the fact that the patient is not in a position to give a reliable history of his symptoms. The third is the fact that the patient is not in a position to give a reliable history of his symptoms.



The fourth is the fact that the patient is not in a position to give a reliable history of his symptoms. The fifth is the fact that the patient is not in a position to give a reliable history of his symptoms. The sixth is the fact that the patient is not in a position to give a reliable history of his symptoms.



Tsjeru-tardavel

FIG. 94



S a small plant, growing in sandy soil. Root is fibrous and white. Stalks are round, jointed, green.

Leaves are attached to the nodes in pairs, are round, anteriority narrowed into a tip, slender, smooth, covered with rather oblong, rare, white hairs, especially in the trail of the veins, which stand out on the lower side, of dark greenness.

Flowers are spiked, two petalled, irregular, the most part of the petal white, reddish at the top, a little in deep rosaceous, in the middle more deep, in the neck white. In them are two stamens, capped with red apices, in the middle of which is seen the style.

(Its Uses)

Levigated in rice and decocted with the old dung of buffalo, or also pulverised, and placed over the bruised part, nullifies (render ineffective) the noxious sting of wasps and drones (*Magalla* in Malabar).

T. jérú-taróvel L.
 ചെറു കുങ്കുമവെളുത്തു mal.
 جهرؤ طارضاو ميل dub.

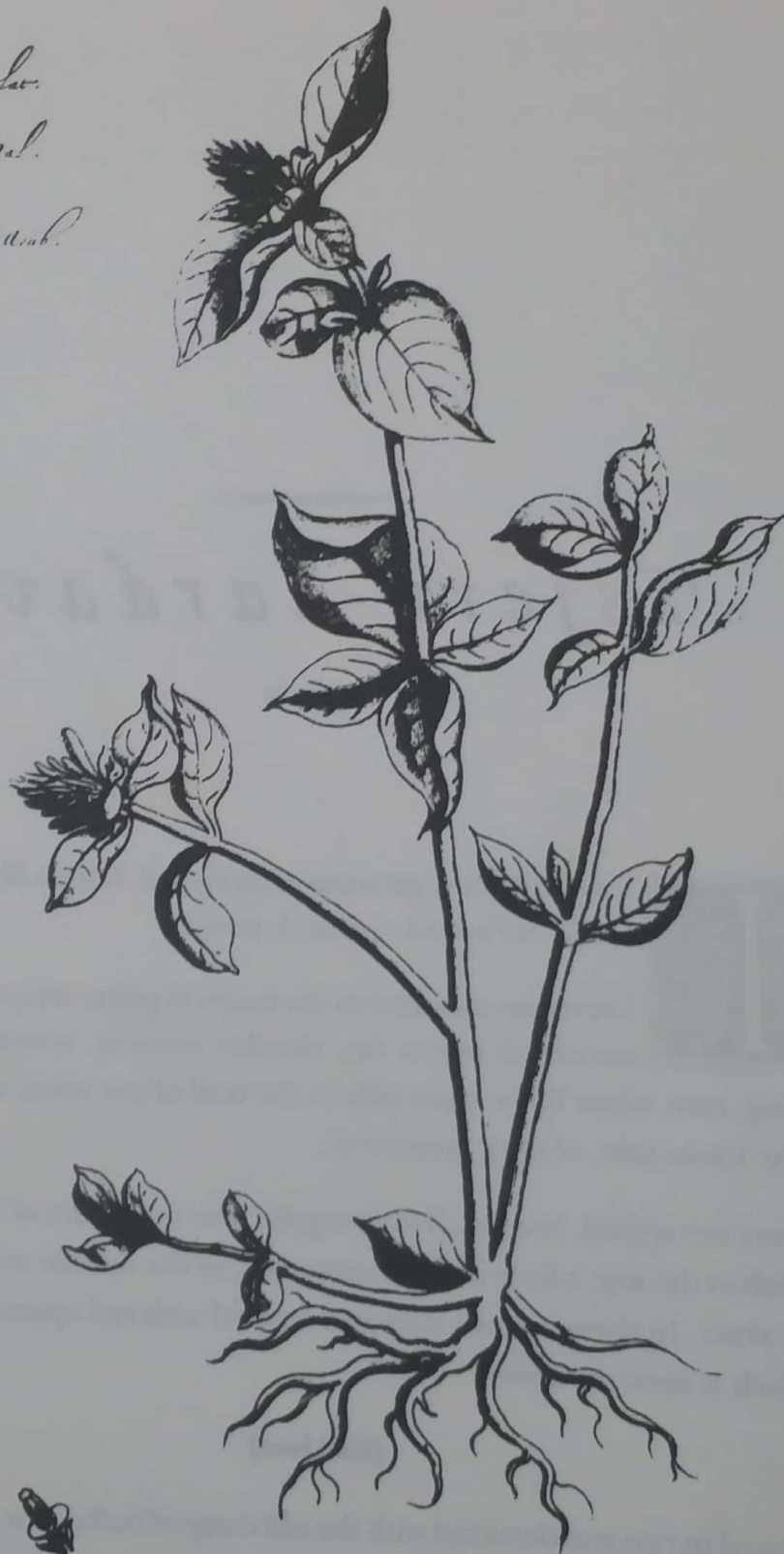


Fig. 94

Justicia procumbens L., Sp. Pl. 15. 1753; Sasidh. & Sivar., Fl. Thrissur 342. 1996; Sivar. & Philip, Fl. Nilambur 509. 1997. -*Rostellaria procumbens* (L.) Nees in Wall., Pl. As. Rar. 3: 101. 1832; Nees in DC., Prodr. 11: 371. 1847 [ACANTHACEAE].

Tsjeru-tardavel Rheede, Hort. Malab. 10: 187, t. 94. 1690.

The name Cherutharthaval [Malayalam script on t. 94] is not in use now; cheru means small Tharthaval refers to *Spermacoce hispida*. No Malayalam name is currently in use for this plant. It occurs throughout Malabar.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
PUBLISHED WEEKLY
CHICAGO, ILL., U.S.A.
Vol. [illegible] No. [illegible]
[illegible] [illegible]



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

Volume /Fig./ Year	Malayalam Name	Scientific Name	Family Name
10: 1-2, t. 1. 1690	Sjasmin	<i>Hibiscus hirtus</i> L.	MALVACEAE
10: 3-4, t. 2. 1690	Uren	<i>Urena lobata</i> L. subsp. <i>sinuata</i> (L.) Borssum Waalkes	MALVACEAE
10: 5[not 7!], t. 4. 1690	Valli-itti-canni	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	LORANTHACEAE
10: 7[not 5!], t. 3. 1690	Velluta-itti-canni	<i>Dendrophthoe elastica</i> (Desr.) Danser	LORANTHACEAE
10: 9, t. 5. 1690	Kanneli-itti-canni	<i>Helixanthera wallichiana</i> (Schult.) Danser	LORANTHACEAE
10: 11-12, t. 6. 1690	Manga-nari	<i>Limnophila aromatica</i> (Lam.) Merr.	SCROPHULARIACEAE
10: 13-14, t. 7. 1690	Ana-schovadi	<i>Elephantopus scaber</i> L.	ASTERACEAE
10: 15, t. 8. 1690	Tumba-codiveli	<i>Plumbago zeylanica</i> L.	PLUMBAGINACEAE
10: 17-18, t. 9. 1690	Schetti-codiveli	<i>Plumbago indica</i> L.	PLUMBAGINACEAE
10: 19-20, t. 10. 1690	Schada-veli-kelangu	<i>Asparagus racemosus</i> Willd.	LILIACEAE
10: 21-22, t. 11. 1690	Coluppa	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	AMARANTHACEAE
10: 23, t. 12. 1690	Nir-valli-pulll	<i>Hygroryza aristata</i> (Retz.) Nees ex Wight & Arn.	POACEAE
10: 25, t. 13. 1690	Nir-pulli	<i>Cyanotis axillaris</i> (L.) Sweet	COMMELINACEAE
10: 27, t. 14. 1690	Brami	<i>Bacopa monnieri</i> (L.) Pennell	SCROPHULARIACEAE
10: 29, t. 15. 1690	Kirganeli	<i>Phyllanthus kozhikodianus</i> Sivar. & Manilal	EUPHORBIACEAE
10: 31, t. 16. 1690	Tsjeru-kirganeli	<i>Phyllanthus gardnerianus</i> (Wight) Baill.	EUPHORBIACEAE
10: 33, t. 17. 1690	Manja-adeca-manjen	<i>Blumea eriantha</i> DC.	ASTERACEAE
10: 35, t. 18. 1690	Kurundoti	<i>Sida alnifolia</i> L.	MALVACEAE
10: 37, t. 19. 1690	Nelam-pullu	<i>Murdannia semiteres</i> (Dalz.) Santapau	COMMELINACEAE
10: 39, t. 20. 1690	Akara-puda	<i>Drosera indica</i> L.	DROSERACEAE
10: 41, t. 21. 1690	Karinta-kali	<i>Geophila repens</i> (L.) Johnston	RUBIACEAE
10: 43, t. 22. 1690	Nela-naregam	<i>Naregamia alata</i> Wight & Arn.	MELIACEAE
10: 45, t. 23. 1690	Schanganam-pulli	<i>Hedyotis herbacea</i> L.	RUBIACEAE
10: 47, t. 24. 1690	Kaipa-tsjira	<i>Glinus oppositifolius</i> (L.) A. DC.	MOLLUGINACEAE
10: 49, t. 25. 1690	Tsjeru-talu-dama	<i>Neanotis rheedei</i> (Wight & Arn.) W. H. Lewis	RUBIACEAE

