

## TWO INTERESTING PLANT RECORDS FROM EAST AFRICA

By

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## 1. An Interesting Fern Record From Kenya

The genus Adiantum L. is known to most people interested in plants since it contains the familiar Maidenhair fern (Adiantum capillus-veneris L.). Eight other species, including two escapes, are now recorded from East Africa.

In April 1959, Mr. Terence Adamson, who has collected many interesting plants in the Northern Frontier Province of Kenya, found a fern on a steep cliff on Mt. Kulal, which is to the east of the southern end of Lake Rudolf. He brought a few fronds to the herbarium where Mr. Newbould immediately recognised it as something exciting and identified it as Adiantum reniforme L. var. asarifolium Willd. Material was later collected on Marsabit. I have also heard that it had previously been found there by another collector but no specimens were presented to the herbarium; Kew were also unaware that the plant had been found in Kenya. Until someone claims to the contrary, and presents evidence, Mr. Adamson's record is considered to be the first. Prof. R.E.G. Pichi-Sermolli does not mention the species in his excellent and beautifully illustrated account of the species of Adiantum occurring in north east Africa (Adumbratio Florae Aethiopiae 5. Parkeriaceae, Adiantaceae, Vittariaceae (1957)). A figure based on T. Adamson's Marsabit specimen has kindly been drawn by Mrs. E.J. Brown (Fig. 1)

This record is of extreme interest. Typical Adiantum reniforme occurs in Madeira, the Canary Islands and the Cape Verde Islands. Adiantum reniforme L. var. asarifolium Willd. is recorded from Mauritius and Réunion (Bourbon) and Adiantum reniforme L. var. crenatum Bak. from Madagascar. There are two other records from continental Africa, both a little dubious, though why I do not know, since the plant is utterly unmistakable. The Rev. J. Buchanan is said to have gathered some barren fronds by a spring on the Drakensberg mountains (T.R. Sim, The Ferns of South Africa, p. 241, t. 118 (1915). Kuhn in his Filices Africanae (1868) records it doubtfully from Senegambia. Even if these records are accurate, the occurrence of this plant in Kenya is still somewhat of a remarkable discovery. They may indicate a relict distribution, or a possible explanation might lie in the fact that spores have been carried by birds. The flora of Marsabit and Kulal is not at all peculiar, being closely similar to that occurring at similar altitudes in the Central Province of Kenya. The distribution is mapped in Fig. 2.

The actual validity of the varieties needs careful investigation. Christiansen (Cat. Pterid. Madagascar, 51 (1931)) does not uphold the variety crenatum; incidentally he records both the typical variety and var. asarifolium from Madagascar. Hooker and Baker (Synopsis Filicum, 114 (1867)) distinguish the var. asarifolium as follows - stems stronger, 6-12 in. long (not 4-6 in.), frond 2-4 in. broad (not 1.5-2.5 in. broad) with a deep narrow sinus (not a broad open sinus).

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The sheets available for study in Nairobi are cited below.

KENYA. Northern Frontier Province. Mt. Kulal, growing in small tufts on a cliff, at about 7000 ft. alt., April 1959, I. Adamson in EAH 11649 (EA); Marsabit, July 1959, I. Adamson in EAH 11691 (EA), and same locality, Gof Sokorte-dika, south wall, on sheer cliff in forest, spring at foot of cliff, 18th Aug. 1959, J.A. Wood 100 (EA).

In order to make this note as useful as possible the other species of Adiantum recorded from East Africa are keyed out below and portions of fronds are figured in fig. 3 for which I am also indebted to Mrs. E.J. Brown.

1. Fronds simple, reniform.  
(Kenya: Marsabit, Kulal)..... Adiantum reniforme L.
1. Fronds variously pinnate,  
never simple..... 2
2. Fronds subpalmately divided into  
several pinnate pinnae, stems hairy  
(Kilimanjaro, W. Usambaras)..... Adiantum hispidulum Sw.
2. Fronds once to thrice pinnate..... 3
3. Fronds simply pinnate..... 4
3. Fronds twice or more pinnate..... 6
4. Rhachis glabrous, pinnules about twice as  
long as broad, on quite long delicate  
stalks (Tanganyika: Kiberege, Tunduru,  
Tendaguru and Lindi)..... Adiantum philippense L.
4. Rhachis hairy, pinnules more shortly  
stalked or sessile..... 5
5. Pinnules not deeply incised  
(E. Usambaras, Amani - seemingly  
rare\*, only one specimen in the  
E.A. Herbarium)..... Adiantum confine Fee
5. Pinnules deeply incised; fronds  
often rooting at the tips if they  
touch the ground (Uganda: Murchison  
Falls, Lake Albert scarp; Kenya:  
Thika, Emali, Chyulus, Moyale;  
Tanganyika: Amboni, Amani, W. Usambaras,  
Pares, Marangu; Zanzibar) (Sometimes  
misidentified with the oriental  
Adiantum caudatum L.)..... Adiantum incisum Forsk.

