
Notes on Some Species of *Acalypha*

Author(s): D. Prain and J. Hutchinson

Source: *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)*, Vol. 1913, No. 1 (1913), pp. vi+1-28+iv

Published by: Springer on behalf of Royal Botanic Gardens, Kew

Stable URL: <http://www.jstor.org/stable/4118404>

Accessed: 27-06-2016 09:19 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Springer, Royal Botanic Gardens, Kew are collaborating with JSTOR to digitize, preserve and extend access to *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)*

ROYAL BOTANIC GARDENS, KEW.

BULLETIN

OF

MISCELLANEOUS INFORMATION.

No. 1.]

[1913.]

I.—NOTES ON SOME SPECIES OF ACALYPHA.

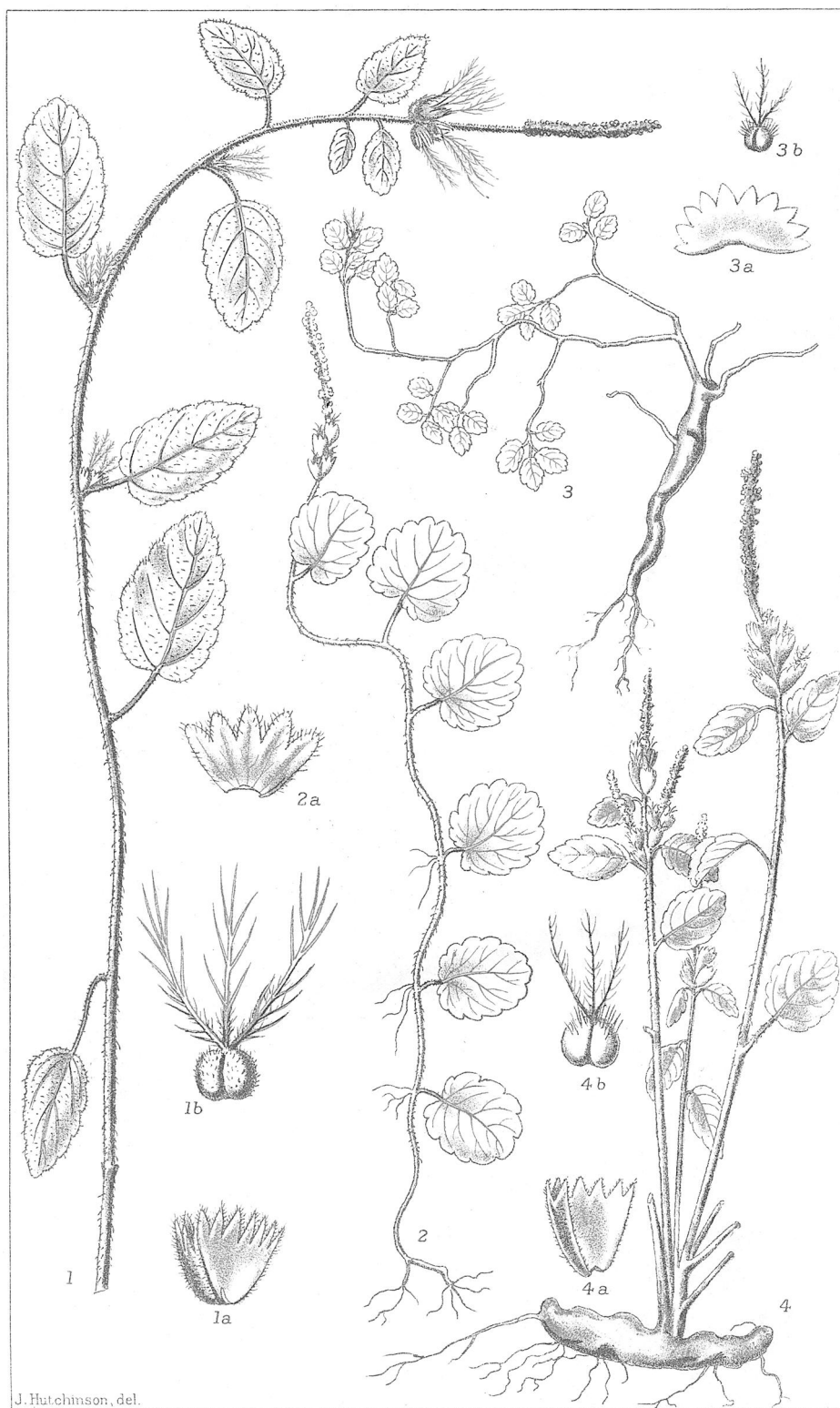
D. PRAIN AND J. HUTCHINSON.

The earliest effort to enumerate the South African species of this genus we owe to Thunberg, in whose *Prodr. Pl. Cap.*, part 2, p. 117 (1800), we find diagnoses of three species: *A. glabrata*, *A. decumbens*, and *A. cordata*. In the edition of Thunberg's *Flora Capensis*, published by Schultes (1823), we find at p. 545 descriptions as well as diagnoses of the same three species, with diagnoses and descriptions of two others, *A. acuta*, Thunb., and *A. obtusa*, Thunb., on p. 546.

When, however, we turn to Thunberg's herbarium, which, thanks to the kindness of Professor Juel, has been entrusted to us for study, we find that of the two species of *Tragia* diagnosed in *Prodr. Pl. Cap.*, part 1, p. 14 (1794), and described in the *Flora Capensis*, ed. Schultes, p. 37 (1823): one, *T. villosa*, is an *Acalypha*. We find, moreover, that in Thunberg's herbarium, the plant which he collected between Sunday River and Fish River, and which he has written up as *A. glabrata* with his own hand, is not the plant to which the diagnosis and description published by Schultes apply. It is a plant with opposite leaves, and is in reality the plant described as "*A. acuta*." On the other hand, this name *A. acuta* is that which Thunberg has himself written on the sheet of the woody species with alternate leaves, which has been described as *A. glabrata*.

The opposite-leaved species described as *A. acuta*, happens to be an *Adenocline* and does not further concern us; the other species, *A. obtusa*, described on p. 546, is a *Leidesia*, and so may also be put aside. But the two remaining species described on p. 545 as

(27821--6A.) Wt. 189—808. 1125. 1/13. D & S.



West Indian *Acalyphas*

A. decumbens, Thunb., and *A. cordata*, Thunb., respectively, prove, from Thunberg's original specimen, to be merely forms of one species: the specimens in the same collection further demonstrate that *Tragia villosa*, Thunb., is merely a variety of the same species. Jacquin, in 1760, had already published his *Acalypha villosa*, so that the publication of *Tragia villosa* in 1794 does not necessitate the abandonment of the name *Acalypha decumbens*, published in 1800. But before dealing with it himself Thunberg gave a specimen of this plant to Linnaeus as his n. 326 and without a name, some time after the appearance of the second *Mantissa* in 1771. When placing this specimen in his collection Linnaeus wrote it up as *Urtica africana*, "T. 326." The description did not, however, appear until 1781 when it was published by the younger Linnaeus, who, when publishing, altered his father's manuscript name "*U. africana*" to *U. capensis*, Linn. f. Suppl. Pl. 417. The name *A. decumbens*, which dates from 1800, must therefore give place to *A. capensis*.

Briefly summarised, Thunberg has made known two South African species of *Acalypha*: (1) *A. glabrata*, as conventionally understood, though this name was really applied by Thunberg to a member of another genus, and (2) *A. capensis*, which Thunberg broke up into three species, and referred to two different genera.

No further addition was made to our knowledge of this genus in Africa until the appearance in 1843 of Drège's *Zwei pflanzengeographische Documente*. At p. 161 of this work the following twenty-three references to *Acalypha* are given:—(1) *A. betulina*, Retz a; (2) *A. betulina*, Retz b; (3) *A. betulina*, Retz c; (4) *A. betulina*, Retz?; (5) *A. glabrata*, Thunb.; (6) *A. languida*, E. Mey. a; (7) *A. languida*, E. Mey. b; (8) *A. languida*, E. Mey. c; (9) *A. brachiata*, a, E. Mey. a; (10) *A. brachiata*, a, E. Mey. b; (11) *A. brachiata*, β, E. Mey.; (12) *A. cordata*, Thunb.; (13) *A. cordata*, Thunb.?; (14) *A. discolor*, E. Mey.; (15) *A. peduncularis*, E. Mey. a; (16) *A. peduncularis*, E. Mey. aa; (17) *A. peduncularis*, E. Mey. b; (18) *A. peduncularis*, E. Mey.?; (19) *A. velutina*, E. Mey.; (20) *Acalypha*, 4636; (21) *Acalypha*, 5380; (22) *Acalypha*, 8240; (23) ?*Acalypha*, 4610.

Of these twenty-three references two are duplicates, because No. 13, *A. cordata*, Thunb.?, and No. 18, *A. peduncularis*, E. Mey.?, indicate the same species, as also do No. 3, *A. betulina*, Retz, c, and No. 23, *Acalypha*, 4610. The plant which is at once the subject of references 13 and 18, is neither *A. cordata* nor *A. peduncularis*; it is, however, the same as the subjects of the references 9, 10 and 11, *A. brachiata*, E. Mey., a distinct species different from either of those enumerated by Thunberg. To the same species belongs No. 12, "*A. cordata*," which, again, is not the species so named by Thunberg.

No. 5 of the list, "*A. glabrata*," is really *A. glabrata*, Thunb., and to the same species belongs No. 4, "*A. betulina*?", which is not *A. betulina*, Retz (*A. fruticosa*, Forst.), as also does *Acalypha*, 4636 (No. 20). The three gatherings named *A. betulina*, Retz (Nos. 1, 2 and 3), are shown by the specimens not to be that species, but to be forms or varieties of *A. glabrata*, usually with leaves broader than in the type; two of them, b and c, have glabrous

leaves, the remaining one, a, has velvety leaves, and is identical with No. 19, *A. velutina*, *E. Mey.*, which is therefore also referable to *A. glabrata*; the one marked b, however, includes some specimens which are not distinguishable from typical *A. glabrata*, Thunb.

To the second Thunbergian species belong 14, *A. discolor*, *E. Mey.*, and 22, *Acalypha*, 8240, both of which are *A. capensis*.

Of the remainder, Nos. 6, 7 and 8 represent a distinct species, *A. languida*; Nos. 15, 16 and 17, another distinct species, *A. peduncularis*; while No. 21, *Acalypha*, 5380, represents yet another species for which, in Hb. Lübeck, Meyer proposed the name "*A. longifolia*."

Briefly summarised, we find then that Drège had repeated both of Thunberg's species:—

1. *A. capensis*, under references 14, 22, and
2. *A. glabrata*, *Thunb.*, under references 2 (in part), 4, 5, 20, 23, with the addition, as species, of two varieties of *A. glabrata*, viz.:—
betulina, *E. Mey.*, *non Retz*, under references 2 (in part), 3, and
velutina, *E. Mey.*, under references 1, 19.

But in addition to these two species Drège has added four more:—

3. *A. languida*, *E. Mey.*, under references 6, 7, 8.
4. *A. brachiata*, *E. Mey.*, under references 9, 10, 11, 12, 13.
5. *A. peduncularis*, *E. Mey.*, under references 15, 16, 17.
6. *A. longifolia*, *E. Mey.*, under reference 21.

Unfortunately, these four species were not properly published in 1843, and the last of the list, *A. longifolia*, was not even named in Drège's *Zwei pflanzengeographische Documente*. Owing to this circumstance, although all the four species recognised by Meyer are valid, only one of his names has been maintained.

In 1845, Krauss published in *Flora*, vol. xxviii., on pp. 82–84, an account of the species of *Acalypha* which he had collected in South Africa. In dealing with his material he appears to have had the assistance of Buchinger, who named some of his specimens, and of Meisner and Hochstetter, who described some of the species.

It is somewhat singular that among the specimens collected by Krauss there should be no example of *A. glabrata*, *Thunb.* His n. 1826, however, which was dealt with by Hochstetter, who identified it with *A. discolor*, *E. Mey.*, and provided a description of the species, is the original *A. decumbens*, *Thunb.*, a fact which neither Hochstetter nor Krauss appears to have detected. His n. 1825 was named by Buchinger *A. Kraussiana*. This name was taken up by Meisner, who provided a description for the plant. In so doing, Meisner appears to have overlooked the fact that *A. Kraussiana* is identical with *Tragia villosa*, *Thunb.*, and had no means of knowing that it is identical with *Urtica capensis*, *Linn. f.*

Krauss collected, as his Nos. 319 and 367, two plants, one near Durban, the other near Maritzburg, which, in spite of their identity as regards external appearance, he referred to different species. One of the two, n. 319, was taken to be *A. brachiata*, *E. Mey.*; the other, n. 367, it was supposed might perhaps be *A. languida* *E. Mey.* The two are conspecific; neither is *A. brachiata*, *E. Mey.*,

which as it happens Krauss does not appear to have collected at all ; both, however, are *A. languida*, E. Mey. Owing to his doubt as to this fact, Hochstetter thought it desirable to use for n. 367 a new name, *A. petiolaris* ; as this name is accompanied by a description, whereas the older name, *A. languida*, had none, *A. petiolaris*, Hochst., is the name which is now employed to distinguish this species.