10: 51, t. 26. 1690	Tsjeru-jonganam-pullu	<i>Mollugo stricta</i> L.	MOLLUGINACEAE
10: 53, t. 27. 1690	Nirpulla	<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE
10: 53, t. 27. 1690	Niruri	<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE
10: 55, t. 28. 1690	Tsjeru-vallel	<i>Hydrolea zeylanica</i> (L.) Vahl	HYDROPHYLLACEAE
10: 57, t. 29. 1690	Scheru-bula	<i>Aerva lanata</i> (L.) Juss. ex Schult.	AMARANTHACEAE
10: 59, t. 30. 1690	Bula	<i>Pouzolzia zeylanica</i> (L.) Benn.	URTICACEAE
10: 61, t. 31. 1690	Nelatsjera	<i>Portulaca quadrifolia</i> L.	PORTULACACEAE
10: 63, t. 32. 1690	Muriguti	<i>Hedyotis auricularia</i> L.	RUBIACEAE
10: 65, t. 33. 1690	Caicotten-pala	<i>Euphorbia thymifolia</i> L.	EUPHORBIACEAE
10: 67-68, t. 34. 1690	Naru-nindi	<i>Hemidesmus indicus</i> (L.) W. T. Aiton	ASCLEPIADACEAE
10: 69, t. 35. 1690	Parpadagam	<i>Hedyotis corymbosa</i> (L.) Lam.	RUBIACEAE
10: 71, t. 36. 1690	Kara-tsjira	<i>Portulaca oleracea</i> L.	PORTULACACEAE
10: 73-74, t. 37. 1690	Wadapu	<i>Gomphrena globosa</i> L.	AMARANTHACEAE
10: 75, t. 38. 1690	Belutta-adeca-manjen	<i>Celosia argentea</i> L.	AMARANTHACEAE
10: 77, t. 39. 1690	Tsjeria-belutta- adeca- manjen	<i>Celosia argentea</i> L.	AMARANTHACEAE
10: 79-80, t. 40. 1690	Vallia-manga-nari	<i>Wollastonia biflora</i> (L.) DC.	ASTERACEAE
10: 81-82, t. 41. 1690	Cajennaem	<i>Eclipta prostrata</i> (L.) L.	ASTERACEAE
10: 83, t. 42. 1690	Pee-cajenneam	<i>Wedelia chinensis</i> (L.) Merr.	ASTERACEAE
10: 85-96, t. 43. 1690	Adaca-manjen	<i>Sphaeranthus indicus</i> L.	ASTERACEAE
10: 87, t. 44. 1690	Tsjetti-pu	<i>Dendranthema indicum</i> (L.) Des Moulins	ASTERACEAE
10: 89, t. 45. 1690	Katu-tsjetti-pu	<i>Artemisia japonica</i> Thunb.	ASTERACEAE
10: 91, t. 46. 1690	Codagen	<i>Centella asiatica</i> (L.) Urban	APIACEAE
10: 93, t. 47. 1690	Ana-coluppa	<i>Phyla nodiflora</i> (L.) Greene	VERBENACEAE
10: 95-96, t. 48. 1690	Bena-patsja	<i>Heliotropium keralense</i> Sivar. & Manilal	BORAGINACEAE
10: 97, t. 49. 1690	Nelam-pata	<i>Grangea maderaspatana</i> (L.) Poir.	ASTERACEAE
10: 99, t. 50. 1690	Nanschera-canschabu	<i>Lindernia caespitosa</i> (Bl.) Panigrahi	SCROPHULARIACEAE
10: 101, t. 51. 1690	Nir-cottam-pala	<i>Euphorbia hypericifolia</i> L.	EUPHORBIACEAE
10: 103, t. 52. 1690	Cansjan-cora	<i>Canscora perfoliata</i> Lam.	GENTIANACEAE
10: 105, t. 53. 1690	Tsjeru-parua	<i>Sida acuta</i> N. Burm.	MALVACEAE
10: 107, t. 54. 1690	Katu-uren	<i>Sida cordifolia</i> L.	MALVACEAE
10: 109, t. 55. 1690	Niruren	<i>Melochia corchorifolia</i> L.	STERCULIACEAE
10: 111, t. 56. 1690	Naga-pou	<i>Pentapetes phoenicea</i> L.	STERCULIACEAE
10: 113, t. 57. 1690	Kilcola-tsjetti	<i>Ixora malabarica</i> (Dennst.) Mabb.	RUBIACEAE
10: 115, t. 58. 1690	Ben-pala	<i>Euphorbia atoto</i> G. Forster	EUPHORBIACEAE
10: 117, t. 59. 1690	Wellia-codiveli	<i>Pupalia lappacea</i> (L.) Juss.	AMARANTHACEAE
10: 119, t. 60. 1690	Kalengi-cansjava	<i>Cannabis sativa</i> L.	CANNABINACEAE
10: 121, t. 61. 1690	Tsjeru-cansjava	<i>Cannabis sativa</i> L.	CANNABINACEAE

10: 123, t. 62. 1690	Nari-patsja	<i>Blumea mollis</i> (D. Don) Merr.	ASTERACEAE
10: 125, t. 63. 1690	Pu-tumba	<i>Phyllocephalum indicum</i> (Less.) Kirkman	ASTERACEAE
10: 127, t. 64. 1690	Puam-curundala	<i>Vernonia cinerea</i> (L.) Less.	ASTERACEAE
10: 129, t. 65. 1690	Manam-podam	<i>Pogostemon paniculatus</i> (Willd.) Benth.	LAMIACEAE
10: 131, t. 66. 1690	Katu-mailosina	<i>Polycarpaea corymbosa</i> (L.) Lam.	CARYOPHYLLACEAE
10: 133, t. 67. 1690	Pee-coipa	<i>Allmania nodiflora</i> (L.) R. Br. ex Wight	AMARANTHACEAE
10: 135, t. 68. 1690	Muel-schevi	<i>Emilia sonchifolia</i> (L.) DC.	ASTERACEAE
10: 137, t. 69. 1690	Nela-vaga	<i>Sida cordata</i> (N. Burm.) Borssum Waalkes	MALVACEAE
10: 139, t. 70. 1690	Inota-inodien	<i>Physalis angulata</i> L.	SOLANACEAE
10: 141, t. 71. 1690	Pee-inota-inodien	<i>Physalis angulata</i> L.	SOLANACEAE
10: 143-144, t. 72. 1690	Caca-mullu	<i>Pedaliium murex</i> L.	PEDALIACEAE
10: 145, t. 73. 1690	Nelen-tsjunda	<i>Solanum americanum</i> Mill	SOLANACEAE
10: 147, t. 74. 1690	Nila-barudena	<i>Solanum melongena</i> L.	SOLANACEAE
10: 149-150, t. 75. 1690	Andi-malleri	<i>Mirabilis jalapa</i> L.	NYCTAGINACEAE
10: 151, t. 76. 1690	Naga-danti	<i>Baliospermum solanifolium</i> (J. Burm.) Suresh	EUPHORBIACEAE
10: 153, t. 77. 1690	Cottam	<i>Pogostemon heyneanus</i> Benth.	LAMIACEAE
10: 155, t. 78. 1690	Cadelari	<i>Achyranthes aspera</i> L.	AMARANTHACEAE
10: 157, t. 79. 1690	Scheru-cadelari	<i>Cyathula prostrata</i> (L.) Bl.	AMARANTHACEAE
10: 159, t. 80. 1690	Belutta-modela-muccu	<i>Polygonum barbatum</i> L.	POLYGONACEAE
10: 161, t. 81. 1690	Cupameni	<i>Acalypha indica</i> L.	EUPHORBIACEAE
10: 163, t. 82. 1690	Pee-cupameni	<i>Acalypha racemosa</i> Wall. ex Baill.	EUPHORBIACEAE
10: 165, t. 83. 1690	Welja-cupameni	<i>Acalypha racemosa</i> Wall. ex Baill.	EUPHORBIACEAE
10: 167, t. 84. 1690	Perim-tolassi	<i>Plectranthus mollis</i> (Aiton) Spreng.	LAMIACEAE
10: 169, t. 85. 1690	Nala-tirtava	<i>Ocimum tenuiflorum</i> L.	LAMIACEAE
10: 171, t. 86. 1690	Kattu-tirtava	<i>Ocimum gratissimum</i> L.	LAMIACEAE
10: 173, t. 87. 1690	Soladi-tirtava	<i>Ocimum basilicum</i> L.	LAMIACEAE
10: 175, t. 88. 1690	Tsjadean	<i>Anisomeles indica</i> (L.) Kuntze	LAMIACEAE
10: 177, t. 89. 1690	Tsjeria-manga-nari	<i>Lobelia alsinoides</i> Lam.	CAMPANULACEAE
10: 179, t. 90. 1690	Katu-kurka	<i>Anisochilus carnosus</i> (L.f.) Wall. ex Benth.	LAMIACEAE
10: 181, t. 91. 1690	Tumba	<i>Leucas aspera</i> (Willd.) Link	LAMIACEAE
10: 183, t. 92. 1690	Katu-tumba	<i>Geniosporum prostratum</i> (L.) Benth.	LAMIACEAE
10: 185, t. 93. 1690	Carim-tumba	<i>Adenosma indiana</i> (Lour.) Merr.	SCROPHULARIACEAE
10: 187, t. 94. 1690	Tsjeru-tardavel	<i>Justicia procumbens</i> L.	ACANTHACEAE