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\* A. Peter appears to have collected about a dozen specimens in the East Usambaras.

6. Pinnules small, 7-10 mm. long and 3.5-10 mm. wide, strongly cuneate at the base, slightly incised at the apex; sori round or kidney-shaped (A delicate fern with numerous small pinnules; a tropical American species now commonly naturalised on banks at Amani, Tanganyika).....Adiantum cuneatum Langsd.& Fisch.
6. Pinnules larger, sori oblong, square, curved-oblong or reniform.....7
7. Pinnules usually smaller, rounded to cuneate at the base, not so deeply incised, usually regularly crenate, 5-14 mm. long and 6-15 mm. wide, breaking off at maturity and leaving a short stalk; sori rounded-oblong or reniform (Uganda: Moroto, Elgon; Kenya: Chyulus, Mt. Kenya, S. Kinangop, Mau, Elgon, Mt. Kulal; Tanganyika: Kilimanjaro, Meru, Monduli, Hanang, Kigoma) (This has been usually misidentified with Adiantum poiretii Wikstr.).....Adiantum thalictroides Willd.
7. Pinnules usually larger, rounded to strongly cuneate at the base, slightly to very deeply incised, 8-22 mm. long and 6-22 mm. wide, persistent at maturity; sori approximately oblong or square, not curved (Kenya: Chyulus, Mbololo, Nairobi, Thika Gorges, Kedong Valley, Mau, S. Kinangop; Tanganyika: Kilimanjaro, Crater Highlands, Pares, Mpwapwa.).....Adiantum capillus-veneris L.

There is a single specimen of Adiantum weigandii Moore in the East African Herbarium collected by Mrs. Moreau at Amani and kindly determined by Mr. F. Ballard of Kew. This is not an African species and, since there is no data with it and it was perhaps collected in the little fern house once maintained at Amani, it has been omitted from the key. It resembles Adiantum capillus-veneris L. in its deeply incised, cuneate pinnules about 1.5 cm. long and broad but the sori are round or kidney-shaped.

Addendum. A. Peter (Flora von Deutsch-Ostafrika 1, 43-45 and Anhang 4, t.5, f.1 (1929)) describes two species of Adiantum from Tanganyika, namely A. pedatum A. Peter, the description and figure of which indicate that it is close to A. hispidulum Sw. but has larger pinnules and is not hairy; and A. alatum

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A. Peter, which from the description (no figure is given) is closely allied to A. philippense L. but has winged rachides and shorter, winged petioles. Since so many of Peter's species are superfluous and no material in the herbarium can be referred to either of them I have omitted them from the key.

### 2. Monanthotaxis poggei Engl. & Diels (Annonaceae);

#### A New Generic Record For East Africa

The western affinities of the forest flora of the Lake Province of Tanganyika and adjacent parts of Uganda are emphasised nearly every time a collection from that area is received for naming.

In several small collections sent in for naming by Miss V.J. Morris-Goodall and Mrs. M. Morris-Goodall, who are carrying out researches into the habits of Chimpanzees in the Kigoma area of western Tanganyika, three specimens of an unfamiliar Annonacea were discovered. With the aid of Boutique's keys in Flora Congo Belge this was readily identified as Monanthotaxis poggei Engl. & Diels, a species represented in the East African Herbarium by two sheets from the Congo, comparison with which left no doubt as to its identity. Apart from the Congo, where it is widespread, but local, in the equatorial forest, only one other very recently recorded occurrence in Angola could be found in the literature. The distribution of the tree is shown in Fig. 5. Rosette Fernandes gives a photograph of the Angolan specimen collected by Gossweiler and through the kindness of Mrs. Church I have been able to include a drawing giving fuller details (Fig. 4). The tree is well characterised by the silvery adpressed hairs beneath the leaves and the small flowers with six valvate petals. Details of the specimens are given below; unfortunately all are unicates and are represented only in the East African Herbarium, Nairobi.

Monanthotaxis poggei Engl. et Diels in Engl., Monogr. Afr. Pflanzen-fam., 6, 53 (1901); Boutique in Fl. Congo Belge 2, 373 (1951); R. Fernandes in Garcia de Orta 6, 673-677, t.1 (1958).