Under his field number 377, Krauss appears to have collected three nearly related but fairly easily distinguishable forms. One of these Meisner identified—we believe rightly so, though so great an authority as Müller was of a contrary opinion—with *A. peduncularis*, E. Mey. Of the other two, Buchinger regarded one as a distinct species, *A. crassa* ; Meisner described the other as a third distinct species, *A. punctata*. Krauss, however, has remarked in a footnote upon the difficulty which he experienced in separating *A. crassa*, Buching., from *A. peduncularis*. With the view of Krauss we entirely agree, and we concur with Müller in his treatment of the plant as a variety, var. *crassa*, of *A. peduncularis*. But as regards *A. punctata*, Meisn., which is only a form of the species already recognised by Meyer under the name *A. longifolia*, we concur with Krauss in treating it as distinct, and feel unable to follow Müller in dealing with it as only a variety of *A. peduncularis*.

The last species dealt with by Krauss is one represented by specimens which he had collected without any field-number ; to this Buchinger gave the name *A. glandulifolia* and in spite of the fact that Müller treated this plant as yet another variety of *A. peduncularis* there is probably no more valid species in the genus.

Briefly summarised the account given by Krauss deals with only one of Thunberg's species of *Acalypha*, *A. capensis*, and omits *A. glabrata*. The account equally omits one of the species, *A. brachiata*, enumerated by Drège ; of the other three it retains only the name given by Meyer to *A. peduncularis* ; the name of *A. languida*, E. Mey., is altered to *A. petiolaris*, Hochst., that of *A. longifolia*, E. Mey., is replaced by *A. punctata*, Meisn. The omission of *A. brachiata*, E. Mey., is compensated for by the communication of the very distinct *A. glandulifolia*, Buching.

Up to this point (1845) the South African species of *Acalypha* were known to be *A. glabrata*, Thunb. ; *A. capensis* ; *A. petiolaris*, Hochst. (= *A. languida*, E. Mey.) ; *A. brachiata*, E. Mey. ; *A. peduncularis*, E. Mey. ; *A. punctata*, Meisn. (= *A. longifolia*, E. Mey.) and finally *A. glandulifolia*, Buching.

In *Linnæa*, vol. xx. (1847), p. 213 there is a list of specimens of *Acalypha* collected by Zeyher in South Africa. The first of these, Zeyher 3838, is named *A. peduncularis*, E. Mey., and the specimens show that this identification is correct. The second, Zeyher 3839, which is unnamed, became at a later date the type of a new species described by Baillon. The third, Zeyher 1518, also unnamed, became subsequently, in part, the basis of a new species described by Sonder. The next number in the list, Zeyher 1517, is applied to the specimens of three gatherings and is treated as including two species. One of these, represented by Zeyher 1517a, is identified with *A. glabrata*, Thunb., the other, represented by Zeyher 1517b and 1517c is provisionally identified with *A. betulina*,

Retz. This limitation is substantially in accordance with the limitation of the same two *Acalyphas* by Meyer in 1843; the plant identified with *A. glabrata*, Thunb. is in reality that species while the one identified as *A. betulina* is not the plant so named by Retz but is a variety of *A. glabrata*. The last *Acalypha* in this list, Zeyher 3840, identified correctly as *A. discolor*, E. Mey., is, therefore, as we have seen, *A. capensis* (= *A. decumbens*, Thunb.).

This Zeyherian list, briefly summarised, therefore adds to the genus two additional South African species neither of which is provided with a name.

The next contribution to our knowledge of the South African species of *Acalypha* was published by Sonder in *Linnaea*, vol. xxiii. (1850), pp. 115-117. Through the kindness of Professor Lindman and Dr. Dahlstedt we have been enabled, in considering this enumeration, to examine the actual specimens with which Sonder dealt. We may discuss the six species he accounts for seriatim.

The first species recorded by Sonder is "*A. peduncularis*, E. Mey. ! Meisn. ! syn. *A. crassa*, Buching!" for which he cites no specimen but to which he adds a variety "*β. glabrata*, Sond." based on a specimen collected by Zeyher on the Macalisberg Range. The only specimen in his herbarium on which Sonder has written the name "*A. peduncularis*, E. Mey." is one of Zeyher 3838, from Howison's Poort, Albany Div., which is exactly like the plant collected in the Assegai Bush, Albany Div. by Drège, and obtained by the same collector on two occasions on the Zuureberg Range, that forms the basis of *A. peduncularis*, E. Mey. It so happens that Sonder's statement that this plant is really conspecific with the Natal one described by Meisner under the same name, is accurate. But an examination of his specimens shows that the accuracy of Sonder in this regard is purely accidental, for he did not have at his command any example of any portion of Krauss, 377. The specimen which led Sonder to this conclusion is one collected by Gueinzus at Port Natal which was written up in Sonder's collection as "*Acalypha peduncularis*, E. Mey. ?—*crassa*, Buch.!" Above this legend has been added subsequently the name "*A. punctata*, Meisn.?" a justifiable afterthought because this plant of Gueinzus does not agree either with the part of Krauss 377 which Meisner described as *A. peduncularis*, or with the part of Krauss 377 which Buchinger named *A. crassa*. It is, however, identical with the remaining portion of Krauss 377, which is the type of *A. punctata*, Meisn.

Nor has Sonder been really more fortunate in his treatment of his own variety '*glabrata*.' It is true that the description given by Sonder applies only to one plant, and that this plant is a specimen of Zeyher 1521, from the Macalisberg Range, on which Sonder has written the name *A. peduncularis*, *β. glabrata*. But in his own herbarium Sonder wrote up a specimen of Zeyher 3839 also as *A. peduncularis*, *β. glabrata*; to this second specimen, which was collected on Van Staadensberg, Uitenhage Div., Sonder's description of var. *glabrata* is quite inapplicable.

Sonder's second species is one which he describes as new and is based on Gueinzus 171, from Natal and on Zeyher 1518, from the Macalisberg Range. This species, *A. angustata*, Sond., is perfectly

valid and the only modification that is required in his view consists of the inclusion of the proposed variety within the type.

Sonder's third species is *A. glandulifolia*, Buching., which we have already seen to be a valid species. Here again Sonder has suggested the recognition of two distinct forms; the advent of additional material indicates that this differentiation is not required.

The fourth species enumerated by Sonder is the one first issued by Drège in 1843 as *A. languida*, E. Mey., but first described by Hochstetter in 1845 as *A. petiolaris*. In giving preference to the synonym which, though the older, is merely a naked name, Sonder acted unfortunately.

The fifth species is that which Sonder has termed *A. betulina*, Retz. The species is now for the first time dealt with intelligibly and the true relationship of the two allied forms, whose existence had already been indicated by E. Meyer and by Ecklon and Zeyher, is more clearly defined. But the name employed is unfortunate; the species is not *A. betulina*, Retz, but is *A. glabrata*, Thunb. Fuller knowledge, moreover, indicates that there is no real necessity for the recognition of var. *latifolia* as apart from the type.

The sixth species, in spite of the doubt to which Sonder testifies, is really an *Acalypha* and is, as Sonder indicates, a distinct and valid species. But the use, in designating this new species, of the epithet which Sonder was aware Hochstetter had already applied to another *Acalypha* is singularly unfortunate. Our present conventions, which render incumbent the use of the name "*A. petiolaris*" in connection with the plant described as such by Hochstetter in 1845, prevent us from employing it to designate the plant so described by Sonder in 1850.

In Linnaea, vol. xxv. (1852), at p. 587, Scheele based on Drège, 8242, a species of *Acalypha* from South Africa, *A. lamifolia*, Scheele. The plant on which this species was based is, however, identical with that to which Buchinger had already given the name *A. Kraussiana* and is hardly distinguishable from *Urtica capensis*, Linn. f. = *Tragia villosa*, Thunb., of which *A. decumbens*, Thunb. is at best only a variety.

Ten years later Baillon published in *Adansonia*, vol. iii. (1862), pp. 156-158 a resume of the South African species of *Acalypha*, based partly on specimens, partly on the literature which has been passed under review.

1. *Acalypha peduncularis*, Baill. is identical with *A. peduncularis*, E. Mey., the specimens of Masson and of Zeyher 3838 which are cited agreeing precisely with those of Drège on which the species was based. Baillon, however, had no opportunity of seeing any specimen of Krauss 377 and his erroneous reduction of *A. crassa*, Buching. to *A. peduncularis* is adopted from Sonder.

2. *Acalypha Zeyheri*, Baill., based on Zeyher 3839 and on a specimen of doubtful provenance bearing the number 301, supplies the earliest description of a valid species.

3. *Acalypha caperonioides*, Baill., based on Zeyher 1521 is again a valid species. In this instance Baillon has failed to note that the same plant is the type of *A. peduncularis*, β *glabrata*, Sond.

4. *Acalypha angustata*, Baill. is Sonder's species of this name.

5. *Acalypha glandulifolia*, Baill. is Buchinger's species of this name.

6. *Acalypha languida*, Baill. is E. Meyer's species of this name treated as it was treated by Sonder.

7. *Acalypha betulina*, Baill., to which Baillon only doubtfully refers Zeyher 1517a, the only specimen seen by him, is on this account *A. glabrata*, Thunb. proper.

8. *Acalypha discolor*, Baill. is *A. discolor*, E. Mey. treated as it was by Krauss and Hochstetter in 1845. To this Baillon has added a variety β major, *Baill.* which is, though Baillon was unaware of the fact, the same as *A. cordata*, Thunb.

9. *Acalypha lamifolia*, Baill. is *A. lamifolia*, Scheele, the identity of which with *A. Kraussiana*, Buching. Baillon has failed to notice. It is also almost identical with *Urtica capensis*, Linn. f. = *Tragia villosa*, Thunb., of which *A. decumbens*, Thunb., is only a variety.

10. *Acalypha brachiata*, Baill. is E. Meyer's species of this name.

11. *Acalypha Eckloni*, Baill., based on a gathering issued by E. Meyer as *A. cordata*?, is identical with the preceding species. As the only description so far published was that here supplied by Baillon his name *A. Eckloni* supplants the earlier name *A. brachiata*.

Briefly summarised the resumé of Baillon of 1863 makes us aware of the existence of nine species, viz:—*A. glabrata* and *A. capensis* already known to Thunberg in 1800; *A. petiolaris*, *A. Eckloni* and *A. peduncularis* already known to E. Meyer (as *A. languida*, *A. brachiata* and *A. peduncularis* respectively) in 1843; *A. glandulifolia* already known to Krauss in 1845; *A. angustata* already known to Sonder in 1850; finally *A. Zeyheri* and *A. caperonioides* the existence of which had been indicated by Ecklon and Zeyher in 1847, now for the first time properly named and described. Baillon's resumé fails to account for *A. punctata*, Meisn. published by Krauss, or to observe that *A. lamifolia*, Scheele is hardly more than a repetition of *A. Kraussiana*, Buching. also published by Krauss.

This resumé was followed in 1865 and 1866 by the preliminary and the finished monographs of the genus by Müller published in *Linnaea*, vol. xxxiv. (1865), pp. 1–54 and in *De Candolle's Prodr.*, vol. xv., pars ii. (1866), pp. 799–889 respectively. These two accounts we may conveniently consider together.

In the earlier account, Müller gives ten species as coming from South Africa. These are:—10, *Sonderiana* (*Linnaea*, vol. xxxiv., p. 9); 87, *peduncularis* (p. 28); 88, *Zeyheri* (p. 29); 89, *petiolaris* (p. 29); 90, *languida* (p. 29); 91, *tenuis* (p. 30); 92, *Eckloni* (p. 30); 98, *glabrata* (p. 36); 118, *discolor* (p. 38); 119, *Kraussiana* (p. 39).

In the fuller account of the following year, Müller enumerates eleven South African forms, adding two new species to the 1865 list and at the same time reducing two of those in the earlier list, *discolor* and *Kraussiana*, to the position of varieties of one species, *decumbens*. The 1866 list is as follows:—10, *Sonderiana* (DC. *Prodr.* xv., ii., p. 804); 59, *grandidentata* (p. 823); 116, *peduncularis* (p. 846); 117, *Zeyheri* (p. 847); 118, *petiolaris* (p. 847); 119, *languida* (p. 848); 120, *tenuis* (p. 848); 121, *patens* (p. 848); 122,

Eckloni (p. 849); 139, *glabrata* (p. 857), and 156, *decumbens* (p. 864). In addition to the foregoing, five of the species described by Müller in 1866, which were not at that time known to occur south of the Tropic, have since that date been gathered in South Africa. These are:—85, *ornata* (p. 833); 115, *senensis* (p. 845), from which 114, *zambesica*, is not distinguishable; 165, *indica* (p. 868); 175, *ciliata* (p. 873), and 183, *segetalis* (p. 877).

No remark is called for in the case of any of these five species, nor is any remark called for in the case of 10, *Sonderiana*, Müll. Arg. (1865), which is *A. petiolaris*, Sond. (1850), not of Hochst. (1845), and is a valid species.