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

Volume/Fig. / Year	Malayalam Name	Konkani Name	Portuguese Name	Dutch / Belgian Name
10: 1-2, t. 1. 1690	Sjasmin	*	*	*
10: 3-4, t. 2. 1690	Uren	Tupu Kadu	*	*
10: 5[not 7!], t. 4. 1690	Valli-itti-canni	*	*	*
10: 7[not 5!], t. 3. 1690	Velluta-itti-canni	*	*	*
10: 9, t. 5. 1690	Kanneli-itti-canni	*	*	*
10: 11-12, t. 6. 1690	Manga-nari	Ambuli	*	*
10: 13-14, t. 7. 1690	Ana-schovadi	Astipada	*	*
10: 15, t. 8. 1690	Tumba-codiveli	Davo Citroco	*	*
10: 17-18, t. 9. 1690	Schetti-codiveli	Tambido Citroco	*	*
10: 19-20, t. 10. 1690	Schada-veli-kelangu	Sasara-Mulli	*	*
10: 21-22, t. 11. 1690	Coluppa	Coipa	*	*
10: 23, t. 12. 1690	Nir-valli-pulli	*	*	*
10: 25, t. 13. 1690	Nir-pulli	*	*	*
10: 27, t. 14. 1690	Brami	*	*	*
10: 29, t. 15. 1690	Kirganeli	Bujan-Anvali	*	*
10: 31, t. 16. 1690	Tsjeru-kirganeli	*	*	*
10: 33, t. 17. 1690	Manja-adeca-manjen	*	*	*
10: 35, t. 18. 1690	Kurundoti	*	*	*
10: 37, t. 19. 1690	Nelam-pullu	*	*	*
10: 39, t. 20. 1690	Akara-puda	*	*	*
10: 41, t. 21. 1690	Karinta-kali	*	*	*
10: 43, t. 22. 1690	Nela-naregam	*	*	*
10: 45, t. 23. 1690	Schanganam-pulli	*	*	*
10: 47, t. 24. 1690	Kaipa-tsjira	*	*	*
10: 49, t. 25. 1690	Tsjeru-talu-dama	*	*	*
10: 51, t. 26. 1690	Tsjeru-jonganam-pullu	*	*	*
10: 53, t. 27. 1690	Nirpulla	*	*	*
10: 53, t. 27. 1690	Niruri	*	*	*
10: 55, t. 28. 1690	Tsjeru-vallel	*	*	*
10: 57, t. 29. 1690	Scheru-bula	Tandalo	*	*
10: 59, t. 30. 1690	Bula	Dacalo Tandalo	*	*

10: 61, t. 31. 1690	Nelatsjera	*	*	*
10: 63, t. 32. 1690	Muriguti	*	*	*
10: 65, t. 33. 1690	Caicotten-pala	Dodini	*	*
10: 67-68, t. 34. 1690	Naru-nindi	Upa-Sali	*	*
10: 69, t. 35. 1690	Parpadagam	*	*	*
10: 71, t. 36. 1690	Kara-tsjiira	*	*	*
10: 73-74, t. 37. 1690	Wadapu	*	*	*
10: 75, t. 38. 1690	Belutta-adecca-manjen	*	*	*
10: 77, t. 39. 1690	Tsjeria-belutta-adecca-manjen	*	*	*
10: 79-80, t. 40. 1690	Vallia-manga-nari	*	*	*
10: 81-82, t. 41. 1690	Cajennaem	Maco	*	*
10: 83, t. 42. 1690	Pee-cajenneam	Bringarasi	*	*
10: 85-96, t. 43. 1690	Adacca-manjen	Mundi	*	*
10: 87, t. 44. 1690	Tsjetti-pu	*	Alosna de botao	*
10: 89, t. 45. 1690	Katu-tsjetti-pu	*	*	*
10: 91, t. 46. 1690	Codagen	Ecapani	*	*
10: 93, t. 47. 1690	Ana-coluppa	Adaly	*	*
10: 95-96, t. 48. 1690	Bena-patsja	Ageru	*	*
10: 97, t. 49. 1690	Nelam-pata	*	*	*
10: 99, t. 50. 1690	Nanschera-canschabu	Schanga-Cuspi	*	*
10: 101, t. 51. 1690	Nir-cottam-pala	*	*	*
10: 103, t. 52. 1690	Cansjan-cora	*	*	*
10: 105, t. 53. 1690	Tsjeru-parua	*	*	*
10: 107, t. 54. 1690	Katu-uren	*	*	*
10: 109, t. 55. 1690	Niruren	*	*	*
10: 111, t. 56. 1690	Naga-pou	*	*	*
10: 113, t. 57. 1690	Kilcola-tsjetti	*	*	*
10: 115, t. 58. 1690	Ben-pala	*	*	*
10: 117, t. 59. 1690	Wellia-codiveli	*	*	*
10: 119, t. 60. 1690	Kalengi-cansjava	Bangi	*	*
10: 121, t. 61. 1690	Tsjeru-cansjava	Tsjada Bangi	*	*
10: 123, t. 62. 1690	Nari-patsja	Vasini	*	*
10: 125, t. 63. 1690	Pu-tumba	*	*	*
10: 127, t. 64. 1690	Puam-curundala	*	*	*
10: 129, t. 65. 1690	Manam-podam	*	*	*
10: 131, t. 66. 1690	Katu-mailosina	*	*	*
10: 133, t. 67. 1690	Pee-coipa	*	*	*
10: 135, t. 68. 1690	Muel-schevi	Udiram-Panum	*	*
10: 137, t. 69. 1690	Nela-vaga	*	*	*
10: 139, t. 70. 1690	Inota-inodien	Zera-Puti	*	*

10: 141, t. 71. 1690	Pee-inota-inodien	*	*	*
10: 143-144, t. 72. 1690	Caca-mullu	Caca-Taly	*	*
10: 145, t. 73. 1690	Nelen-tsjunda	*	*	*
10: 147, t. 74. 1690	Nila-barudena	Vaenna	*	*
10: 149-150, t. 75. 1690	Andi-malleri	Eudraxa	*	*
10: 151, t. 76. 1690	Naga-danti	*	*	*
10: 153, t. 77. 1690	Cottam	Padso	*	*
10: 155, t. 78. 1690	Cadelari	Cante-Mogaro	*	*
10: 157, t. 79. 1690	Scheru-cadelari	Dacolo-Cante-Mogaro	*	*
10: 159, t. 80. 1690	Belutta-modela-muccu	*	*	*
10: 161, t. 81. 1690	Cupameni	Maserasesade	*	*
10: 163, t. 82. 1690	Pee-cupameni	Maserasesade	*	*
10: 165, t. 83. 1690	Welia-cupameni	Maserasesade	*	*
10: 167, t. 84. 1690	Perim-tolassi	Gandarli	*	*
10: 169, t. 85. 1690	Nala-tirtava	Tolasi	*	*
10: 171, t. 86. 1690	Kattu-tirtava	Rana-tolasi	*	*
10: 173, t. 87. 1690	Soladi-tirtava	Bui-Tolasi	*	*
10: 175, t. 88. 1690	Tsjadean	*	*	*
10: 177, t. 89. 1690	Tsjeria-manga-nari	*	*	*
10: 179, t. 90. 1690	Katu-kurka	*	*	*
10: 181, t. 91. 1690	Tumba	Thumba	*	*
10: 183, t. 92. 1690	Katu-tumba	*	*	*
10: 185, t. 93. 1690	Carim-tumba	*	*	*
10: 187, t. 94. 1690	Tsjeru-tardavel	*	*	*