TANGANYIKA. Western Province, Gombe Stream Chimpanzee reserve, north of Kigoma, 1960, Mrs. M. Morris-Goodall 59 (EA), and same locality, Jan. 1961, Miss V.J. Morris-Goodall 6 (EA): small tree, flowers rather fleshy, yellowish, and same locality, in 'miombo woodland', 11 March 1961, Miss V.J. Morris-Goodall 30 (EA): shrub with small green fruits.

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Explanation of Figures

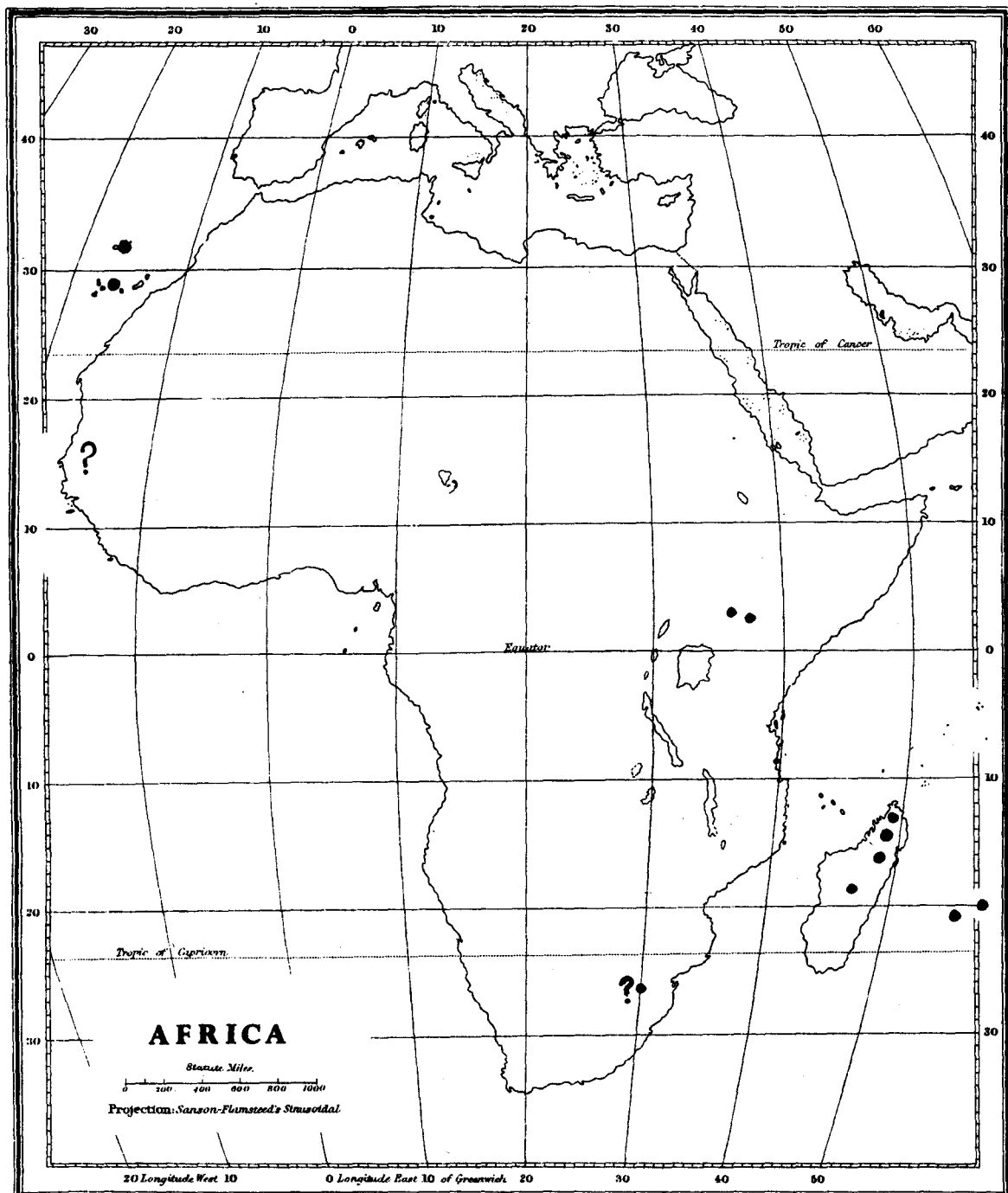
- Fig.1 Adiantum reniforme L. var. asarifolium Willd.  
Kenya, Mt. Kulal, T. Adamson. (Sori enlarged).
- Fig.2 Distribution of Adiantum reniforme L.
- Fig.3 Adiantum species; fronds and sori.
- a. Adiantum confine Fée. Drawn from Warnecke 473.
  - b. Adiantum incisum Forsk. Drawn from Meinertzhagen 9472.
  - c. Adiantum capillus-veneris L. Drawn from Gillett 14881.
  - d. Adiantum cuneatum Langsd. & Fisch. Drawn from  
Verdcourt 276.
  - e. Adiantum hispidulum Sw. Drawn from Molesworth-Allen 3613.
  - f. Adiantum thalictroides Willd. Drawn from Hedburg 65.
  - g. Adiantum philippense L. Drawn from Schlieben 6035.
- Fig.4 Monanthotaxis poggei Engl. & Diels.
- a. Fruiting branch, x 2/3.
  - b. Flower, x 6.
  - c. Part of corolla, x 8.
  - d. Sepal, x 8.
  - e. Carpels, x 20.
  - f. Stamen, x 20.
- Fig.5 Distribution of Monanthotaxis poggei Engl. & Diels.