Little remark is required in the case of 139, *glabrata*, Thunb. (1800), which is the plant described in Schultes' edition of Thunberg's *Flora Capensis* (1823), and on this account is a valid species notwithstanding the fact that it is not based on the specimen cited in that work, and is not the plant named *A. glabrata* in Thunberg's own herbarium. In his acceptance of the variety *latifolia*, Müller has merely followed Sonder. Another valid species is 156, *decumbens*, Thunb. (1800), now *A. capensis*, which is identical with *A. discolor*, E. Mey. ex Meisn. (1845), and includes *Urtica capensis*, Linn. f. (1781), *Tragia villosa*, Thunb. (1794), *A. cordata*, Thunb. (1800), *A. Kraussiana*, Buching. (1845), *A. lamiiifolia*, Scheele (1852), and *A. discolor*, β *major*, Baill. (1862). But 59, *grandidentata*, Müll. Arg. (1866), is identical with *Tragia villosa*, Thunb., and therefore is not a valid species. Owing to Müller having failed to observe that *Urtica capensis*, Linn. f. (1781) and *Tragia villosa*, Thunb. (1794) are the same plant, he has omitted to employ for the species as a whole the name "*Acalypha capensis*." Another valid species is 122, *Eckloni*, Baill. (1863), which includes *A. brachiata*, E. Mey. In 1862 Baillon had himself actually accepted this name which Meyer had proposed in 1843. But in so doing, Baillon, like Meyer himself, failed to prepare a description; as a consequence, the conventions of nomenclature insist that the name *A. Eckloni*, though the accident of a misconception, shall be used for Meyer's plant.

Another quite valid species is 118, *petiolaris*, Hochst. (1845), the name used for which similarly supplants the name *A. languida* proposed by Meyer two years earlier. In this instance, however, Müller has made an effort to maintain *A. languida*, E. Mey., as a species. His justification for this is the belief that a specimen in Herb. Berlin, which Meyer has written up as *A. languida*, differs specifically from the other specimens so named, and therefore from *A. petiolaris*, Hochst. This view cannot be sustained. There is no specimen in Herb. Berlin named *A. languida* by Meyer which differs in any important feature from *A. petiolaris*, Hochst. Therefore 119, *languida*, Müll. Arg. (1865) is not a valid species. The same remark is called for in the case of 120, *tenuis*, Müll. Arg. (1865), to which Müller has attributed two varieties which do not differ from each or from *A. petiolaris*, Hochst., by any tangible character.

In the case of 117, *Zeyheri*, Müller has deviated very considerably from the treatment accorded to that species by Baillon when he founded it in 1863. Baillon's original types were Zeyher,

3839, and a specimen of doubtful provenance bearing the number 301, which Müller has been able to assign to Krebs. This latter specimen Müller transfers to *A. peduncularis*, var. *psilogyne*, Müll. Arg. But Müller's modification of *A. Zeyheri* by no means ends here, for he treats *A. Zeyheri*, Baill. (1863) as merely a variety, var. *glabrata*, of an enlarged *A. Zeyheri*, Müll. Arg. (1864), the other variety of which, var. *pubescens*, is in intention identical with the original *A. peduncularis*, E. Mey. (1843). There is no clue in the earlier account given by Müller in *Linnaea*, vol. xxxiv., to the idea underlying this arrangement. Apparently as an afterthought, a character is added in the account given in the *Prodromus* which might have served to differentiate *A. Zeyheri*, Müll. Arg., hardly of Baill. from *A. peduncularis*, Müll. Arg., not of E. Mey and hardly of Meisn., had it been constant. This character is that in *A. Zeyheri*, as widened by Müller, the flowers are monoecious, whereas in *A. peduncularis* they are dioecious. It is true that in some, but by no means all, of the specimens actually included by Müller in his *A. Zeyheri*, var. *pubescens*, the flowers are monoecious. But there is not a single example of Zeyher, 3839, which is all that Müller has left in *A. Zeyheri*, var. *glabrata*, in which the flowers are monoecious. In his choice of the varietal name *glabrata* to designate Baillon's original *A. Zeyheri*, Müller has been singularly unfortunate. The name was selected under the impression that the plant in question is *A. peduncularis*, var. *glabrata*, Sond. We know, as Müller clearly also knew, that Sonder had without due consideration, written this name upon his example of Zeyher 3839, the gathering on which *A. Zeyheri*, Baill., was based. But this does not alter the fact that Sonder's description of *A. peduncularis*, var. *glabrata*, does not apply to this plant, or modify the circumstance that the plant on which Sonder's description of *A. peduncularis*, var. *glabrata*, was based, was treated by Baillon as the basis of a distinct species, *A. caperonioides*, Baill., which Müller, in 1866, though not in 1865, has referred as a distinct variety to his *A. peduncularis*.

The same entanglement marks Müller's treatment of his *A. Zeyheri*, var. *pubescens*. The specimens collected by Masson, Krebs, and Ecklon and Zeyher, which Baillon refers to *A. peduncularis*, var. *genuina*, are identical with those collected by Drège, which are referred to *A. Zeyheri*, var. *pubescens*. The latter are by no means invariably monoecious, the former by no means invariably dioecious, and the idea that Meisner was in error when he identified with Meyer's plant so named a species from Natal which he described for Krauss as *A. peduncularis*, is without foundation. At the same time *A. Zeyheri*, Baill., remains a perfectly valid species, but one with which *A. peduncularis*, var. *glabrata*, Sond., is not synonymous.

If the treatment accorded by Müller to *A. Zeyheri*, Baill., leaves something to be desired, this is more markedly the case as regards the treatment of *A. peduncularis*. In this species, Müller has recognised as many as seven varieties :—(a) *caperonioides*; (β) *genuina*; (γ) *psilogyne*; (δ) *crassa*; (ε) *punctata*; (ζ) *glandulifolia*; (η) *angustata*. Of these *a*, *caperonioides* is a valid species, *A. caperonioides*, Baill. (1863), the earliest name for which, *A. peduncularis*, var. *glabrata*, Sond. (1850), Müller has transferred, as a

synonym, to *A. Zeyheri*, var. *glabrata*; β , *genuina* is identical with Müller's own *A. Zeyheri*, var. *pubescens*; γ , *psilogyne* is a mixture of two plants, one of which, Zeyher, 3838, is referable to *A. peduncularis* proper, the other, Krebs 301, to *A. Zeyheri*, var. *glabrata*; δ , *crassa*, is in reality a variety of *A. peduncularis*; ϵ , *punctata* is a valid species, *A. punctata*, Meisn. (1845); ζ , *glandulifolia* is another valid species, *A. glandulifolia*, Buching (1845); η , *angustata* is yet another valid species, *A. angustata*, Sond. (1850), though in this case Müller has confused with it another very distinct species, represented by Wahlberg's specimen, viz. :—*A. depressinervia*, K. Schum. (1900) = *Ricinocarpus depressinervius*, O. Kuntze (1893).

In the case of 121, *patens*, Müll. Arg. (1866), another and somewhat different misapprehension has arisen.

Müller based his description of this species on a plant in the Hornemann herbarium at Copenhagen, and he attributed the habitat to South Africa. We are greatly indebted to Dr. Ostenfeld for the loan of this specimen, which on examination proved to be very different from any other species of the genus known to occur at the Cape. Moreover, we are unaware that Hornemann ever visited or even received any collections from that region.

Pinned to the sheet is the following note written by Müller :— "Species Americanae inter 'Capitatae' non occurrunt ex hanc ob rem e Capite Bonae Spei potius quam ex Antillis provenientem censeo." On the back of the mounting paper is written "Cap. b. Sp. v. Ind. occid.", and it may be worth noting that the first half of this seems to be in a smaller and different handwriting from the other, although the "v." appears to have been penned by the same hand as the "Ind. occid."

On comparing the plant with West Indian specimens, it was found to be identical with *Acalypha chamaedrifolia*, var. β , *genuina*, Müll. Arg. The original of this is *Croton chamaedrifolius*, Lam.,* which again was founded on a West Indian plant described and well figured by Plumier† under the name *Croton foliis cordatis*.

It is probable that if Müller had examined his original specimen of *A. patens* more critically he would not have written the above note. He described the terminal spike as being entirely female and often congested like a head, with lateral bisexual ones produced from the axils of the upper leaves. In the type, however, we have found a short male spike at the top of each terminal inflorescence just as in the lateral ones, and exactly as in the West Indian plant figured by Plumier. On account of this misapprehension, Müller came to the conclusion that his plant must belong to a group which is characterized by having a terminal female spike and lateral more or less entirely male ones. As this group is entirely African, Müller had no hesitation in assuming that the habitat of this plant must be South African.

Further research showed that Hornemann had described a West Indian plant in his collection under the name *Acalypha adscendens*, and he indicated its affinity with *A. reptans*, Swartz, which is undoubtedly the same as the form of *A. chamaedrifolia* already mentioned. Müller in DC. Prodr., relying on Hornemann's

* Encycl. vol. ii. p. 215 (1786).

† Plant. Amer. t. 172, fig 2 (1757).

description, has actually reduced this species to his *A. chamaedrifolia*, and we have little doubt that in doing so he was really dealing with his own type of *A. patens*, for Hornemann's diagnosis agrees so well with this specimen that we have no hesitation in concluding that the descriptions of both authorities were based on the same specimen though Hornemann's specific name is not inscribed on the sheet.

It seemed therefore necessary to ascertain whether any other specimen bearing the name *A. adscendens*, Hornem., existed in the Hornemann collection or in the general herbarium at Copenhagen, and on enquiring of Dr. Ostenfeld he kindly replied as follows:—

"I have carefully looked over all our *Acalyphas* from the West Indies and also from other parts, but we have no specimen named *A. adscendens*, Hornem.; there are several named '*A. reptans*' and '*A. reptans?*' by Hornemann, and it [his *A. adscendens*] may have been one of these, but I think it is more probable that it is the specimen upon which Müller has described his *A. patens*. I have also enquired for *A. adscendens* in the Garden, where it was cultivated in Hornemann's time, but it is not there, at least not so named . . . I think that your suggestion regarding the identity of *A. patens* and *A. adscendens* is right, and at any rate Müller's argument about the origin of his plant is not feasible, for we have here in Copenhagen many old plants from the West Indies, but very scanty collections from Africa."

Briefly summarized then we find that *Acalypha patens*, Müll. Arg., was collected in the West Indies, and not in South Africa as stated by Müller, that its description was drawn up from the type of *A. adscendens*, Hornemann, which is identical with *A. chamaedrifolia*, var. *genuina*.

Since Müller's account of *Acalypha* was published in 1866, there have been only two important contributions to our knowledge of the South African species of the genus. The first of these is that by O. Kuntze (*Rev. Gen. Pl.* vol iii, pars 2, pp. 291, 292), published in 1893 under *Riccinocarpus*, and we are indebted to the kindness of Dr. N. L. Britton, New York, for an opportunity of studying Kuntze's actual material. Here (p. 291) is given an account of a very distinct species *R. depressinervius*, O. Kuntze, changed later by K. Schumann to *A. depressinervia*; also a diagnosis of a new form, *pilosior*, O. Kuntze, of *A. glabrata*, Thunb. Kuntze's specimens, however, show that *R. crenatus*, from Mozambique recorded on this page is not *Acalypha crenata*, Hochst., but is *A. glomerata*, Hutchinson.

On p. 292 are given diagnosis of two varieties of *A. peduncularis*; one of these, var. *ovatifolius*, O. Kuntze, is the plant previously described as *A. crassa*, Buching.; the other, var. *Radula*, O. Kuntze, appears to be a distinct species for which the new name *A. Wilmsii* has been suggested by Professor Pax. As the plant is very different from *A. Radula*, Baker, Dr. Pax's name has been here adopted. Kuntze's specimens, however, show that while *R. peduncularis*, var. *punctatus*, recorded on this page, is really *Acalypha punctata*, Meisn., the plant cited as *R. peduncularis*, var. *genuinus*, is not the original *A. peduncularis*, E. Mey., Meisn., but the same thing as his own var. *Radula* and therefore is *A. Wilmsii*. Kuntze's other African specific determinations are accurate.

The second contribution to be noticed is that by Pax in *Bull. Herb. Boiss.* vol. vi. pp. 733, 734, published in 1898. Here four forms are referred to, all of them as new. As a matter of fact, however, every one of them had already been accounted for. They are:—*A. glabrata*, var. *pilosa*, Pax l.c. 733 = *pilosior* O. Kuntze (1893); *A. Rehmanni*, Pax l.c. 733 = *A. senensis*, Klotzsch (1862); *A. Schinzii*, Pax l.c. 734 = *Ricinocarpus depressinervius*, O. Kuntze, (1893); *A. Schinzii*, var. *denticulata*, Pax l.c. 734 = *A. angustata*, Sond. (1850). The only other contribution to be noted is that by Sim in *The Forests and Forest Flora of Cape Colony*, published in 1907 where (p. 318) a really intelligible account of *A. glabrata*, Thunb. is given.