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

Scientific Name	Family	Malayalam Name	Volume / Fig. / Year
<i>Acalypha indica</i> L.	EUPHORBIACEAE	Cupameni	10: 161, t. 81. 1690
<i>Acalypha racemosa</i> Wall. ex Baill.	EUPHORBIACEAE	Welia-cupameni	10: 165, t. 83. 1690
<i>Acalypha racemosa</i> Wall. ex Baill. z	EUPHORBIACEAE	Pee-cupameni	10: 163, t. 82. 1690
<i>Achyranthes aspera</i> L.	AMARANTHACEAE	Cadelari	10: 155, t. 78. 1690
<i>Adenosma indiana</i> (Lour.) Merr.	SCROPHULARIACEAE	Carim-tumba	10: 185, t. 93. 1690
<i>Aerva lanata</i> (L.) Juss. ex Schult.	AMARANTHACEAE	Scheru-bula	10: 57, t. 29. 1690
<i>Allmania nodiflora</i> (L.) R. Br. ex Wight	AMARANTHACEAE	Pee-coipa	10: 133, t. 67. 1690
<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	AMARANTHACEAE	Coluppa	10: 21-22, t. 11. 1690
<i>Anisochilus camosus</i> (L.f.) Wall. ex Benth.	LAMIACEAE	Katu-kurka	10: 179, t. 90. 1690
<i>Anisomeles indica</i> (L.) Kuntze	LAMIACEAE	Tsjadean	10: 175, t. 88. 1690
<i>Artemisia japonica</i> Thunb.	ASTERACEAE	Katu-tsjetti-pu	10: 89, t. 45. 1690
<i>Asparagus racemosus</i> Willd.	LILIACEAE	Schada-veli-kelangu	10: 19-20, t. 10. 1690
<i>Bacopa monnieri</i> (L.) Pennell	SCROPHULARIACEAE	Brami	10: 27, t. 14. 1690
<i>Baliospermum solanifolium</i> (J. Burm.) Suresh	EUPHORBIACEAE	Naga-danti	10: 151, t. 76. 1690
<i>Blumea eriantha</i> DC.	ASTERACEAE	Manja-adeca-manjen	10: 33, t. 17. 1690
<i>Blumea mollis</i> (D. Don) Merr.	ASTERACEAE	Nari-patsja	10: 123, t. 62. 1690
<i>Cannabis sativa</i> L.	CANNABINACEAE	Kalengi-cansjava	10: 119, t. 60. 1690
<i>Cannabis sativa</i> L.	CANNABINACEAE	Tsjeru-cansjava	10: 121, t. 61. 1690
<i>Canscora perfoliata</i> Lam.	GENTIANACEAE	Cansjan-cora	10: 103, t. 52. 1690
<i>Celosia argentea</i> L.	AMARANTHACEAE	Belutta-adeca-manjen	10: 75, t. 38. 1690
<i>Celosia argentea</i> L.	AMARANTHACEAE	Tsjeria-belutta-adeca-manjen	10: 77, t. 39. 1690
<i>Centella asiatica</i> (L.) Urban	APIACEAE	Codagen	10: 91, t. 46. 1690
<i>Cyanotis axillaris</i> (L.) Sweet	COMMELINACEAE	Nir-pulli	10: 25, t. 13. 1690
<i>Cyathula prostrata</i> (L.) Bl.	AMARANTHACEAE	Scheru-cadelari	10: 157, t. 79. 1690
<i>Dendranthema indicum</i> (L.) Des Moulins	ASTERACEAE	Tsjetti-pu	10: 87, t. 44. 1690
<i>Dendrophthoe elastica</i> (Desr.) Danser	LORANTHACEAE	Velluta-itti-canni	10: 7[not 5!], t. 3. 1690
<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	LORANTHACEAE	Valli-itti-canni	10: 5[not 7!], t. 4. 1690
<i>Drosera indica</i> L.	DROSERACEAE	Akara-puda	10: 39, t. 20. 1690
<i>Eclipta prostrata</i> (L.) L.	ASTERACEAE	Cajennaem	10: 81-82, t. 41. 1690
<i>Elephantopus scaber</i> L.	ASTERACEAE	Ana-schovadi	10: 13-14, t. 7. 1690
<i>Emilia sonchifolia</i> (L.) DC.	ASTERACEAE	Muel-schevi	10: 135, t. 68. 1690

<i>Euphorbia atoto</i> G. Forster	EUPHORBIACEAE	Ben-pala	10: 115, t. 58. 1690
<i>Euphorbia hypericifolia</i> L.	EUPHORBIACEAE	Nir-cottam-pala	10: 101, t. 51. 1690
<i>Euphorbia thymifolia</i> L.	EUPHORBIACEAE	Caicotten-pala	10: 65, t. 33. 1690
<i>Geniosporum prostratum</i> (L.) Benth.	LAMIACEAE	Katu-tumba	10: 183, t. 92. 1690
<i>Geophila repens</i> (L.) Johnston	RUBIACEAE	Karinta-kali	10: 41, t. 21. 1690
<i>Glinus oppositifolius</i> (L.) A. DC.	MOLLUGINACEAE	Kaipa-tsjira	10: 47, t. 24. 1690
<i>Gomphrena globosa</i> L.	AMARANTHACEAE	Wadapu	10: 73-74, t. 37. 1690
<i>Grangea maderaspatana</i> (L.) Poir.	ASTERACEAE	Nelam-pata	10: 97, t. 49. 1690
<i>Hedyotis auricularia</i> L.	RUBIACEAE	Muriguti	10: 63, t. 32. 1690
<i>Hedyotis corymbosa</i> (L.) Lam.	RUBIACEAE	Parpadagam	10: 69, t. 35. 1690
<i>Hedyotis herbacea</i> L.	RUBIACEAE	Schanganam-pulli	10: 45, t. 23. 1690
<i>Heliotropium keralense</i> Sivar. & Manilal	BORAGINACEAE	Bena-patsja	10: 95-96, t. 48. 1690
<i>Helixanthera wallichiana</i> (Schult.) Danser	LORANTHACEAE	Kanneli-itti-canni	10: 9, t. 5. 1690
<i>Hemidesmus indicus</i> (L.) W. T. Aiton	ASCLEPIADACEAE	Naru-nindi	10: 67-68, t. 34. 1690
<i>Hibiscus hirtus</i> L.	MALVACEAE	Sjasmin	10: 1-2, t. 1. 1690
<i>Hydrolea zeylanica</i> (L.) Vahl	HYDROPHYLLACEAE	Tsjeru-vallel	10: 55, t. 28. 1690
<i>Hygroryza aristata</i> (Retz.) Nees ex Wight & Arn.	POACEAE	Nir-valli-pulll	10: 23, t. 12. 1690
<i>Ixora malabarica</i> (Dennst.) Mabb.	RUBIACEAE	Kilcola-tsjetti	10: 113, t. 57. 1690
<i>Justicia procumbens</i> L.	ACANTHACEAE	Tsjeru-tardavel	10: 187, t. 94. 1690
<i>Leucas aspera</i> (Willd.) Link	LAMIACEAE	Tumba	10: 181, t. 91. 1690
<i>Limnophila aromatica</i> (Lam.) Merr.	SCROPHULARIACEAE	Manga-nari	10: 11-12, t. 6. 1690
<i>Lindernia caespitosa</i> (Bl.) Panigrahi	SCROPHULARIACEAE	Nanschera-canschabu	10: 99, t. 50. 1690
<i>Lobelia alsinoides</i> Lam.	CAMPANULACEAE	Tsjeria-manga-nari	10: 177, t. 89. 1690
<i>Melochia corchorifolia</i> L.	STERCULIACEAE	Niruren	10: 109, t. 55. 1690
<i>Mirabilis jalapa</i> L.	NYCTAGINACEAE	Andi-malleri	10: 149-150, t. 75. 1690
<i>Mollugo stricta</i> L.	MOLLUGINACEAE	Tsjeru-jonganam-pullu	10: 51, t. 26. 1690
<i>Murdannia semiteres</i> (Dalz.) Santapau	COMMELINACEAE	Nelam-pullu	10: 37, t. 19. 1690
<i>Naregamia alata</i> Wight & Arn.	MELIACEAE	Nela-naregam	10: 43, t. 22. 1690
<i>Neanotis rheedei</i> (Wight & Arn.) W. H. Lewis	RUBIACEAE	Tsjeru-talu-dama	10: 49, t. 25. 1690
<i>Ocimum basilicum</i> L.	LAMIACEAE	Soladi-tirtava	10: 173, t. 87. 1690
<i>Ocimum gratissimum</i> L.	LAMIACEAE	Kattu-tirtava	10: 171, t. 86. 1690
<i>Ocimum tenuiflorum</i> L.	LAMIACEAE	Nala-tirtava	10: 169, t. 85. 1690
<i>Pedaliium murex</i> L.	PEDALIACEAE	Caca-mullu	10: 143-144, t. 72. 1690
<i>Pentapetes phoenicea</i> L.	STERCULIACEAE	Naga-pou	10: 111, t. 56. 1690
<i>Phyla nodiflora</i> (L.) Greene	VERBENACEAE	Ana-coluppa	10: 93, t. 47. 1690
<i>Phyllanthus gardnerianus</i> (Wight) Baill.	EUPHORBIACEAE	Tsjeru-kirganeli	10: 31, t. 16. 1690