Plant Records



Fig. 1 Adiantum reniforme L.

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Fig. 2 Distribution of Adiantum reniforme L.

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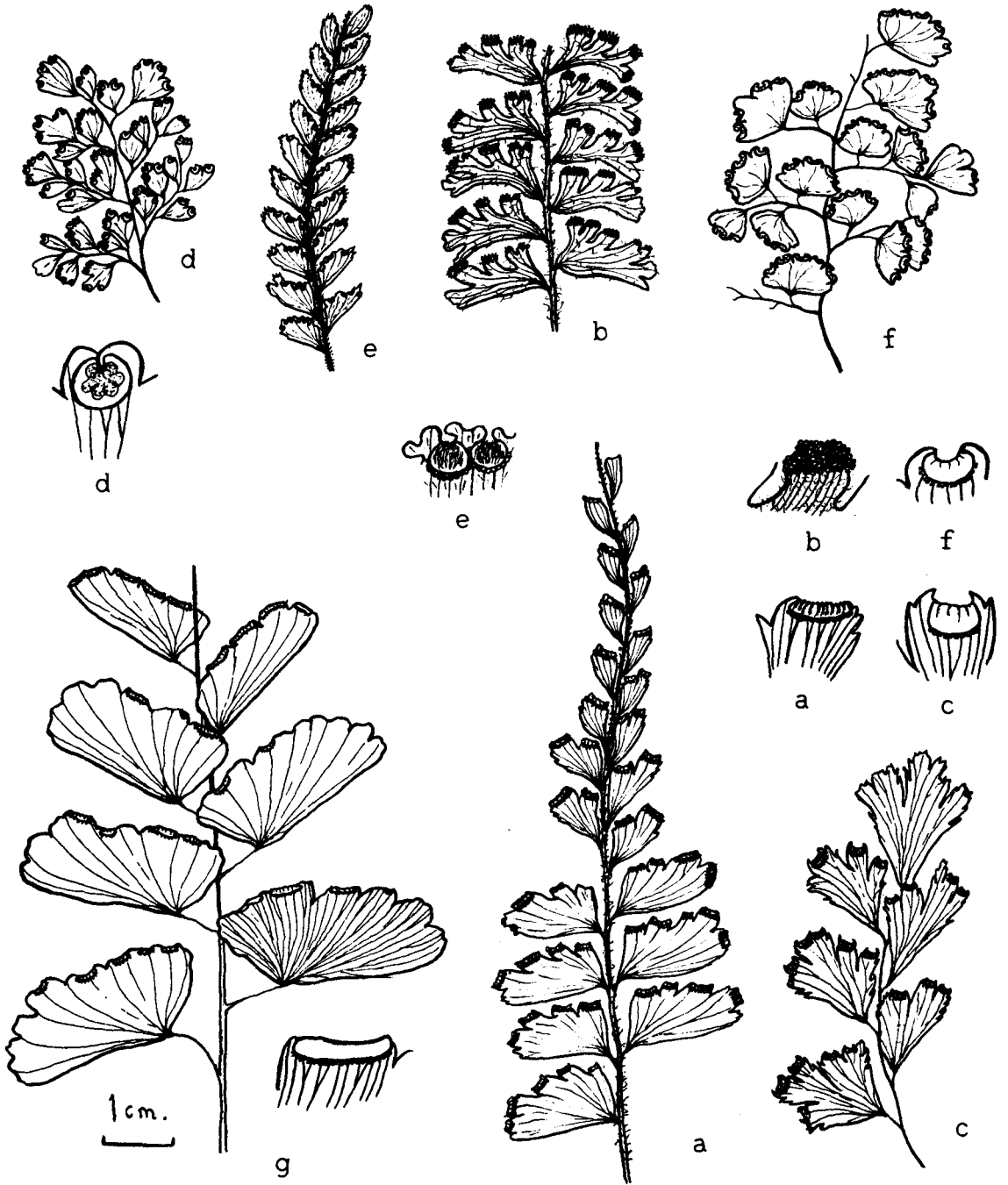
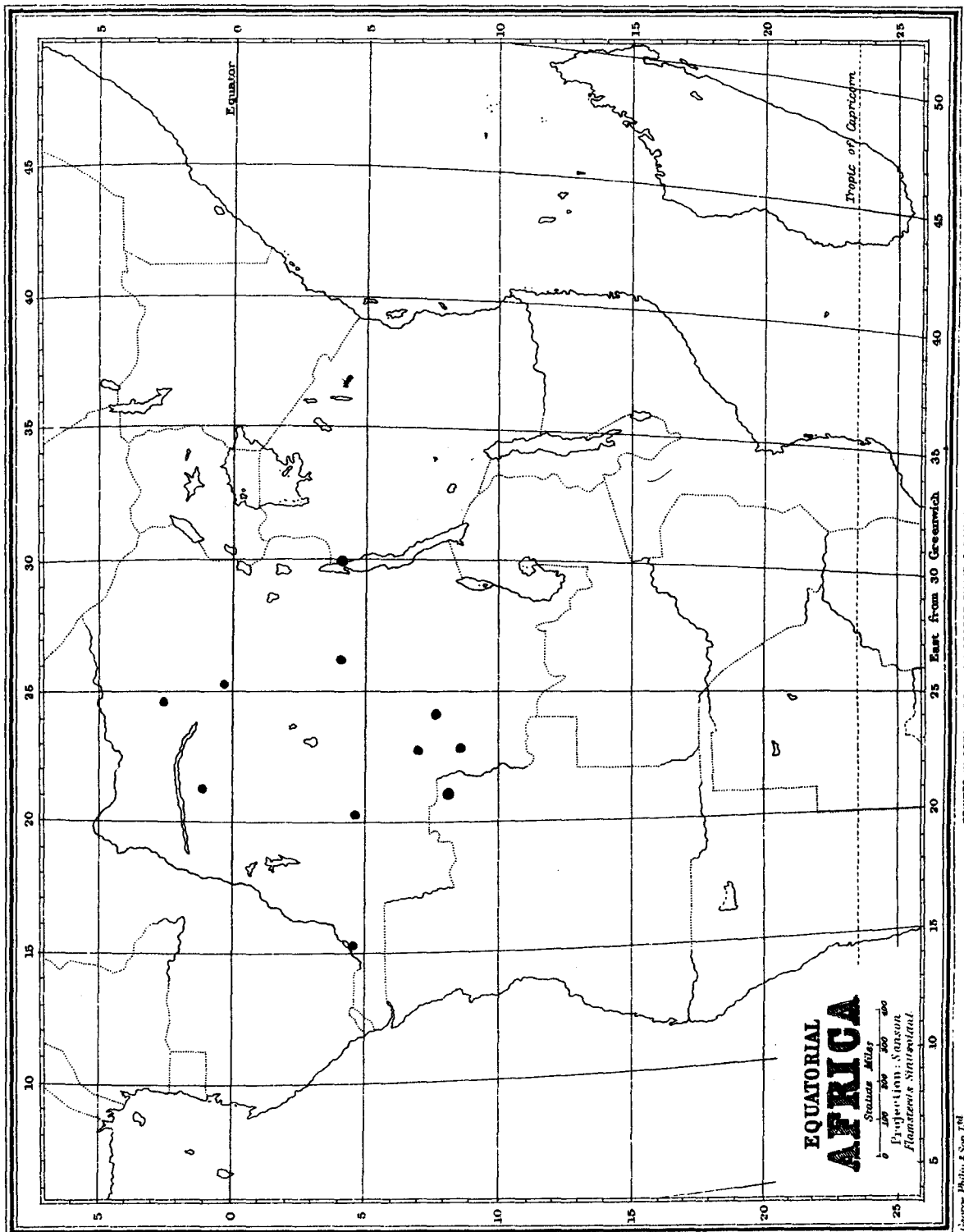


Fig. 3 Adiantum species





Fig. 4 *Monanthotaxis poqgei* Engl. & Diels



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Fig. 5 Distribution of Monanthotaxis poggei Engl. & Diels

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