The number of species known from South Africa is now twenty. In the list of these which follows we have in each case given a detailed account of the distribution in South Africa of the species concerned and in all those cases where a species has not already been dealt with by one of us in the *Flora of Tropical Africa* its synonymy is given in full. Of the twenty species here recognised the last nine, all of which have subsessile leaves, would probably have been included by Müller in *A. peduncularis*; as a matter of fact all of them save *A. entumenica*, Prain, and *A. Wilmsii*, Pax, here for the first time described, were so included by Müller. The nine species with subsessile leaves here recognised are, however, as easily discriminated and as distinct as the eleven which have petioled leaves.

CONSPECTUS OF THE SOUTH AFRICAN SPECIES OF ACALYPHA.

1. *Acalypha Sonderiana*, Müll. Arg. in *Linnaea* xxxiv. 9 (1865) et in DC. Prodr. xv. ii. 804 (1866). Arbor parva; spicae superne foemineae, inferne masculae.—*A. ? petiolaris*, Sond. in *Linnaea* xxiii. 117 (1850); Walp. Ann. iii. 367 (1852). *Ricinocarpus Sonderianus*, O. Kuntze, Rev. Gen. Pl. ii. 618 (1891).

Natal: near Durban, Guéinzus, 11! 510! Gerrard! Gerrard & McKen, 1625!

2. *Acalypha glabrata*, Thunb. Prodr. Pl. Cap. 117 (1800), et in Flor. Cap. ed. Schult. 545 (1823); Spreng. Syst. iii. 882 (1823); E. Mey. in Drège Zwei Pfl. Documente, 161 (1843); Eckl. & Zeyh. in Flora, xx. 213 (1847); Sim in For. Fl. Cap. Col. 318, t. 142, fig. 2 (1907). Folia glabra, nunquam ultra 4 cm. longa, 2-2.5 cm. lata.—*A. betulina*?, E. Mey. l. c. (1843). *A. betulina*, Sond. in *Linnaea*, xxiii. 116 (1850); Baill. Adansonia, iii. 157 (1862); non Retz. *A. glabrata*, var. *genuina*, Müll. Arg. in *Linnaea*, xxxiv. 36 (1865) et in DC. Prodr. xv. ii. 857 (1866). *Ricinocarpus glabratus*, O. Kuntze, Rev. Gen. Pl. ii. 618 (1891). *R. glabratus*, var. *genuina*, O. Kuntze, l.c. iii. ii. 291 (1893).

Cape Colony: Uitenhage Div.; between the Kromme River and Uitenhage, Zeyher, 1517a partly! Addo, Burke! Enon, Drège 2332! near Uitenhage, Thunberg! Prior! Port Elizabeth Div.; Krakamma Forest, Ecklon & Zeyher, 72 partly! Ecklon 1124! Zeyher, 1517a partly! Bathurst Div.; Port Alfred, 300 ft., Schlechter, 2692! Potts, 197! near the Kowie River, Ecklon &

Zeyher, 72 partly! Fort Beaufort Div.; near Fort Beaufort, 1000–2000 ft., *Ecklon & Zeyher*, 72 partly! at the foot of the Witbergen, between the Gariep and the Caledon River, *Ecklon and Zeyher*! East London Div.; East London, *Rattray*, 123! British Caffraria; without locality, *Cooper*, 228!

Transkei: Bashee River, *Drège* b (under *A. betulina*) partly! Kentani, 1000 ft., *Miss Pegler*, 874 partly!

Tembuland: Perie Forest, *Kuntze*!

Pondoland: Port St. John, at Isnuka, *Galpin*, 3484 partly! between the Umtata River and St. John's River, *Drège*, 4655!

Natal: Durban, 50 ft., *Schlechter*, 2931! *Rehmann*, 8976! Clairmont, *Engler*, 2518a! *Kuntze*!

Transvaal: Crocodile River, *Leendertz*, 716! Shilouvane, *Junod* 1100!

Forma pilosior, *O. Kuntze* (sub *Ricinocarpum*); folia persistenter pubescentia, nunquam ultra 4 cm. longa, 2–2.5 cm. lata.—*Ricinocarpus glabratus*, a (*genuinae*) forma pilosior, *O. Kuntze*, Rev. Gen. Pl. iii. ii. 291 (1893).

Cape Colony: Komgha Div.; Prospect Farm, 2100 ft., *Flanagan*, 409! near Kei River, 2000 ft., *Schlechter*, 6250!

Tembuland; Perie Forest, *Kuntze*!

This form only differs from typical *A. glabrata*, Thunb., in having persistently pubescent leaves.

Var. *latifolia*, *Müll. Arg. in Linnaea*, xxxiv. 36 (1865) et in *DC. Prodr.* xv. ii. 857 (1866). Folia primum secus nervos prope basin subtus parce pilosa, cito fere glabra, 5–8 cm. longa, 4–6.5 cm. lata.—*A. betulina*, *E. Mey.* in *Drège Zwei Pfl. Documente*, 161 (1843) pro parte maxima; *Eckl. & Zeyh.* in *Linnaea* xx. 213 (1847); nec *Retz.* *A. betulina*, var. *latifolia*, *Sond.* in *Linnaea* xxiii. 117 (1850). *Ricinocarpus glabratus*, var. *latifolius*, *O. Kuntze*, Rev. Gen. Pl. iii. ii. 291 (1893).

Transvaal: Zoutspansberg, near Goldgedacht, 3700 ft., *Schlechter*, 4602 partly! Blaauwberg, *Schlechter*! Barberton, *Thorncroft*, 4328!

Cape Colony: Uitenhage Div.; Addo, 1000–2000 ft., *Zeyher*, 1517b! Zwartkops River, *Prior*! Alexandria Div.; banks of the Bushman River, *Zeyher*, 1517c! Bathurst Div.; Kasuga, *Mac Owan*, 715! Komgha Div.; Kei Bridge, 560 ft., *Rogers*, 4506! Kei River near Komgha, 600 ft., *Flanagan*, 2318!

Transkei: Bashee River, *Drège* b (under *A. betulina*) partly! Kentani, 1000 ft., *Miss Pegler*, 874 partly!

Pondoland: Port St. John, Isnuka, *Galpin*, 3484 partly!

Natal: near Durban, 150 ft., *Drège* c (under *A. betulina*)! 4593! 4610! *Gueinzus*, 476! *Gerrard & McKen*, 546! *Gerrard*, 82! *Rehmann*, 8977! *Wood*, 1715! *Scott Elliot*, 1691! *Wilms*, 2267! Clairmont, *Engler*, 2524! *Kuntze*! Inanda, *Wood*, 404! 430! Friedenau, 1750 ft., *Rudatis*, 1166!

This variety, though vaguely indicated by *E. Meyer* and by *Ecklon* and *Zeyher*, and more definitely recognised both by *Sonder* and by *Müller*, and though here formally defined and segregated is probably not a valid one. It differs only as regards the size of the leaves from typical *A. glabrata*, Thunb., and not infrequently the two forms have been collected in the same locality and issued under the same

number. The first instance of this occurs in the case of Drège, whose "*A. betulina* b" from the Bashee River is a mixture of the two glabrous varieties. The second instance is hardly less instructive; Burke and Zeyher, collecting together at Addo in Uitenhage, have distributed one the typical, the other the broad-leaved variety of "*A. glabrata*." But the same experience has been met with by collectors so competent as Mr. Galpin and Miss Pegler, whose respective field-numbers 3484 and 874 cover the same "mixture" of what Sonder and Müller have supposed to be distinct varieties. It is unnecessary to suppose that collectors so careful as those cited must be in error; indeed there is nothing to show that the specimens which conform with the characters of Müller's two varieties have not been taken from the same bush. With very little trouble the two varieties might even be manufactured because in a considerable number of instances—specimens of Drège's "*A. betulina* b," of Wood 430, and of Gerrard 82 may be cited as examples—the leaves at the ends of the twigs are those of var. *latifolia*, those lower down on the twig are those of typical *A. glabrata*. Such specimens bear out the statement of Sim (For. Fl. Cap. Col. p. 318) who speaks of "growth made during drought having leaves 1 inch long or less, that made during rains having leaves 3 inches long." It is therefore not only possible but probable that Sonder's variety "*latifolia*" is merely a condition, not even a form, still less a true variety.

Var. *pilosa*, Pax. Folia persistenter pubescentia, 5-8 cm. longa, 4-6.5 cm. lata.—*A. velutina*, E. Mey. in Drège Zwei Pfl. Documente 161 (1843). *A. betulina*, E. Mey. l.c. (1843) partim et quoad Drège 4595 tantum. *A. glabrata*, var. *pilosa*, Pax in Bull. Herb. Boiss. vi. 733 (1898).

Transvaal: Zoutspansberg; near Goldgedacht, *Schlechter*, 4602 partly!

Cape Colony: Bathurst Div.; Fish River, near Trumpeter's Drift, *Drège*, a (under *A. betulina*)! 4595! Komgha Div.; Kei Bridge, 1800 ft. *Flanagan*, 1214!

Transkei: Bashee River, *Drège* (*A. velutina*)! Kentani, *Miss Pegler*, 606!

Natal: Inanda, *Wood*, 1241 (a transition form)! Tugela, Colenso, *Gerrard & McKen*, 1623! *Rehmann*, 7164!

The form named var. *pilosa* by Dr. Pax bears to the form termed var. *latifolia* by Sonder, Müller and Kuntze very much the relationship that the form named f. *pilosior* by Kuntze bears to typical *A. glabrata*. Some of the specimens, notably those issued by Mr. Medley Wood as 1241, and those distributed by Dr. Schlechter as 4602, are almost exactly intermediate between var. *latifolia* and *A. velutina*, E. Mey (= var. *pilosa*, Pax). It is therefore almost as doubtful whether it is worth while recognising a pubescent as apart from a glabrous variety of *A. glabrata* as it is to distinguish between a large-leaved and a small-leaved variety. There is, however, a certain advantage in recognising the variety proposed by Pax; there is none in recognising the variety proposed by Sonder. The abandonment of Sonder's variety admits of the union of Kuntze's form with Pax's variety and Kuntze's name, having priority, is the one which should be adopted.

The most natural treatment for this species would therefore appear to be to treat it as including but one variety in addition to the type, as follows:—

Acalypha glabrata, *Thunb. uti supra*; *var. latifoliam*, Müll. Arg. *uti supra inclusam*.

(β *var. pilosior* Prain; *var. pilosam*, Pax (1898) *et formam pilosiorum*, O. Kuntze (1893) *uti supra includens*.

3. *Acalypha glomerata*, *Hutchinson* in *Kew Bulletin*, 1911, 229 (1911) *et in Dyer Fl. Trop. Afr. vi. i. 902* (1912). *Ricinocarpus crênatus*, O. Kuntze, *Rev. Gen. Pl. iii. 2, 291* (1893); *nec id. ii, 617*.

Lourenço Marques: Lourenço Marques, *Howard*, 5696!

There is nothing to add to the account of this species given by one of us in the *Flora of Tropical Africa* except to record the fact that it extends beyond the tropic into South Africa.

4. *Acalypha ciliata*, *Forsk. Fl. Aegypt.-Arab. 162* (1775); *Hutchinson in Dyer, Fl. Trop. Afr. vi. i. 901* (1912).

Transvaal: Shilouvane, *Junod*, 1028! 2188!

There is nothing to add to the account of this species given by one of us in the *Flora of Tropical Africa* except to record the fact that it extends beyond the tropic into South Africa.

5. *Acalypha indica*, *Linn. Sp. Pl. ed. 1, 1003* (1753); *Hutchinson in Dyer Fl. Trop. Afr. vi. i. 903*.

Transvaal: Vaal River, *Burke*! near Hausman's Kraal, 4400 ft., *Schlechter*, 4185! Avoca, near Barberton, 1900 ft., *Galpin*, 1237! Komati Poort, *Kirk*, 105! Shilouvane, *Junod*, 1321! 1615!

Natal: Tugela, *Gerrard & McKen*, 1624!

The synonymy and the distribution outside South Africa of this species has already been fully discussed by one of us in the *Flora of Tropical Africa*.

6. *Acalypha segetalis*, Müll. Arg. in *Journ. Bot. ii. 336* (1864); *Hutchinson in Dyer, Fl. Trop. Afr. vi. i. 904* (1912).

Transvaal: Waterberg; Springbok Flats, *Sampson*, 4410! Shilouvane, *Junod*, 2346!

Great Namaqualand: Rehoboth, *Fleck*, 170!

Little Bushmanland: without locality, *Fleck*, 472a!

Lourenço Marques: Lourenço Marques, *Quintas*, 210! Matola, *Schlechter*, 11,686! Incanhini, *Schlechter*, 12,043!

A species exceedingly closely allied to *A. indica*, Linn., the synonymy of which has been fully discussed by one of us in the *Flora of Tropical Africa*. The only addition which has to be made to that record is to note the fact that it extends southward beyond the tropic on the western as well as on the eastern side.