<i>Phyllanthus kozhikodanus</i> Sivar. & Manilal	EUPHORBIACEAE	Kirganeli	10: 29, t. 15. 1690
<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE	Nirpulla	10: 53, t. 27. 1690
<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE	Niruri	10: 53, t. 27. 1690
<i>Phyllocephalum indicum</i> (Less.) Kirkman	ASTERACEAE	Pu-tumba	10: 125, t. 63. 1690
<i>Physalis angulata</i> L.	SOLANACEAE	Inota-inodien	10: 139, t. 70. 1690
<i>Physalis angulata</i> L.	SOLANACEAE	Pee-inota-inodien	10: 141, t. 71. 1690
<i>Plectranthus mollis</i> (Aiton) Spreng.	LAMIACEAE	Perim-tolassi	10: 167, t. 84. 1690
<i>Plumbago indica</i> L.	PLUMBAGINACEAE	Schetti-codiveli	10: 17-18, t. 9. 1690
<i>Plumbago zeylanica</i> L.	PLUMBAGINACEAE	Tumba-codiveli	10: 15, t. 8. 1690
<i>Pogostemon heyneanus</i> Benth.	LAMIACEAE	Cottam	10: 153, t. 77. 1690
<i>Pogostemon paniculatus</i> (Willd.) Benth.	LAMIACEAE	Manam-podam	10: 129, t. 65. 1690
<i>Polycarpaea corymbosa</i> (L.) Lam.	CARYOPHYLLACEAE	Katu-mailosina	10: 131, t. 66. 1690
<i>Polygonum barbatum</i> L.	POLYGONACEAE	Belutta-modela-muccu	10: 159, t. 80. 1690
<i>Portulaca oleracea</i> L.	PORTULACACEAE	Kara-tsjiira	10: 71, t. 36. 1690
<i>Portulaca quadrifolia</i> L.	PORTULACACEAE	Nelatsjera	10: 61, t. 31. 1690
<i>Pouzolzia zeylanica</i> (L.) Benn.	URTICACEAE	Bula	10: 59, t. 30. 1690
<i>Pupalia lappacea</i> (L.) Juss.	AMARANTHACEAE	Wellia-codiveli	10: 117, t. 59. 1690
<i>Sida acuta</i> N. Burm.	MALVACEAE	Tsjeru-parua	10: 105, t. 53. 1690
<i>Sida alnifolia</i> L.	MALVACEAE	Kurundoti	10: 35, t. 18. 1690
<i>Sida cordata</i> (N. Burm.) Borssum Waalkes	MALVACEAE	Nela-vaga	10: 137, t. 69. 1690
<i>Sida cordifolia</i> L.	MALVACEAE	Katu-uren	10: 107, t. 54. 1690
<i>Solanum americanum</i> Mill	SOLANACEAE	Nelen-tsjunda	10: 145, t. 73. 1690
<i>Solanum melongena</i> L.	SOLANACEAE	Nila-barudena	10: 147, t. 74. 1690
<i>Sphaeranthus indicus</i> L.	ASTERACEAE	Adaca-manjen	10: 85-96, t. 43. 1690
<i>Urena lobata</i> L. subsp. <i>sinuata</i> (L.) Borssum Waalkes	MALVACEAE	Uren	10: 3-4, t. 2. 1690
<i>Vernonia cinerea</i> (L.) Less.	ASTERACEAE	Puam-curundala	10: 127, t. 64. 1690
<i>Wedelia chinensis</i> (L.) Merr.	ASTERACEAE	Pee-cajenneam	10: 83, t. 42. 1690
<i>Wollastonia biflora</i> (L.) DC.	ASTERACEAE	Vallia-manga-nari	10: 79-80, t. 40. 1690

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

Malayalam Name	Scientific Name	Family	Volume / Fig. / Year
Adaca-manjen	<i>Sphaeranthus indicus</i> L.	ASTERACEAE	10: 85-96, t. 43. 1690
Akara-puda	<i>Drosera indica</i> L.	DROSERACEAE	10: 39, t. 20. 1690
Ana-coluppa	<i>Phyla nodiflora</i> (L.) Greene	VERBENACEAE	10: 93, t. 47. 1690
Ana-schovadi	<i>Elephantopus scaber</i> L.	ASTERACEAE	10: 13-14, t. 7. 1690
Andi-malleri	<i>Mirabilis jalapa</i> L.	NYCTAGINACEAE	10: 149-150, t. 75. 1690
Belutta-adeca-manjen	<i>Celosia argentea</i> L.	AMARANTHACEAE	10: 75, t. 38. 1690
Belutta-modela-muccu	<i>Polygonum barbatum</i> L.	POLYGONACEAE	10: 159, t. 80. 1690
Bena-patsja	<i>Heliotropium keralense</i> Sivar. & Manilal	BORAGINACEAE	10: 95-96, t. 48. 1690
Ben-pala	<i>Euphorbia atoto</i> G. Forster	EUPHORBIACEAE	10: 115, t. 58. 1690
Brami	<i>Bacopa monnieri</i> (L.) Pennell	SCROPHULARIACEAE	10: 27, t. 14. 1690
Bula	<i>Pouzolzia zeylanica</i> (L.) Benn.	URTICACEAE	10: 59, t. 30. 1690
Caca-mullu	<i>Pedaliium murex</i> L.	PEDALIACEAE	10: 143-144, t. 72. 1690
Cadelari	<i>Achyranthes aspera</i> L.	AMARANTHACEAE	10: 155, t. 78. 1690
Caicotten-pala	<i>Euphorbia thymifolia</i> L.	EUPHORBIACEAE	10: 65, t. 33. 1690
Cajennaem	<i>Eclipta prostrata</i> (L.) L.	ASTERACEAE	10: 81-82, t. 41. 1690
Cansjan-cora	<i>Canscora perfoliata</i> Lam.	GENTIANACEAE	10: 103, t. 52. 1690
Carim-tumba	<i>Adenosma indiana</i> (Lour.) Merr.	SCROPHULARIACEAE	10: 185, t. 93. 1690
Codagen	<i>Centella asiatica</i> (L.) Urban	APIACEAE	10: 91, t. 46. 1690
Coluppa	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	AMARANTHACEAE	10: 21-22, t. 11. 1690
Cottam	<i>Pogostemon heyneanus</i> Benth.	LAMIACEAE	10: 153, t. 77. 1690
Cupameni	<i>Acalypha indica</i> L.	EUPHORBIACEAE	10: 161, t. 81. 1690
Inota-inodien	<i>Physalis angulata</i> L.	SOLANACEAE	10: 139, t. 70. 1690
Kaipa-tsjiira	<i>Glinus oppositifolius</i> (L.) A. DC.	MOLLUGINACEAE	10: 47, t. 24. 1690
Kalengi-cansjava	<i>Cannabis sativa</i> L.	CANNABINACEAE	10: 119, t. 60. 1690
Kanneli-itti-canni	<i>Helixanthera wallichiana</i> (Schult.) Danser	LORANTHACEAE	10: 9, t. 5. 1690
Kara-tsjiira	<i>Portulaca oleracea</i> L.	PORTULACACEAE	10: 71, t. 36. 1690
Karinta-kali	<i>Geophila repens</i> (L.) Johnston	RUBIACEAE	10: 41, t. 21. 1690
Kattu-tirtava	<i>Ocimum gratissimum</i> L.	LAMIACEAE	10: 171, t. 86. 1690
Katu-kurka	<i>Anisochilus carnosus</i> (L.f.) Wall. ex Benth.	LAMIACEAE	10: 179, t. 90. 1690
Katu-mailosina	<i>Polycarpaea corymbosa</i> (L.) Lam.	CARYOPHYLLACEAE	10: 131, t. 66. 1690