7. *Acalypha capensis*, *Prain*. *Caules dense patenter pilosi; folia basi saepissime cordata, subtus ubique dense pilosa; spicae foemineae paucibracteatae in axillis supremis axillares.*—*Urtica capensis*, Linn. f. *Suppl. 417* (1781). *U. africana*, Linn. *Mss. ex. Jackson*, Ind. Linn. *Herb. 148* (1912). *Tragia villosa*, *Thunb. Prodr. Cap. 14* (1794) *et in Flor. Cap. ed. Schult. 37* (1823) nequaquam *Acalypha villosa*, *Jacq. Acalypha Kraussiana*, *Buching. ex Meisn. apud Krauss in Flora xxviii. 84* (1845); Müll. Arg. in *Linnaea xxxiv.*

39 (1865). *A. decumbens*, *a. villosa*, Müll. Arg. in DC. Prodr. xv. ii. 864 (1866) quoad spp. omnia. *A. cordata*, Burchell Mss. nec Thunb.

Cape Colony: George Div.; Outeniqua Mountains, *Thunberg!* *Rehmann*, 258! Knysna Div.; near Knysna, *Burchell*, 5390! 5391! *Krauss*, 1825! Wittedrift, Plettenbergs Bay, *Pappé!*

Forma *grandidentata*. Caules foliaque uti in forma praecedenti, sed spicae foemineae pluribracteatae terminales.—*A. grandidentata*, Müll. Arg. in DC. Prodr. xv. ii. 823 (1866).

Cape Colony: Knysna Div.; near Knysna, *Burchell*, 5392! without precise locality, *Mund & Maire*, 659!

Forma *decumbens*. Caules glabri; folia basi truncata vel parum cordata, subtus argillaceo-incana.—*A. decumbens*, Thunb. Prodr. Pl. Cap. 117 (1800) et in Flor. Cap. ed. Schult. 545 (1823); Spreng. Syst. iii. 882 (1826). *A. discolor*, E. Mey. in Drège Zwei Pfl. Documente, 161, nomen (1843) ex parte; Eckl. & Zeyh. in Linnaea xx. 213 (1847) ex parte; Baill. Adansonia iii. 157 (1862); Müll. Arg. in Linnaea, xxxiv. 38 (1865) ex parte. *A. decumbens*, *γ, genuina*, Müll. Arg. in DC. Prodr. xv. ii. 864 (1866). *A. prostrata*, Zeyh. Mss. in Herb. Holm. *Ricinocarpus decumbens*, O. Kuntze, Rev. Gen. Pl. ii. 617 (1891).

Cape Colony: Humansdorp Div.; Gamtous River, *Thunberg!* Near Humansdorp, *Ecklon & Zeyher*, 73 partly! *West*, 276! Uitenhage Div.; Zwartkops River, *Drège!* *Ecklon*, 162! without precise locality, *Mund & Maire*, 33! *Zeyher!*

Forma *cordata*. Caules glabri; folia basi saepissime distincte cordata, subtus dense olivaceo-puberula.—*A. cordata*, Thunb. Prodr. Pl. Cap. 117 (1800) et in Flor. Cap. ed. Schult. 545 (1823); Spreng. Syst. Veg. iii. 880 (1826). *A. discolor*, E. Mey. in Drège Zwei Pfl. Documente, 161, nomen (1843) ex parte; Hochst. apud Krauss in Flora xxviii. 84 (1845); Eckl. & Zeyh. in Linnaea xx. 213 (1847) ex parte; Müll. Arg. in Linnaea, xxxiv. 38 (1865) ex parte; Zeyh. Mss. *A. discolor*, *β major*, Baill. Adansonia iii. 158 (1862). *A. decumbens*, *β cordata*, Müll. Arg. in DC. Prodr. xv. ii. 864 (1866). *A. decumbens*, Burchell Mss. vix Thunb.

Cape Colony: Riversdale Div.; between Little Vet River and Garcias Pass, *Burchell*, 6925! near Riversdale, *Schlechter*, 1961! Knysna Div.; Gouw Kamma River, *Krauss*, 1826! near Knysna, *Marloth*, 2448 partly! Humansdorp Div.; Riverside at Humansdorp, *Ecklon & Zeyher*, 73 partly! *Galpin*, 4576! Uitenhage Div.; Maitland River near the lead mines, *Burchell*, 4494! without precise locality, *Thunberg!* *Sparrman!* *Zeyher!*

Forma *lamiifolia*. Caules parce molliter pilosi; folia basi saepissime distincte cordata, subtus praesertim secus nervos dense patenter pilosa.—*A. lamiifolia*, Scheele in Linnaea xxv. 584 (1852); Baill. Adansonia, iii. 158 (1862). *A. decumbens*, *a villosa*, Müll. Arg. in DC. Prodr. xv. ii. 864 (1866) ex citatione tantum.

Cape Colony: Riversdale Div.; banks of the Vet River near Riversdale, *Muir*, 283! Knysna Div.; near Knysna, *Marloth*, 2448 partly! Albany Div.; without locality, *Bowie!* without precise locality, *Drège* 8242!

A. decumbens is a species of even greater variability than *A. glabrata*, and the five forms here characterised are readily recognisable. This has always been appreciated. Thunberg over a century

ago accorded specific rank to three of these forms; one of the three he referred to another genus. The synonymy cited shows that similar if varying views had been held by other writers. The treatment by Müller, whose careful monograph of 1866 has not since then been critically examined, involved the recognition of four of these five forms, three of them as varieties of *A. decumbens*, the last as a distinct species, *A. grandidentata*.

More closely examined, however, this last form, though at first sight apparently the most distinctive of all, proves in reality to be undeserving of separate recognition. It differs from *Urtica capensis*, as described by the younger Linnaeus in 1781 and from *Tragia villosa*, as described by Thunberg in 1794, which is the same as *A. Kraussiana*, described by Meisner in 1845, only in having the female inflorescences aggregated in a terminal spike in place of being disposed in the axils of the uppermost leaves. In spite of the different facies thus imparted to these two plants, *A. grandidentata* is merely a condition of *A. Kraussiana*, Meisn. (= *A. decumbens*, var. *villosa*, Müll. Arg.).

The distinction between the typical *A. decumbens* of Thunberg and the form which that author described as *A. cordata* is hardly more tangible. In the original specimens of *A. decumbens* the leaves are all reddish-hoary underneath and are all truncate or only slightly cordate at the base, while in the original specimens of *A. cordata* the leaves are all olive-hoary beneath and are nearly all distinctly cordate at the base. But it was not owing to these real differences that the two forms were separated as species by Thunberg; the main character relied on for their separation was that *A. decumbens* is herbaceous while *A. cordata* is shrubby. Thunberg's belief we know now to be without foundation; we now know too that while the main branches have leaves that conform with those of the original *A. cordata*, the secondary branches have leaves that agree with those of the original *A. decumbens*. This was fully appreciated by E. Meyer in dealing with Drège's specimens, some of which, and some also of Zeyher's, show both forms on the same branch; the name *A. discolor*, suggested by E. Meyer, happily indicates the peculiar difference in the colour of the underside of the cordate and the less distinctly cordate leaves. *A. cordata*, Thunb., therefore, so far from being even a distinct variety, is merely a condition of *A. decumbens*.

The only remaining form is that which was originally described by Scheele as *A. lamifolia*. Though reduced by Müller, in the absence of specimens, to var. *villosa* it resembles much more closely in its general appearance Müller's var. *cordata* from which indeed it only differs in having the nerves beneath pilose with long hairs instead of having the nerves very shortly puberulous. Now it is found that even this distinction breaks down, since in certain specimens collected by Marloth we find leaves characteristic of *A. cordata* and leaves characteristic of *A. lamifolia* in plants which have grown side by side. The true position of the form *lamifolia* is midway between the forms *cordata* and *villosa* and the true significance of the form does not lie in its differences from these two, but in its testimony that they themselves do not really differ from each other.

Having regard, however, to the extreme diversity of view which has hitherto prevailed, and to the convenience from the bibliographical standpoint which the division of the species involves, it

seems better to separate those forms with long hairs on the leaves beneath from the forms in which there is only a short close hoary tomentum; treating the former, which coincides with Müller's variety *a*, *villosa* but includes also *A. grandidentata*, as the type, and treating the latter as a distinct variety, β , *decumbens*, which includes Müller's variety β , *cordata*.

8. *Acalypha senensis*, *Klotzsch in Peters Reise Mossamb. Bot.* 96 (1862); *Hutchinson in Dyer, Fl. Trop. Afr.* vi. i. 888 (1912).—Spicae 1-sexuales; plantae monoicae; folia longe petiolata; caules erecti; bractae foemineae glandulis stipitatis dense obsitae, nec tamen setosae.

Bechuanaland: Masupa River in Banquakatsé Territory, *Holub!*

Transvaal: near Pretoria, *Burke! Scott Elliot*, 1398! *Rehmann*, 4285! *Fehr*, 58! *Wilms*, 1321a! *Burt Davy*, 695! 725! 5380! *Bolus*, 10838! *Leendertz*, 56! Aapiés River, *Burke!* Boshveld, *Klippan, Rehmann*, 5330! Houthbosch, *Rehmann*, 5915! Rustenberg, *Collins*, 70! Warmbaths, *Leendertz*, 1561! Waterval Onder, *Jenkins*, 6717! Lydenberg, *Wilms*, 1321 partly! Johannesburg, *Marloth*, 3830! Shilouvane, *Junod*, 1039! 2178!

Very close to, but still probably deserving to be considered a species apart from *A. petiolaris*, Hochst. A full account of the distribution of this species in Tropical Africa, where it is rather widely spread, and of its synonymy, has been given by one of us in the *Flora of Tropical Africa*.

9. *Acalypha petiolaris*, *Hochst. apud Krauss in Flora* xxviii. 83 (1845); *Müll. Arg. in Linnaea* xxxiv. 29 (1865) et in *DC. Prodr.* xv. ii. 847 (1866).—Spicae 1-sexuales; plantae monoicae; folia longe petiolata; caules decumbentes, bractae foemineae dense setosae, parcissime glandulosae.—*A. languida*, E. Mey. in *Drège Zwei Pfl. Documente*, 161, nomen (1843); *Sond. in Linnaea* xxiii. 116 (1850); *Baill. Adansonia*, iii. 157 (1863); *Müll. Arg. in Linnaea* xxxiv. 29 (1865) et in *DC. Prodr.* xv. ii. 848 (1866). *A. brachiata*, *Krauss in Flora* xxviii. 83 (1845), nec E. Mey. *A. tenuis*, *Müll. Arg. in Linnaea* xxxiv. 30 (1865) et in *DC. Prodr.* xv. ii. 848 (1866), var. *a*, *glandulosa* et var. β , *eglandulosa* amb. inclus. *Ricinocarpus languidus*, O. Kuntze, *Rev. Gen. Pl.* ii. 618 (1891). *R. petiolaris*, O. Kuntze, *Rev. Gen. Pl.* ii. 618 (1891).

Cape Colony: Komgha Div.; near the Kei River mouth, *Flanagan*, 454!

Transkei: Bashee, *Drège, a!* 4594! Kentani, *Miss Pegler*, 870!

Pondoland: between the Umtata River and St. John's River, *Drège, b!* Murchison, *Bachmann*, 791!

Griqualand East: Clydesdale, 2500 ft., *Tyson*, 1232! 2568! 2693! 2694!

Natal: near Durban, *Krauss*, 319! *Guinzius*, 169! 506! *Gerrard & McKen*, 617! *Rehmann*, 8803! *Wood*, 68! 1408! near Phoenix, *Schlechter*, 3026! near Maritzburg, *Krauss*, 367! Inanda, 2000 ft., *Wood*, 254! Camperdown, 2000 ft., *Miss Franks in Herb. Wood*, 11771! *Rehmann*, 7795! between Umzimkulu River and Umkomanzi River, *Drège, c!* 8421! Umgeni, *Rehmann*, 8802 partly! Umkomaas, *Engler*, 2569! Marianhill, *Landauer*, 223! Friedenau, 1300 ft., *Rudatis*, 1185! without precise locality, *Wahlberg!*

Lourenço Marques : Ressano Garcia, *Schlechter*, 11882! Lourenço Marques, *Junod*, 147!

Transvaal : Macalisberg, *Wahlberg*! *Burke*! *Zeyher*, 1519! Wonderboompoort, *Leendertz*, 443! Potgietersrust, *Leendertz*, 2313! near Lydenberg, *Wilms*, 1321 partly! Elandspruitberg, *Schlechter*, 3897! near Barberton, 1900–4000 ft., *Galpin*, 513! 1245! Matkibi's Kom, 500 ft., *Bolus*, 9777! Kaap River, 1200 ft., *Bolus*, 9778!

Swaziland : Low Veld near Mafutane, *Bolus*, 12294!

A very distinct species, broken up by Müller into three, which, however, do not differ from each other even as varieties.

10. *Acalypha Eckloni*, *Baill. Adansonia*, iii. 158 (1863); *Müll. Arg. in Linnaea*, xxxiv. 30 (1865) et in *DC. Prodr.* xv. ii. 849 (1866).—Spicae 1-sexuales; plantae monoicae, annuae.—*A. cordata*, E. Mey. in Drège, *Zwei Pfl. Documente*, 161 (1843); *Baill. Adansonia*, iii. 158 (1863); non Thunb. *A. brachiata*, E. Mey., in Drège, *Zwei Pfl. Documente*, 161, nomen (1843); *Baill. Adansonia*, iii. 158 (1863). *Ricinocarpus Ecklonii*, O. Kuntze, *Rev. Gen. Pl.* ii. 617 (1891) et iii. ii. 291 (1893).

Cape Colony : George Div.; woods near George, 1000 ft., *Schlechter*, 2350! Uitenhage Div.; near Uitenhage, *Burchell*, 4251! *Mund & Maire*! *Verreaux*! *Burke*! *Prior*! on Van Stadens Mountains, *Burchell*, 4751! Zwartkops River, *Drège*, 4602! *Ecklon*, 74 partly! 609! *Zeyher* 228! 3841! Enon, *Drège*, 2345! 4600! Albany Div.; near the Kasuga River, *Prior*! Kleinemund near Grahamstown, *MacOwan*, 1507! Grahamstown, *Misses Daly & Gane*, 743! King Williamstown Div.; Yellowwood River, *Drège*; King Williamstown, *Sim*, 1468! East London Div.; East London, *Galpin*, 7790! *Rattray*, 809! Komgha Div.; near Komgha, 2000 ft., *Flanagan*, 630!

Transkei ; Gekwa River, *Drège*, 4601! Kentani, 1000 ft., *Miss Pegler*, 732!

Tembuland : Perie Forest, O. Kuntze!

Pondoland : St. John's River at Omsamwubo, *Drège*!

Natal : near Durban, *Gueinzus*, 8! 168! Inanda, 1800 ft., *Wood* 3148! near Isipingo, *Schlechter*, 2808!

A very distinct species nearest, in spite of its annual habit, to *A. petiolaris*, Hochst. and *A. senensis*, Klotzsch, but with much larger female bracts. Meyer's name *A. brachiata*, though older than Baillon's by twenty years, was not accompanied by a description and so cannot now be taken up. Meyer recognised two distinct varieties; α , with taller stems and almost glabrous leaves, and β with short stems and hirsute leaves. But the ample material now available proves that this distinction cannot be sustained.

11. *Acalypha ornata*, *Hochst. ex A. Rich. in Tent. Fl. Abyss.* ii. 247 (1851); *Hutchinson in Dyer, Fl. Trop. Afr.* vi. i. 890 (1912).

Lourenço Marques : Lion's Creek, *Schlechter*, 12,198!

There is nothing to add to the account of this species given by one of us in the Flora of Tropical Africa except to record the fact that it extends beyond the tropic into South Africa.

12. *Acalypha Zeyheri*, *Baill. Adansonia*, iii. 156 (1863). Folia subsessilia, glabra vel glabrescentia, eglandulosa; caules procumbentes.—*A. Zeyheri*, var. *glabrata*, *Müll. Arg. in Linnaea* xxxiv. 29

(1865) et in DC. Prodr. xv. ii. 847 (1866) quoad Zeyher 3839 tantum, var. *pubescente*, necnon syn. Sond. amb. excludend. *A. peduncularis*, var. *psilogyne*, Müll. Arg. in Linnaea xxxiv, 28 (1865) et in DC. Prodr. xv. ii. 846 (1866), pro parte et quoad Krebs 301 tantum. *Ricinocarpus Zeyheri*, O. Kuntze, Rev. Gen. Pl. ii. 618 (1891).

Cape Colony: Uitenhage Div.; Van Stadensberg, *Ecklon*, 345! *Zeyher*, 3839! *Burchell*, 4726! *Mrs. Paterson*, 886!

This very local but very distinct and easily recognisable *Acalypha*, described by Baillon as a species, has been accepted as such, but in a rather modified and somewhat unsatisfactory fashion, by Müller, who has recognised as a distinct variety what is, with little room for doubt, a different species, and has included in the variety which is based on Baillon's type yet another and even more distinct species. To add to the confusion Müller has placed all of the three forms thus included in *A. Zeyheri* in as many different places, for his own *A. Zeyheri*, var. *pubescens*, is also his own *A. peduncularis*, var. *genuina*; the plant which Sonder named *A. peduncularis* β , *glabrata* is Müller's own *A. peduncularis*, var. *caperonioides*; finally, one of the types only of *A. Zeyheri*, Baill., is left by Müller in this species, the other is transferred to *A. peduncularis*, var. *psilogyne*.

13. *Acalypha peduncularis*, *E. Mey. in Drège, Zwei Pfl. Documente*, 161, nomen (1843) et ex Meisn. apud Krauss in *Flora*, xxviii., 82 (1845); *Eckl. & Zeyh. in Linnaea*, xx. 213 (1847); *Sond. in Linnaea*, xxiii. 115 (1850), syn. *Buching. et var. glabrata exclus.*; *Baill. Adansonia*, iii., 156 (1863), syn. *Buching. exclus.*; *Pax in Engl. Pfl. Ost.-Afr.*, C. 239 (1895) ex parte, spp. *nyasica tantum*. Folia subsessilia saepe acuta vel subacuta plus minusve pubescentia, eglandulosa; caules herbacei ramosi procumbentes.—*A. peduncularis*, var. *genuina*, Müll. Arg. in Linnaea, xxxiv. 29 (1865) et in DC. Prodr. xv. ii. 846 (1866). *A. Zeyheri*, var. *pubescens*, Müll. Arg. in Linnaea, xxxiv. 29 (1865) et in DC. Prodr. xv. ii. 847 (1866) nec *A. Zeyheri*, Baill. *Ricinocarpus peduncularis*, O. Kuntze, Rev. Gen. Pl. ii., 618 (1891).

Cape Colony: Uitenhage Div.; Bontje's River, 2000 ft., *Drège*, 2309! Enon, *Drège*! near Zwartkops River, *Ecklon*, 214! Alexandria Div.; Zuureberg, 2000–3000 ft., *Drège*! *Cooper*, 3580! Bathurst Div.; between Blue Krantz and Kaffir Drift, *Burchell*, 3707! at Rietfontein between the Kasuga River and Port Alfred, *Burchell*, 4041! Albany Div.; near Grahamstown, 1500–2500 ft., *Ecklon*, 75 partly! *Bolton*! *Mrs. Barber*! *MacOwan*, 49! *Galpin*, 191! *Bolus*! Slangkraal, *Burke*! Assegai Bush and Botram, 1000–2000 ft., *Drège*, 4596! Howison's Poort, *Zeyher*, 3838! *Mrs. H. Hutton*! near Sidbury, *Burchell*, 4176! Stockenstroom Div.; sources of the Kat River above Philipstown, 3000–4000 ft., *Ecklon*, 75 partly! *Peddie* Div.; Fredericksburg, *Gill*! East London Div.; near East London, *Rattray*, 678! *J. Wood in Herb. Galpin*, 3136! British Caffraria; Hangman's Bush, *Cooper*, 147! 3581! without locality, *Masson*! *Hb. Swartz*! *Grondal*! *Delalande*! *Krebs*!

Transkei: Kreili's country, *Bowker*, 292! Kentani, 1200 ft., *Miss Pegler*, 65 partly!

Tembuland : near Bazeia, beyond the Bashee River, 2000 ft., *Baur*, 373!

Pondoland : many localities, *Bachmann*, 783! 790! 792! 793! 1711! *Beyrich*, 102!

Natal : near Durban, *Krauss*, 377 partly! *Gueinzius*, 404 partly! *Gerrard & McKen*, 619! *Sanderson*, 129! *Wood*, 1416 partly! *Umgeni*, *Rehmann*, 8804! Inanda, *Wood*, 48 partly! Camperdown, *Schlechter*, 3059 partly!

Var. β , *crassa*, Müll. Arg. in *Linnaea*, xxxiv. 28 (1865) et in *DC. Prodr.* xv. ii. 846 (1866). Folia omnia obtusa densius pubescentia; caules subsimplices.—*A. crassa*, Buching. ex Meisn. apud *Krauss* in *Flora*, xxviii. 83 (1845). *A. peduncularis*, Sond. in *Linnaea*, xxiii., 115 (1850), quoad syn. *A. crassa*, Buching.; *Baill. Adansonia*, iii., 156 (1863), quoad syn. *A. crassa*, Buching.: vix E. Mey. *A. peduncularis*, var. *ferox*, Pax Mss. in *Wilms exsicc.* No. 2265. *Ricinocarpus peduncularis*, var. *ovatifolius*, O. Kuntze, *Rev. Gen. Pl.*, iii., ii., 292.

Natal : near Durban, *Krauss*, 377 partly! *Gueinzius*, 404 partly! *Sutherland*! *Gerrard*, 521! *Wood*, 90! Camperdown, *Gerrard & McKen*, 1166! near Claremont, *Schlechter*, 3059 mainly! *Krantzkloof*, *Schlechter*, 3188! Inanda, *Wood*, 640! *Pietermaritzburg*, *Wilms*, 2265! *Riet Vlei*, *Fry in Herb. Galpin*, 2722! *Alexandria Dist.*, *Dumisa*, *Rudatis*, 445! *Highland Station*, *Kuntze*! *Nottingham*, *Buchanan*, 143! *Klip River*, *Sutherland*! without locality, *Hb. Swartz*! *Gerrard*, 373!

A. peduncularis, as treated by one of us in the *Flora of Tropical Africa*, has been accepted in the sense in which the species was presented by Müller in *DC. Prodr.* xv. ii. 846, in 1866. In reality there are to the north of the tropic two distinct forms; one of these, confined to Rhodesia, is the plant treated by Müller as *A. peduncularis*, α , *caperonioides* (= *A. caperonioides*, *Baill.*), the other, met with in Nyasaland and Gazaland, being the plant treated by Müller as *A. peduncularis*, ϵ , *punctata* (= *A. punctata*, *Meisn.*). The abundant material of both now available shows that it is better to treat them as distinct species.

The variety here recognised, var. *crassa*, though usually readily separable from *A. peduncularis* proper, is, as Meisner pointed out when he originally described it, not really specifically distinct. Müller made an endeavour to distinguish the *A. peduncularis* issued but not described by E. Meyer in 1843, from the *A. peduncularis* described by Meisner in 1845. But there is no justification for Müller's belief that these two differ. It is true that *A. peduncularis*, E. Mey., itself, is rare in Natal, and that in that colony its place is largely taken by var. *crassa*. But it so happens that the portion of *Krauss* 377, on which in 1845 Meisner based his description of *A. peduncularis*, is not separable from the plant issued by E. Meyer in 1843 under the same name.

14. *Acalypha glandulifolia*, Buching. ex Meisn. apud *Krauss* in *Flora*, xxviii. 83 (1845); *Sond. in Linnaea*, xxiii. 116 (1850); *Walp. Ann.* iii. 367 (1852); *Baill. Adansonia*, iii. 157 (1863).—*A. peduncularis*, var. *glandulifolia*, Müll. Arg. in *Linnaea*, xxxiv. 28 (1865), et in *DC. Prodr.* xv. ii. 846 (1866).

Natal: near Durban, *Krauss*! *Gueinzins*, 170! *Gerrard*, 520! *Sutherland*! *Wood*, 1416 partly! Attercliffe, 800 ft., *Sanderson*, 298! Inanda, 1800 ft., *Wood*, 48 partly! 694! Indwedwe, *Wood*, 1054! Alexandra Dist., Dumisa, 2000–2500 ft., *Rudatis*, 96! 743! 744!

A well-marked species, within which Sonder suggested the recognition of two distinct forms, one with pilose almost simple, the other with glabrous more branching stems. The more ample material now available shows that this subdivision is not essential.

15. *Acalypha entumenica*, *Prain*. Herbacea, prostrata, 3–4.5 dm. longa, simplex, dense foliosa, caulis densius patente setulosus. *Folia* subsessilia, membranacea, ovato-lanceolata vel lanceolata, acuta, basi cuneata vel rotundata, margine distincte serrata, dentibus singulis aut glandulam capitata stipitata aut setam basi bulbosam suffulcientibus, 1.25–2.5 cm. longa, 0.5–0.6 cm. lata, utrinque densius pilis basi bulbosis setulosa, et saepe glandulis stipitatis parcius obsita; petiolus setulosus, 1.5 mm. longus; stipulae minimae, membranaceae, caducae. *Inflorescentiae* 1-sexuales, dioicae. *Spicae* maris haud visae. *Spicae* femineae solitariae, terminales, sessiles, demum 2.5–4 cm. longae; bractae subsessiles, foliaceae, late ovatae vel suborbiculares, acutae, basi rotundatae, margine serratae, 0.6–0.8 cm. longae, 0.8–1.25 cm. latae, margine glandulosae extra densius setulosae glandulosaeque. *Semina* subglobosa.

Zululand: Entumeni, 2000 ft., *Wood*, 3737!

A species most nearly allied to *A. glandulifolia*, *Buching.*, but readily distinguished by its shorter wider female bracts with stalked glands, and by its strigose foliage.