Katu-tsjetti-pu	<i>Artemisia japonica</i> Thunb.	ASTERACEAE	10: 89, t. 45. 1690
Katu-tumba	<i>Geniosporum prostratum</i> (L.) Benth.	LAMIACEAE	10: 183, t. 92. 1690
Katu-uren	<i>Sida cordifolia</i> L.	MALVACEAE	10: 107, t. 54. 1690
Kilcola-tsjetti	<i>Ixora malabarica</i> (Dennst.) Mabb.	RUBIACEAE	10: 113, t. 57. 1690
Kirganeli	<i>Phyllanthus kozhikodianus</i> Sivar. & Manilal	EUPHORBIACEAE	10: 29, t. 15. 1690
Kurundoti	<i>Sida alnifolia</i> L.	MALVACEAE	10: 35, t. 18. 1690
Manam-podam	<i>Pogostemon paniculatus</i> (Willd.) Benth.	LAMIACEAE	10: 129, t. 65. 1690
Manga-nari	<i>Limnophila aromatica</i> (Lam.) Merr.	SCROPHULARIACEAE	10: 11-12, t. 6. 1690
Manja-adeca- manjen	<i>Blumea eriantha</i> DC.	ASTERACEAE	10: 33, t. 17. 1690
Muel-schevi	<i>Emilia sonchifolia</i> (L.) DC.	ASTERACEAE	10: 135, t. 68. 1690
Muriguti	<i>Hedyotis auricularia</i> L.	RUBIACEAE	10: 63, t. 32. 1690
Naga-danti	<i>Baliospermum solanifolium</i> (J. Burm.) Suresh	EUPHORBIACEAE	10: 151, t. 76. 1690
Naga-pou	<i>Pentapetes phoenicea</i> L.	STERCULIACEAE	10: 111, t. 56. 1690
Nala-tirtava	<i>Ocimum tenuiflorum</i> L.	LAMIACEAE	10: 169, t. 85. 1690
Nanschera- canschabu	<i>Lindernia caespitosa</i> (Bl.) Panigrahi	SCROPHULARIACEAE	10: 99, t. 50. 1690
Nari-patsja	<i>Blumea mollis</i> (D. Don) Merr.	ASTERACEAE	10: 123, t. 62. 1690
Naru-nindi	<i>Hemidesmus indicus</i> (L.) W. T. Aiton	ASCLEPIADACEAE	10: 67-68, t. 34. 1690
Nelam-pata	<i>Grangea maderaspatana</i> (L.) Poir.	ASTERACEAE	10: 97, t. 49. 1690
Nelam-pullu	<i>Murdannia semiteres</i> (Dalz.) Santapau	COMMELINACEAE	10: 37, t. 19. 1690
Nela-naregam	<i>Naregamia alata</i> Wight & Arn.	MELIACEAE	10: 43, t. 22. 1690
Nelatsjera	<i>Portulaca quadrifolia</i> L.	PORTULACACEAE	10: 61, t. 31. 1690
Nela-vaga	<i>Sida cordata</i> (N. Burm.) Borssum Waalkes	MALVACEAE	10: 137, t. 69. 1690
Nelen-tsjunda	<i>Solanum americanum</i> Mill	SOLANACEAE	10: 145, t. 73. 1690
Nila-barudena	<i>Solanum melongena</i> L.	SOLANACEAE	10: 147, t. 74. 1690
Nir-cottam-pala	<i>Euphorbia hypericifolia</i> L.	EUPHORBIACEAE	10: 101, t. 51. 1690
Nirpulla	<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE	10: 53, t. 27. 1690
Nir-pulli	<i>Cyanotis axillaris</i> (L.) Sweet	COMMELINACEAE	10: 25, t. 13. 1690
Niruren	<i>Melochia corchorifolia</i> L.	STERCULIACEAE	10: 109, t. 55. 1690
Niruri	<i>Phyllanthus virgatus</i> G. Forster	EUPHORBIACEAE	10: 53, t. 27. 1690
Nir-valli-pulll	<i>Hygroryza aristata</i> (Retz.) Nees ex Wight & Arn.	POACEAE	10: 23, t. 12. 1690
Parpadagam	<i>Hedyotis corymbosa</i> (L.) Lam.	RUBIACEAE	10: 69, t. 35. 1690
Pee-cajenneam	<i>Wedelia chinensis</i> (L.) Merr.	ASTERACEAE	10: 83, t. 42. 1690
Pee-coipa	<i>Allmania nodiflora</i> (L.) R. Br. ex Wight	AMARANTHACEAE	10: 133, t. 67. 1690

Pee-cupameni	<i>Acalypha racemosa</i> Wall. ex Baill.z	EUPHORBIACEAE	10: 163, t. 82. 1690
Pee-inota-inodien	<i>Physalis angulata</i> L.	SOLANACEAE	10: 141, t. 71.1690
Perim-tolassi	<i>Plectranthus mollis</i> (Aiton) Spreng.	LAMIACEAE	10: 167, t. 84. 1690
Puam-curundala	<i>Vernonia cinerea</i> (L.) Less.	ASTERACEAE	10: 127, t. 64. 1690
Pu-tumba	<i>Phyllocephalum indicum</i> (Less.) Kirkman	ASTERACEAE	10: 125, t. 63. 1690
Schada-veli-kelangu	<i>Asparagus racemosus</i> Willd.	LILIACEAE	10: 19-20, t. 10. 1690
Schanganam-pulli	<i>Hedyotis herbacea</i> L.	RUBIACEAE	10: 45, t. 23. 1690
Scheru-bula	<i>Aerva lanata</i> (L.) Juss. ex Schult.	AMARANTHACEAE	10: 57, t. 29.1690
Scheru-cadelari	<i>Cyathula prostrata</i> (L.) Bl.	AMARANTHACEAE	10: 157, t. 79.1690
Schetti-codiveli	<i>Plumbago indica</i> L.	PLUMBAGINACEAE	10: 17-18, t. 9. 1690
Sjasmin	<i>Hibiscus hirtus</i> L.	MALVACEAE	10: 1-2, t. 1. 1690
Soladi-tirtava	<i>Ocimum basilicum</i> L.	LAMIACEAE	10: 173, t. 87.1690
Tsjadean	<i>Anisomeles indica</i> (L.) Kuntze	LAMIACEAE	10: 175, t. 88.1690
Tsjeria-belutta- adeca-manjen	<i>Celosia argentea</i> L.	AMARANTHACEAE	10: 77, t. 39.1690
Tsjeria-manga-nari	<i>Lobelia alsinoides</i> Lam.	CAMPANULACEAE	10: 177, t. 89.1690
Tsjeru-cansjava	<i>Cannabis sativa</i> L.	CANNABINACEAE	10: 121, t. 61. 1690
Tsjeru-jonganam- pullu	<i>Mollugo stricta</i> L.	MOLLUGINACEAE	10: 51, t. 26. 1690
Tsjeru-kirganeli	<i>Phyllanthus gardnerianus</i> (Wight) Baill.	EUPHORBIACEAE	10: 31, t. 16. 1690
Tsjeru-parua	<i>Sida acuta</i> N. Burm.	MALVACEAE	10: 105, t. 53. 1690
Tsjeru-talu-dama	<i>Neanotis rheedei</i> (Wight & Am.) W. H. Lewis	RUBIACEAE	10: 49, t. 25. 1690
Tsjeru-tardavel	<i>Justicia procumbens</i> L.	ACANTHACEAE	10: 187, t. 94. 1690
Tsjeru-vallei	<i>Hydrolea zeylanica</i> (L.) Vahl	HYDROPHYLLACEAE	10: 55, t. 28. 1690
Tsjetti-pu	<i>Dendranthema indicum</i> (L.) Des Moulins	ASTERACEAE	10: 87, t. 44. 1690
Tumba	<i>Leucas aspera</i> (Willd.) Link	LAMIACEAE	10: 181, t. 91. 1690
Tumba-codiveli	<i>Plumbago zeylanica</i> L.	PLUMBAGINACEAE	10: 15, t. 8. 1690
Uren	<i>Urena lobata</i> L. subsp. sinuata (L.) Borssum Waalkes	MALVACEAE	10: 3-4, t. 2. 1690
Vallia-manga-nari	<i>Wollastonia biflora</i> (L.) DC.	ASTERACEAE	10: 79-80, t. 40. 1690
Valli-itti-canni	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	LORANTHACEAE	10: 5[not 7!], t. 4. 1690
Velluta-itti-canni	<i>Dendrophthoe elastica</i> (Desr.) Danser	LORANTHACEAE	10: 7[not 5!], t. 3.1690
Wadapu	<i>Gomphrena globosa</i> L.	AMARANTHACEAE	10: 73-74, t. 37.1690
Welia-cupameni	<i>Acalypha racemosa</i> Wall. ex Baill.	EUPHORBIACEAE	10: 165. t. 83. 1690
Wellia-codiveli	<i>Pupalia lappacea</i> (L.) Juss.	AMARANTHACEAE	10: 117, t. 59.1690

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

Family	Scientific Name	Malayalam Name	Volume / Fig./ Year
ACANTHACEAE	<i>Justicia procumbens</i> L.	Tsjeru-tardavel	10: 187, t. 94. 1690
AMARANTHACEAE	<i>Achyranthes aspera</i> L.	Cadelari	10: 155, t. 78. 1690
AMARANTHACEAE	<i>Aerva lanata</i> (L.) Juss. ex Schult.	Scheru-bula	10: 57, t. 29. 1690
AMARANTHACEAE	<i>Allmania nodiflora</i> (L.) R. Br. ex Wight	Pee-coipa	10: 133, t. 67. 1690
AMARANTHACEAE	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	Coluppa	10: 21-22, t. 11. 1690
AMARANTHACEAE	<i>Celosia argentea</i> L.	Belutta-adeca-manjen	10: 75, t. 38. 1690
AMARANTHACEAE	<i>Celosia argentea</i> L.	Tsjeria-belutta- adeca-manjen	10: 77, t. 39. 1690
AMARANTHACEAE	<i>Cyathula prostrata</i> (L.) Bl.	Scheru-cadelari	10: 157, t. 79. 1690
AMARANTHACEAE	<i>Gomphrena globosa</i> L.	Wadapu	10: 73-74, t. 37. 1690
AMARANTHACEAE	<i>Pupalia lappacea</i> (L.) Juss.	Wellia-codiveli	10: 117, t. 59. 1690
APIACEAE	<i>Centella asiatica</i> (L.) Urban	Codagen	10: 91, t. 46. 1690
ASCLEPIADACEAE	<i>Hemidesmus indicus</i> (L.) W. T. Aiton	Naru-nindi	10: 67-68, t. 34. 1690
ASTERACEAE	<i>Artemisia japonica</i> Thunb.	Katu-tsjetti-pu	10: 89, t. 45. 1690
ASTERACEAE	<i>Blumea eriantha</i> DC.	Manja-adeca-manjen	10: 33, t. 17. 1690
ASTERACEAE	<i>Blumea mollis</i> (D. Don) Merr.	Nari-patsja	10: 123, t. 62. 1690
ASTERACEAE	<i>Dendranthema indicum</i> (L.) Des Moulins	Tsjetti-pu	10: 87, t. 44. 1690
ASTERACEAE	<i>Eclipta prostrata</i> (L.) L.	Cajennaem	10: 81-82, t. 41. 1690
ASTERACEAE	<i>Elephantopus scaber</i> L.	Ana-schovadi	10: 13-14, t. 7. 1690
ASTERACEAE	<i>Emilia sonchifolia</i> (L.) DC.	Muel-schevi	10: 135, t. 68. 1690
ASTERACEAE	<i>Grangea maderaspatana</i> (L.) Poir.	Nelam-pata	10: 97, t. 49. 1690
ASTERACEAE	<i>Phyllocephalum indicum</i> (Less.) Kirkman	Pu-tumba	10: 125, t. 63. 1690
ASTERACEAE	<i>Sphaeranthus indicus</i> L.	Adaca-manjen	10: 85-96, t. 43. 1690