16. *Acalypha depressinervia*, *K. Schum.* in *Just, Bot. Jahresber.* xxvi. i. 348 (1901).—*A. peduncularis*, var. *angustata*, Müll. Arg. in *Linnaea* xxxiv. 28 (1865) et in DC. Prodr. xv. ii. 847 (1866), pro parte minima et quoad sp. *Wahlberg.* tantum; nec *A. angustata*, Sond. *A. Schinzii*, Pax in Bull. Herb. Boiss. vi. 734 (1898), excl. var. *denticulata*. *A. Oweniae*, Harv. Mss. in Herb. T. C. D. *Ricinocarpus depressinervius*, O. Kuntze, Rev. Gen. Pl. iii. ii. 291 (1893).

Transvaal: Macalisberg, *Wahlberg*! Carolina Dist.; Billy's Vlei, *Mitchell*! Houtbosch, *Rehmann*, 5914! Barberton; Saddleback Mountain, 4500–5000 ft., *Galpin*, 638! 1120! near Barberton, and between Komati River Drift and Crocodile River, *Bolus*, 9776!

Orange River Colony: Bester's Vlei near Witzieshoek, 5500 ft., *Flanagan*, 1922! Harrismith, *Sankey* 237!

Basutoland: without precise locality, *Cooper*, 3577!

Natal: near Durban, *Miss Owen*! *Sanderson*! *Wood*, 1416 partly! Inanda, *Wood*, 298! Tugela, *Gerrard*, 618! Near Krantzklouf, 1500 ft., *Schlechter*, 3186! Camperdown, *Rehmann*, 7793! Dalton, 3300 ft., *Rudatis*, 15! between Greytown and Newcastle, *Rudatis*, 2260! Mooi River, 4000–5000 ft., O. Kuntze! *Wood*, 3766!

A very distinct species at once distinguishable from every other South African *Acalypha* with subsessile leaves by the entire leaf margins.

17. *Acalypha angustata*, *Sond.* in *Linnaea* xxiii. 115 (1850); *Walp. Ann.* iii. 367 (1852); *Baill. Adanson* iii. 157 (1863).—*A. angustata*, var. *glabra*, *Sond.* l.c. 116 (1850). *A. peduncularis*, var.

angustata, Müll. Arg. in *Linnaea* xxxiv. 28 (1865) et in DC. Prodr. xv. ii. 847 (1866) pro parte maxima sed sp. Wahlb. exclus. *A. Schinzii*, var. *denticulata*, Pax in Bull. Herb. Boiss. vi. 734 (1898).

Transvaal: Macalisberg, *Burke*, 349! *Zeyher* 1518! Maquasi Mountains, *Nelson*, 231! Pretoria; above Aapies Poort, *Rehmann*, 4284! Derde Poort, *Leendertz*, 363 mainly! Waterval Onder, *Jenkins*, 6735! Elandspruitsberg, *Schlechter*! near Lydenberg, *Wilms*, 1322! 1327! near Johannesburg, *Gilfillan* in *Herb. Galpin*, 6071! 6172! *Marloth*, 3669! Withbank, *Rogers*, 2545! Marico, *Holub*! Derby Station, 5300 ft., *Burt Davy*, 7165! Paardeville, near Zeerust, 4500 ft., *Burt Davy*, 7192! Bethal, *Burt Davy*, 3834! 5602! Heidelberg, *Leendertz*, 2582! Uitgevalen, *Burt Davy*, 9150! Krugersdorp, *Holder*, 4548! Ermelo, *Bester*, 2164 partly! Irene, *Burt Davy*, 747! Hartebeestenek, *Burt Davy*, 769! without precise locality, *McLea*!

Natal: near Durban, *Gueinzus*, 171! *Gerrard* 519! near Maritzburg, *Wilms*, 2262! Riet Vlei, at Greenwich Farm, *Fry* in *Herb. Galpin*, 2721!

The two varieties originally distinguished by Sonder can be readily separated in their extreme conditions, but they are connected by a regular gradation of forms, intermediate as regards pubescence, and their continued recognition serves no useful purpose.

18. *Acalypha caperonioides*, Baill. *Adansonia* iii. 157 (1863).—*A. peduncularis*, var. *glabrata*, Sond. in *Linnaea* xxiii. 115 (1850). *A. Zeyheri*, var. *glabrata*, Müll. Arg. in *Linnaea* xxxiv. 29 (1865) et in DC. Prodr. xv. ii. 847 (1866) quoad syn. Sond. sed spp. citat. exclud. *A. peduncularis*, var. *caperonioides*, Müll. Arg. in DC. Prodr. xv. ii. 846 (1866). *A. peduncularis*, Hutchinson in Dyer Fl. Trop. Afr. vi. i. 884 (1912) quoad spp. *rhodesica*; nec E. Mey.

Rhodesia: Myanga; Manika, 6000–7000 ft., *Cecil*, 179! 182! between Umtali and Myanga Mountains, *Cecil*, 167! Salisbury, *Cecil*, 68! *Engler*, 3052! *Rogers*, 4003! Gwelo, *Gardner*, 33! Bulawayo, *Eyler & Johnson*, 1153!

Transvaal: Macalisberg, *Burke*, 83! 153! *Zeyher*, 15, 21! Elandspruitsberg, *Schlechter*! Lydenberg, *Wilms*, 1324! 1328! 1329! Heidelberg, *Wilms*, 1322! *Leendertz*, 2583! Waterval Boven, *Rogers*, 24! Johannesburg, *Marloth*, 3866! Pretoria and vicinity, *Engler*, 2833! *Burt Davy*, 1988! Road to Wonderboom, *Leendertz*, 321! Wonderboompoort, *Rehmann*, 4553! 4554! between Potchefstroom and Rustenburg, *Roe*! Pinedene, Irene, 4800 ft., *Burt Davy*, 2305! Ermelo, *Burt Davy*, 5485! *Bester*, 2164 partly! Marico, *Koster*, 5300 ft., *Burt Davy* 7171! Modderfontein, *Miss Haagner*! Barberton, *Miss Ivy Thorncroft*, 30!

Orange River Colony: Parys, *Rogers*, 707!

Var. *Galpini*, *Prain*; a typo foliis membranaceis, utrinque dense persistenter pilis elongatis basi bulbosis vestitis differt.

Transvaal: Barberton, 4000 ft., *Galpin*, 1106!

This variety, of which only female specimens are known, may prove a distinct species.

19. *Acalypha punctata*, Meisn. apud *Krauss* in *Flora*, xxviii. 83 (1845).—*A. peduncularis*, var. *punctata*, Müll. Arg. in *Flora*, xxxiv. 28 (1865) et in DC. Prodr. xv. ii. 846 (1866). *A. peduncularis*, Pax in Engl. Pfl. Ost.-Afr. C. 239 (1895) partim; Hutchinson in

Dyer, Fl. Trop. Afr. vi. i. 884 partim et quoad spp. gaz. et nyas. tantum (1912); nec E. Mey. *Ricinocarpus peduncularis*, var. *punctatus*, O. Kuntze, Rev. Gen. Pl. iii. ii. 292 (1893).

Orange River Colony: Bester's Vlei, Witziesshoek, 5700 ft., *Bolus*, 8251! without precise locality *Rogers*!

Transvaal: Barberton, 2500-4000 ft., *Galpin*, 429! Mac Mac Creek, *Mudd*!

Transkei: Kentani, 1200 ft., *Miss Pegler*, 65 partly!

Tembuland: Umtata, *Miss Mason* (icon.)!

Pondoland: Fort Grosvenor, *Bachmann*, 785! 789! 794!

Griqualand East: near Kokstad, 3800 ft., *Tyson* 1107! Clydesdale, 2500 ft., *Tyson*, 3107!

Natal: near Durban, *Krauss*, 377 mainly! *Verreaux*! *Gueinzus*! *Wood*! Bellair, 220 ft., *Schlechter*, 3105! Inanda, 1800 ft., *Wood*, 296! 697! Attercliffe, 800 ft., *Sanderson*, 344! Camperdown, 2000 ft., *Wood*, 864! 4106! Friedenau, 2000 ft., *Rudatis*, 779! 780! Dumisa, Fairfield, 2700 ft., *Rudatis*, 1201! Ladysmith, 3300 ft., *Kuntze*! Klip River, 3500-4000 ft., *Sutherland*! Lidgetten, 3900 ft., *Wood*, 6201!

Zululand: without precise locality, *Gerrard & Mc Ken*, 1167!

Gazaland: Upper Buzi, 3000 ft., *Swynnerton* 383!

Nyasaland: Zomba Plateau, 5000-6000 ft., *Whyte*!

Var. *longifolia*, *Prain*; a typo foliis lanceolatis vel linearilanceolatis acutis, nec ovato-lanceolatis vel ovatis inferioribus obtusis, differt.—*A. longifolia*, E. Meyer Mss. in Herb. Lübeck.

Transvaal: Lydenburg; Witklip, 4800 ft., *Burt Davy*, 7264! Barberton; Fairview Farm, *Burt Davy*, 4080! Pretoria; Aapies River, *Rehmann*, 4016! 4283! *Leendertz*, 1003! *Scott Elliot* 1449! *Derde Poort*, *Leendertz*, 4016! 363 partly!

Transkei: between the Gekua River and the Bashee River, *Drège*, 5380!

Tembuland: Bazeia, 2000 ft., *Baur*, 269!

Pondoland: Fort Grosvenor, *Bachmann*, 788!

Griqualand East: near Kokstad, 4800 ft., *Tyson*, 1231!

Var. *Rogersii*, *Prain*; a typo necnon a varietate praecedenti foliis duplo brevioribus omnibus obtusis differt.

Transvaal: Waterval Boven, 4800 ft., *Rogers*, 288! Swaziland, *Stewart* (*Hb. Transv.* 8917)! Barberton; Saddleback Mt., 4500 ft., *Galpin*, 1121! Shilouvane, *Junod*, 1325!

The form here described as var. *longifolia*, though in extreme cases very distinct from typical *A. punctata*, passes insensibly into the type. Sometimes mistaken in the field for *A. angustata*, Sond., it is readily distinguishable by its different female bracts. Like *A. peduncularis*, *A. punctata* var. *longifolia* is sometimes monoecious, with axillary male spikes and a terminal female spike on the same plant. Occasionally too the foliage is variegated as in *Codiaeum*.

The form here described as var. *Rogersii*, is almost certain to prove, when fuller material is available, deserving of recognition as a distinct species.

20. *Acalypha Wilmsii*, *Pax Mss. in Herb. Berol.* Herbacea, erecta, 3-6 dm. alta, parce ramosa; caulis pubescens vel patenter setulosus. *Folia* subsessilia, membranacea, adulta firmula, ovata vel ovato-lanceolata, ima obtusa, cetera saepissima acuta, basi

rotundata vel parum cordata, margine breviter dentata, 5-7.5 cm. longa, 4-5 cm. lata, utrinque praesertim secus nervos pubescentia vel strigosa, et secus venas graciliores glandulis longe stipitatis obsita; petiolus 2 mm. longus, setulosus; stipulae 3 mm. longae, lanceolatae, persistentes. *Inflorescentiae* 1-sexuales, dioicae. *Spicae* maris axillares, solitariae, pedunculatae; pedunculi 2.5-4 cm. longi, pubescentes vel dense setulosi glandulosique; pars florifera cylindrica, gracilior, densa, 2.5-3 cm. longa; alabastra molliter pubescentia vel setulosa. *Spicae* femineae solitariae, terminales, sessiles, primum 2.5 cm. demum 7 cm. longae; bractee 1-florae, subsessiles, foliaceae, late ovato-cordatae, acutae, 1.75-2 cm. longae, 2.5-3 cm. latae, margine dentatae dentibus triangularibus brevibus, dense pubescentes vel setulosae et glandulis longe stipitatis obsitae. *Sepala* 3, acuta, pubescentia glandulosaque. *Ovarium* distincte 3-lobum, molliter pubescens et glandulosum; styli 3, basi cuneati, superne laciniati. *Semina* subglobosa.—*Ricinocarpus peduncularis*, var. *genuinus*, O. Kuntze, Rev. Gen. Pl. iii. ii. 292, nec *R. peduncularis*, O. Kuntze, l.c. ii. 618. *R. peduncularis*, var. *Radula*, O. Kuntze, l.c. iii. ii. 292 (1893) nec *Acalypha Radula*, Baker.

Transvaal: Lydenberg; Spitzkop, *Wilms*, 1326! Crocodile River, *Wilms*, 1330! Paardeplats, *Wilms*, 1331! Ermelo; *Tennant*, 6807! *Burt Davy*, 9390! *Leendertz*, 2997! Billy's Vlei, *Burt Davy*, 9211! Barberton; Saddleback Mt., 4500-4800 ft., *Galpin*, 1119! 1126!

Pondoland: Fort Grosvenor, *Bachmann*, 787! Griqualand East: Clydesdale, 2500 ft., *Tyson*, 2602! 2603!

Natal: near the Mooi River, 4000 ft., *Wood*, 4103! Highland Station, 5300 ft., *Kuntze*! Van Reenen's Pass, *Kuntze*!

REVIEW OF ACALYPHA CHAMAEDRIFOLIA.

Müller's treatment of the West Indian *A. chamaedrifolia* is somewhat on a par with that accorded to *A. peduncularis*, and we have felt constrained to re-establish most of the species reduced by him as varieties to that species.

Four of these, his var. *pendula* (*A. pendula*, Wright), var. *glechomaefolia* (*A. glechomaefolia*, A. Rich.), var. *nana* (*A. nana*, Griseb.) and var. *genuina* (*A. chamaedrifolia*, emend.) are shown in our Plate figs. 1, 2, 3 and 4 respectively, and from these drawings some idea of Müller's views of this group may be gained. Except in the case of var. *genuina*, the figures have been prepared from the actual types, which are at Kew, and we have seen no intermediate forms which in any way link them up. *A. fissa* (*A. chamaedrifolia*, var. *fissa*, Müll. Arg.), for which there was scarcely space on the plate, is perhaps the most easily recognised of the group, on account of the stems rooting at the nodes, the shape and toothing of the leaves, and the deeply 5-lobed female bracts which are most closely approached by those of *A. glechomaefolia* (fig. 2a).

Below is given the synonymy and a short description of each species indicating the more salient features by which they may be distinguished.

A. chamaedrifolia, Müll. Arg. in DC. Prodr., xv. pt. ii. 879 (emend.); Duss in Ann. Inst. Colon. Marseill. vol. iii. p. 35; Urban, Symb. Antill. vol. iv. p. 347.

Croton chamaedrifolius, Lam. Encycl. vol. ii. p. 215 (1786).

Acalypha reptans, Swartz, Prodr. p. 99 (1788), et Flor. Ind. occid. vol. ii. p. 1170; Willd. Sp. Pl. vol. iv. p. 523; Griseb. Flor. Brit. West Ind. p. 48; Duss, l.c.

A. corchorifolia, Willd. l.c. 524 (1805); Chapman, Fl. of the Southern Unit. States, p. 406.

A. adscendens, Hornem. Hort. Hafn. Suppl. 108 (1819).

A. reptans, var. *genuina*, Müll. Arg. in Linnaea, vol. xxxiv. p. 48, excl. syn. Klotzsch. *A. reptans*, var. *glechomaefolia*, Müll. Arg. l.c., partly, as to Wright, 572.

A. patens, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. 848 (1866). *A. chamaedrifolia*, var. *genuina*, Müll. Arg. in DC. l.c. 879, excl. syn. Klotzsch, and var. *glechomaefolia*, Müll. Arg. l.c., partly, as to Wright, 572.

Ricinocarpus chamaedrifolius, O. Ktze, Rev. Gen. Pl. vol. ii. p. 617 (1891). — Sloan, Hist. Jam. vol. i. t. 82, fig. 3; Plumier, Plant. Amer. t. 172, fig. 2.

Caules patentés vel suberecti, numerosi, simplices, rhizomate lignoso horizontale orti; folia heteromorpha, inferiora minora, suborbicularia, superiora majora, oblongo-ovata vel oblongo-lanceolata, basi rotundata vel truncata, 1–3 cm. longa, plerumque glabra vel fere glabra; inflorescentiae bisexuales, et terminales et in foliorum superiorum axillis aggregati, inferne ♀, superne ♂; bractea ♀ et pistillum ut in fig. 4a et 4b.

Cuba: Eastern district, Wright, 572! 1672! near Monte Verde, Wright, 1426! Santa Clara Province; Cieneguita, Cienfuegos district, Combs, 140! Haland Province; Fecha, Wilson, 1117!

Isle of Pines: near Nueva Gerona, Curtiss, 481!

Jamaica: without precise locality, Wright in Herb Forsyth! Grisebach, 423! St. Andrews, Mc Nab!

San Domingo: Schomburgk, 119!

St. Thomas: Cowells Hill, Eggers, 118!

Guadeloupe: Duchassaing!

Occurs also in S. E. Florida, and according to Urban in the islands of Porto Rico, Hispaniola and St. Croix.

We have not seen *A. microphylla*, Klotzsch, from N.W. Mexico, reduced to this species by Müller, but from the description it can scarcely be the same. The leaves are described as being 4–6 in. long and 3–4 in. broad, and the male spikes axillary and the female terminal.

A. pendula, Wright ex Griseb. in Goett. Nachr. 1865, 176.

A. chamaedrifolia, var. *pendula*, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. p. 879 (1866).

Caules lapidibus penduli (Wright); radix non visa; folia inter se similia, ovata vel oblongo-ovata, basi truncata vel leviter cordata, 1.2–4 cm. longa, 1–2.3 cm. lata, marginibus non incrassatis, utrinque molliter tomentosa, demum pubescentia; inflorescentiae et axillares et terminales; illae e floribus ♀ 1 vel 2 sessilibus constitutae; hae

androgynae, inferne ♀, superne ♂; bractea ♀ et pistillum ut in fig. 1a et b.

Cuba: La Calalina, *Wright*, 1981!

A. glechomaefolia, *A. Rich. Fl. Cub. Fanerog.*, ii. 205 (1853).

A. reptans, var. *glechomaefolia*, Müll. Arg. in *Linnaea*, vol. xxxiv. p. 48, excl. specim. *Wright*, 572.

A. chamaedrifolia, var. *glechomaefolia*, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. p. 879, excl. specim. *Wright*, 572.

Caules rhizomate prostrati, e nodis inferioribus radicanter; folia inter se similia, orbicularia, basi alte cordata, grosse crenata, 8–10 mm. diametro, margine non incrassata, utrinque pubescentia et supra parce setosa; inflorescentiae terminales, inferne ♀, superne ♂; bractea ♀ ut in fig. 2a; ovarium pilosum.

Cuba: without precise locality, *Ramon de la Sagra*, 126!

San Domingo: Jamao, *Eggers*, 2637! without precise locality, *Schomburgk*!

Müller quotes *Wright*, 572, from Cuba as being this species, but it seems to us to be a small-leaved form of *A. chamaedrifolia*.

A. fissa, *Hutchinson*.

A. chamaedrifolia, var. *fissa*, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. p. 879.

Caules prostrati, nodis radicanter, pilis reflexis pubescentes, internodiis 1–2.5 cm. longis. Folia inter se similia, ovata, basi truncata vel rotundata, 8–16 mm. longa, 8–13 mm. lata, grosse 10–12 crenata, membranacea, supra setoso-pilosa, infra patente pubescentia, basi trinervia, nervis infra prominulis; petioli 0.3–1.5 cm. longi, pubescentes. Flores monoici. Inflorescentiae et axillares et terminales, axillares ♀ breves, terminales androgynae, inferne ♀, superne ♂. Gemmae ♂ obtuse quadrangulares, glabrae. Bractee ♀ ambitu transverse oblongae, 3.5 cm. latae, alte 5–lobatae, submembranaceae, extra pilosae, lobis ovatis subacutis 1 mm. longis. Sepala parva, ciliata. Ovarium subglobosum, longe pilosum; styli graciles, tenuiter laciniati.

Cuba: without precise locality, *Wright*, 1983!

A. nana, *Griseb. in Goett. Nachr.* 1865, 176, nomen.

A. pygmaea, *Griseb. l. c.*, non *A. Rich.*, fide Müll. Arg.

A. chamaedrifolia, var. *nana*, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. p. 880 (1866).

Caules prostrati, rhizomate lignoso erecto apice patentes; folia inter se similia, orbicularia vel ovato-orbicularia, basi rotundata, 2–4 mm. diametro, marginibus cartilagine incrassatis, supra parce setoso-pilosa; inflorescentiae unisexuales, ♂ non visae; inflorescentia ♀ uniflora, flore terminali; bractea ♀ et pistillum ut in fig. 3a et 3b.

Cuba: without precise locality, *Wright*, 1984!

Apparently a very distinct species.

A. pygmaea, *A. Rich. Fl. Cub. Fanerog.*, iii. 205 (1853).

A. reptans, var. *pygmaea*, Müll. Arg. in *Linnaea*, vol. xxxiv. p. 49.

A. chamaedrifolia, var. *pygmaea*, Müll. Arg. in DC. Prodr. vol. xv. pt. ii. 880 (1866).

Caules di usi, e basi ramosi; folia ovata, acuta, basi obtusa (4–6 mm. longa, ex Müller), serrata, nervis pubescentibus; inflorescentia brevis, subterminalis, androgyna, inferne floribus 2–3 subsessilibus constituta, superne ♂; bractea ♀ 5-dentata.

Cuba: near the sea, *Ramon de la Sagra* (Herb. Paris).

We have not seen an example of this species, but from the description, an adaptation of which is given above, it is evidently quite distinct and most nearly allied to *A. nana*.

EXPLANATION OF PLATE.

Fig. 1, shoot of *Acalypha pendula*.

1a, female bract of same.

1b, pistil.

Fig. 2, plant of *A. glechomaefolia*.

2a, female bract of same.

Fig. 3, plant of *A. nana*.

3a, female bract of same.

3b, pistil.

Fig. 4, portion of plant of *A. chamaedrifolia*.

4a, female bract of same.

4b, pistil.

Analyses enlarged.

II.—NEW ORCHIDS: DECADE 39.

381. *Liparis nana*, Rolfe; inter species Asiaticas habitu nana, floribus atropurpureis, columna lata et fere recta distinctis.

Herba terrestris, nana, circiter 3·5 cm. alta. *Folia* 3–4, rosulata, patentia, ovato-oblonga, subobtusata, undulata, 2–2·5 cm. longa. *Scapus* circiter 3·5 cm. altus, angulatus; racemus brevis, subcorymbosus. *Bracteae* ovato-lanceolatae, acutae, basi subconcaevae, 3–5 mm. longae. *Pedicelli* 7–9 mm. longi. *Flores* purpurei. *Sepala* subpatentia, ovato-oblonga, subacuta, leviter carinata, 6 mm. longa. *Petala* recurva, linearia, acuta, 5 mm. longa. *Labellum* sessile, late cordato-oblongum, apiculatum, conduplicatum, margine denticulatum, 4 mm. longum, per discum late canaliculatum, basi septo transverso nitido instructum. *Columna* oblonga, lata, medio canaliculata, 4 mm. longa, apice breviter bidentata.

ANNAM.

Sent to Kew for determination by Mr. Gurney Wilson, Glen-thorne, Haywards Heath, who remarks that it was found growing on an imported plant of *Cymbidium insigne*, Rolfe. It is a very small plant, with dark purple flowers, and somewhat anomalous in its very broad nearly straight column. Its precise affinity remains at present uncertain.

382. *Cirrhopetalum miniatum*, Rolfe; a *C. gracillimo*, Rolfe, scapis brevioribus, floribus majoribus, miniatis, sepalo postico et petalis flavo-pilosis valde differt.

No.	Article.	Subject.	Page.
7	XLI.	The Imperial Botanic Garden of Peter the Great at St. Petersburg (with plates) ...	243
"	XLII.	Notes on Queensland Florideae ...	252
"	XLIII.	The Wallichian Herbarium ...	255
"	XLIV.	Decades Kewenses : LXXIV. ...	263
"	XLV.	Visit to the Forests of Switzerland ...	269
"	XLVI.	Miscellaneous Notes ...	278
8	XLVII.	A Botanical Expedition to the Canary Islands (with plates) ...	287
"	XLVIII.	Diagnoses Africanæ : LV. ...	299
"	XLIX.	A Disease of Narcissus Bulbs (with plate) ...	307
"	L.	The National Botanic Garden of South Africa... ...	309
"	LI.	Miscellaneous Notes ...	314
9	LII.	Minor Agricultural Industries : III. Flax ...	319
"	LIII.	Acanthus pubescens and A. arboreus ...	336
"	LIV.	New Orchids : 41 ...	338
"	LV.	Nematodes or Eelworms (with plate and figs.) ...	343
"	LVI.	Decades Kewenses : LXXV. ...	352
"	LVII.	Miscellaneous Notes ...	358
10	LVIII.	Notes from a West Indian Coral Island ...	367
"	LIX.	The National Botanic Garden of South Africa (with plates)... ...	373
"	LX.	The South African Species of Cluytia ...	373
"	LXI.	Miscellaneous Notes ...	417
Appendix I.	—	List of seeds of hardy herbaceous plants and of trees and shrubs ...	1
" II.	—	Catalogue of the Library. Additions received during 1912 ...	21
" III.	—	New garden plants of the year 1912... ..	50
" IV.	—	Botanical Departments at home and in India and the Colonies ...	80

ERRATA.

Page 23, line 20 from bottom, for *Zeyher*, 15, 21! read *Zeyher*, 1521!

Page 32, line 19 from top, for *abysinnica* read *abyssinica*.

Page 44, line 7 from top, for Bahtian (?) read Baktiari.

Page 128, line 15 from bottom, for Tita Shur read Tita Ghur.

Page 145, line 8 from bottom, for Franklyn read Franklin.

Page 257, line 5 from bottom, for Booth read Boott.

Page 278, line 8 from bottom, and page 311, line 3 from bottom, for Matthews read Mathews.

Page 317, lines 15 to 32 from top, for Houttyn read Houttuyn.