ASTERACEAE	<i>Vernonia cinerea</i> (L.) Less.	Puam-curundala	10: 127, t. 64. 1690
ASTERACEAE	<i>Wedelia chinensis</i> (L.) Merr.	Pee-cajenneam	10: 83, t. 42. 1690
ASTERACEAE	<i>Wollastonia biflora</i> (L.) DC.	Vallia-manga-nari	10: 79-80, t. 40. 1690
BORAGINACEAE	<i>Heliotropium keralense</i> Sivar. & Manilal	Bena-patsja	10: 95-96, t. 48. 1690
CAMPANULACEAE	<i>Lobelia alsinoides</i> Lam.	Tsjeria-manga-nari	10: 177, t. 89. 1690
CANNABINACEAE	<i>Cannabis sativa</i> L.	Kalengi-cansjava	10: 119, t. 60. 1690
CANNABINACEAE	<i>Cannabis sativa</i> L.	Tsjeru-cansjava	10: 121, t. 61. 1690
CARYOPHYLLACEAE	<i>Polycarpaea corymbosa</i> (L.) Lam.	Katu-mailosina	10: 131, t. 66. 1690
COMMELINACEAE	<i>Cyanotis axillaris</i> (L.) Sweet	Nir-pulli	10: 25, t. 13. 1690
COMMELINACEAE	<i>Murdannia semiteres</i> (Dalz.) Santapau	Nelam-pullu	10: 37, t. 19. 1690
DROSERACEAE	<i>Drosera indica</i> L.	Akara-puda	10: 39, t. 20. 1690
EUPHORBIACEAE	<i>Acalypha indica</i> L.	Cupameni	10: 161, t. 81. 1690
EUPHORBIACEAE	<i>Acalypha racemosa</i> Wall. ex Baill.	Welia-cupameni	10: 165, t. 83. 1690
EUPHORBIACEAE	<i>Acalypha racemosa</i> Wall. ex Baill. z	Pee-cupameni	10: 163, t. 82. 1690
EUPHORBIACEAE	<i>Baliospermum solanifolium</i> (J. Burm.) Suresh	Naga-danti	10: 151, t. 76. 1690
EUPHORBIACEAE	<i>Euphorbia atoto</i> G. Forster	Ben-pala	10: 115, t. 58. 1690
EUPHORBIACEAE	<i>Euphorbia hypericifolia</i> L.	Nir-cottam-pala	10: 101, t. 51. 1690
EUPHORBIACEAE	<i>Euphorbia thymifolia</i> L.	Caicotten-pala	10: 65, t. 33. 1690
EUPHORBIACEAE	<i>Phyllanthus gardnerianus</i> (Wight) Baill.	Tsjeru-kirganeli	10: 31, t. 16. 1690
EUPHORBIACEAE	<i>Phyllanthus kozhikodianus</i> Sivar. & Manilal	Kirganeli	10: 29, t. 15. 1690
EUPHORBIACEAE	<i>Phyllanthus virgatus</i> G. Forster	Nirpulla	10: 53, t. 27. 1690
EUPHORBIACEAE	<i>Phyllanthus virgatus</i> G. Forster	Niruri	10: 53, t. 27. 1690
GENTIANACEAE	<i>Canscora perfoliata</i> Lam.	Cansjan-cora	10: 103, t. 52. 1690
HYDROPHYLLACEAE	<i>Hydrolea zeylanica</i> (L.) Vahl	Tsjeru-vallel	10: 55, t. 28. 1690
LAMIACEAE	<i>Anisochilus camosus</i> (L.f.) Wall. ex Benth.	Katu-kurka	10: 179, t. 90. 1690
LAMIACEAE	<i>Anisomeles indica</i> (L.) Kuntze	Tsjadean	10: 175, t. 88. 1690

LAMIACEAE	<i>Geniosporum prostratum</i> (L.) Benth.	Katu-tumba	10: 183, t. 92. 1690
LAMIACEAE	<i>Leucas aspera</i> (Willd.) Link	Tumba	10: 181, t. 91. 1690
LAMIACEAE	<i>Ocimum basilicum</i> L.	Soladi-tirtava	10: 173, t. 87. 1690
LAMIACEAE	<i>Ocimum gratissimum</i> L.	Kattu-tirtava	10: 171, t. 86. 1690
LAMIACEAE	<i>Ocimum tenuiflorum</i> L.	Nala-tirtava	10: 169, t. 85. 1690
LAMIACEAE	<i>Plectranthus mollis</i> (Aiton) Spreng.	Perim-tolassi	10: 167, t. 84. 1690
LAMIACEAE	<i>Pogostemon heyneanus</i> Benth.	Cottam	10: 153, t. 77. 1690
LAMIACEAE	<i>Pogostemon paniculatus</i> (Willd.) Benth.	Manam-podam	10: 129, t. 65. 1690
LILIACEAE	<i>Asparagus racemosus</i> Willd.	Schada-veli-kelangu	10: 19-20, t. 10. 1690
LORANTHACEAE	<i>Dendrophthoe elastica</i> (Desr.) Danser	Velluta-itti-canni	10: 7[not 5!], t. 3. 1690
LORANTHACEAE	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	Valli-itti-canni	10: 5[not 7!], t. 4. 1690
LORANTHACEAE	<i>Helixanthera wallichiana</i> (Schult.) Danser	Kanneli-itti-canni	10: 9, t. 5. 1690
MALVACEAE	<i>Hibiscus hirtus</i> L.	Sjasmin	10: 1-2, t. 1. 1690
MALVACEAE	<i>Sida acuta</i> N. Burm.	Tsjeru-parua	10: 105, t. 53. 1690
MALVACEAE	<i>Sida alnifolia</i> L.	Kurundoti	10: 35, t. 18. 1690
MALVACEAE	<i>Sida cordata</i> (N. Burm.) Borssum Waalkes	Nela-vaga	10: 137, t. 69. 1690
MALVACEAE	<i>Sida cordifolia</i> L.	Katu-uren	10: 107, t. 54. 1690
MALVACEAE	<i>Urena lobata</i> L. subsp. sinuata (L.) Borssum Waalkes	Uren	10: 3-4, t. 2. 1690
MELIACEAE	<i>Naregamia alata</i> Wight & Arn.	Nela-naregam	10: 43, t. 22. 1690
MOLLUGINACEAE	<i>Glinus oppositifolius</i> (L.) A. DC.	Kaipa-tsjira	10: 47, t. 24. 1690
MOLLUGINACEAE	<i>Mollugo stricta</i> L.	Tsjeru-jonganam-pullu	10: 51, t. 26. 1690
NYCTAGINACEAE	<i>Mirabilis jalapa</i> L.	Andi-malleri	10: 149-150, t. 75. 1690
PEDALIACEAE	<i>Pedaliium murex</i> L.	Caca-mullu	10: 143-144, t. 72. 1690
PLUMBAGINACEAE	<i>Plumbago indica</i> L.	Schetti-codiveli	10: 17-18, t. 9. 1690
PLUMBAGINACEAE	<i>Plumbago zeylanica</i> L.	Tumba-codiveli	10: 15, t. 8. 1690
POACEAE	<i>Hygroryza aristata</i> (Retz.) Nees ex Wight & Arn.	Nir-valli-pulll	10: 23, t. 12. 1690

POLYGONACEAE	<i>Polygonum barbatum</i> L.	Belutta-modela-muccu	10: 159, t. 80. 1690
PORTULACACEAE	<i>Portulaca oleracea</i> L.	Kara-tsjira	10: 71, t. 36. 1690
PORTULACACEAE	<i>Portulaca quadrifolia</i> L.	Nelatsjera	10: 61, t. 31. 1690
RUBIACEAE	<i>Geophila repens</i> (L.) Johnston	Karinta-kali	10: 41, t. 21. 1690
RUBIACEAE	<i>Hedyotis auricularia</i> L.	Muriguti	10: 63, t. 32. 1690
RUBIACEAE	<i>Hedyotis corymbosa</i> (L.) Lam.	Parpadagam	10: 69, t. 35. 1690
RUBIACEAE	<i>Hedyotis herbacea</i> L.	Schanganam-pulli	10: 45, t. 23. 1690
RUBIACEAE	<i>Ixora malabarica</i> (Dennst.) Mabb.	Kilcola-tsjetti	10: 113, t. 57. 1690
RUBIACEAE	<i>Neanotis rheedei</i> (Wight & Am.) W. H. Lewis	Tsjeru-talu-dama	10: 49, t. 25. 1690
SCROPHULARIACEAE	<i>Adenosma indiana</i> (Lour.) Merr.	Carim-tumba	10: 185, t. 93. 1690
SCROPHULARIACEAE	<i>Bacopa monnieri</i> (L.) Pennell	Brami	10: 27, t. 14; 1690
SCROPHULARIACEAE	<i>Limnophila aromatica</i> (Lam.) Merr.	Manga-nari	10: 11-12, t. 6. 1690
SCROPHULARIACEAE	<i>Lindernia caespitosa</i> (Bl.) Panigrahi	Nanschera-canschabu	10: 99, t. 50. 1690
SOLANACEAE	<i>Physalis angulata</i> L.	Inota-inodien	10: 139, t. 70. 1690
SOLANACEAE	<i>Physalis angulata</i> L.	Pee-inota-inodien	10: 141, t. 71. 1690
SOLANACEAE	<i>Solanum americanum</i> Mill	Nelen-tsjunda	10: 145, t. 73. 1690
SOLANACEAE	<i>Solanum melongena</i> L.	Nila-barudena	10: 147, t. 74. 1690
STERCULIACEAE	<i>Melochia corchorifolia</i> L.	Niruren	10: 109, t. 55. 1690
STERCULIACEAE	<i>Pentapetes phoenicea</i> L.	Naga-pou	10: 111, t. 56. 1690
URTICACEAE	<i>Pouzolzia zeylanica</i> (L.) Benn.	Bula	10: 59, t. 30. 1690
VERBENACEAE	<i>Phyla nodiflora</i> (L.) Greene	Ana-coluppa	10: 93, t. 47. 1690

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

Konkani Name	Malayalam Name	Portuguese Name	Dutch/Belgian Name	Volume/ Fig./Year
*	Akara-puda	*	*	10: 39, t. 20. 1690
*	Belutta-adeqa-manjen	*	*	10: 75, t. 38. 1690
*	Belutta-modela-muccu	*	*	10: 159, t. 80. 1690
*	Ben-pala	*	*	10: 115, t. 58. 1690
*	Brami	*	*	10: 27, t.14; 1690
*	Cansjan-cora	*	*	10: 103, t. 52. 1690
*	Carim-tumba	*	*	10: 185, t. 93. 1690
*	Kaipa-tsjira	*	*	10: 47, t. 24.1690
*	Kanneli-itti-canni	*	*	10: 9, t. 5. 1690
*	Kara-tsjira	*	*	10: 71, t. 36. 1690
*	Karinta-kali	*	*	10: 41, t. 21.1690
*	Katu-kurka	*	*	10: 179, t. 90.1690
*	Katu-mailosina	*	*	10: 131, t. 66. 1690
*	Katu-tsjetti-pu	*	*	10: 89, t. 45. 1690
*	Katu-tumba	*	*	10: 183, t. 92. 1690
*	Katu-uren	*	*	10: 107, t. 54. 1690
*	Kilcola-tsjetti	*	*	10: 113, t. 57. 1690
*	Kurundoti	*	*	10: 35, t. 18. 1690
*	Manam-podam	*	*	10: 129, t. 65. 1690
*	Manja-adeqa-manjen	*	*	10: 33, t.17. 1690
*	Muriguti	*	*	10: 63, t. 32. 1690
*	Naga-danti	*	*	10: 151, t. 76. 1690
*	Naga-pou	*	*	10: 111, t. 56. 1690
*	Nelam-pata	*	*	10: 97, t. 49.1690
*	Nelam-pullu	*	*	10: 37, t.19. 1690
*	Nela-naregam	*	*	10: 43, t. 22. 1690
*	Nelatsjera	*	*	10: 61, t. 31. 1690

*	Nela-vaga	*	*	10: 137, t. 69.1690
*	Nelen-tsjunda	*	*	10: 145, t. 73. 1690
*	Nir-cottam-pala	*	*	10: 101, t. 51. 1690
*	Nirpulla	*	*	10: 53, t. 27. 1690
*	Nir-pulli	*	*	10: 25, t. 13. 1690
*	Niruren	*	*	10: 109, t. 55. 1690
*	Niruri	*	*	10: 53, t. 27. 1690
*	Nir-valli-pulll	*	*	10: 23, t. 12. 1690
*	Parpadagam	*	*	10: 69, t. 35. 1690
*	Pee-coipa	*	*	10: 133, t. 67. 1690
*	Pee-inota-inodien	*	*	10: 141, t. 71.1690
*	Puam-curundala	*	*	10: 127, t. 64. 1690
*	Pu-tumba	*	*	10: 125, t. 63. 1690
*	Schanganam-pulli	*	*	10: 45, t. 23. 1690
*	Sjasmin	*	*	10: 1-2, t. 1. 1690
*	Tsjadean	*	*	10: 175, t. 88.1690
*	Tsjeria-belutta-adeca- manjen	*	*	10: 77, t. 39.1690
*	Tsjeria-manga-nari	*	*	10: 177, t. 89.1690
*	Tsjeru-jonganam-pullu	*	*	10: 51, t. 26. 1690
*	Tsjeru-kirganeli	*	*	10: 31, t. 16. 1690
*	Tsjeru-parua	*	*	10: 105, t. 53. 1690
*	Tsjeru-talu-dama	*	*	10: 49, t. 25. 1690
*	Tsjeru-tardavel	*	*	10: 187, t. 94. 1690
*	Tsjeru-vallel	*	*	10: 55, t. 28. 1690
*	Tsjetti-pu	Alosna de botao	*	10: 87, t. 44. 1690
*	Vallia-manga-nari	*	*	10: 79-80, t. 40. 1690
*	Valli-itti-canni	*	*	10: 5[not 7!], t. 4. 1690
*	Velluta-itti-canni	*	*	10: 7[not 5!], t. 3.1690
*	Wadapu	*	*	10: 73-74, t. 37.1690
*	Wellia-codiveli	*	*	10: 117, t. 59.1690
Adaly	Ana-coluppa	*	*	10: 93, t. 47. 1690
Ageru	Bena-patsja	*	*	10: 95-96, t. 48. 1690
Ambuli	Manga-nari	*	*	10: 11-12, t. 6.1690
Astipada	Ana-schovadi	*	*	10: 13-14, t. 7.1690

Bangi	Kalengi-cansjava	*	*	10: 119, t. 60. 1690
Bringarasi	Pee-cajenneam	*	*	10: 83, t. 42. 1690
Bui-Tolasi	Soladi-tirtava	*	*	10: 173, t. 87.1690
Bujan-Anvali	Kirganeli	*	*	10: 29, t. 15. 1690
Caca-Taly	Caca-mullu	*	*	10: 143-144, t. 72.1690
Cante-Mogaro	Cadelari	*	*	10: 155, t. 78. 1690
Coipa	Coluppa	*	*	10: 21-22, t. 11.1690
Dacalo Tandalo	Bula	*	*	10: 59, t. 30. 1690
Dacolo-Cante-Mogaro	Scheru-cadelari	*	*	10: 157, t. 79.1690
Davo Citroco	Tumba-codiveli	*	*	10: 15, t. 8. 1690
Dodini	Caicotten-pala	*	*	10: 65, t. 33, 1690
Ecapani	Codagen	*	*	10: 91, t. 46. 1690
Eudraxa	Andi-malleri	*	*	10: 149-150, t. 75.1690
Gandarli	Perim-tolassi	*	*	10: 167, t. 84. 1690
Maco	Cajennaem	*	*	10: 81-82, t. 41.1690
Maserasesade	Cupameni	*	*	10: 161, t. 81. 1690
Maserasesade	Pee-cupameni	*	*	10: 163, t. 82. 1690
Maserasesade	Welia-cupameni	*	*	10: 165. t. 83. 1690
Mundi	Adaca-manjen	*	*	10: 85-96, t. 43. 1690
Padso	Cottam	*	*	10: 153, t. 77. 1690
Rana-tolasi	Kattu-tirtava	*	*	10: 171, t. 86. 1690
Sasara-Mulli	Schada-veli-kelangu	*	*	10: 19-20, t. 10. 1690
Schanga-Cuspi	Nanschera-canschabu	*	*	10: 99, t. 50. 1690
Tambido Citroco	Schetti-codiveli	*	*	10: 17-18, t. 9. 1690
Tandalo	Scheru-bula	*	*	10: 57, t. 29.1690
Thumba	Tumba	*	*	10: 181, t. 91. 1690
Tolasi	Nala-tirtava	*	*	10: 169, t. 85. 1690
Tsjada Bangi	Tsjeru-cansjava	*	*	10: 121, t. 61. 1690
Tupu Kadu	Uren	*	*	10: 3-4, t. 2. 1690
Udiram-Panum	Muel-schevi	*	*	10: 135, t. 68. 1690
Upara-Sali	Naru-nindi	*	*	10: 67-68, t. 34. 1690
Vaenna	Nila-barudena	*	*	10: 147, t. 74.1690
Vasini	Nari-patsja	*	*	10: 123, t. 62. 1690
Zera-Puti	Inota-inodien	*	*	10: 139, t. 70. 1690



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 - 10



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 Rhee de 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



9 788186 397572



UNIVERSITY OF KERALA
THIRUVANANTHAPURAM