

## BOTANICAL NOTES.

By E. R. NAPIER.

### RANUNCULACEAE (Cont.)

“ Traveller's Joy,” “ Old man's beard.”

*Clematis*.—A cosmopolitan genus described by Linnaeus, containing many beautiful cultivated species, and a few medicinal ones. Of the 200 species distributed over the world, 40 occur in Africa, but only about a dozen are to be found in the Tropics. Three of those might be called common in Kenya.

#### PLATE I.

*Clematis grata*, Wall.—A rampant climber covering entire bushes with its shroud of greenish white flowers, which later turn to feathery fruits—the “ old man's beard?”

STEMS.—Somewhat woody, ribbed, twining, covered with very short dense hairs.

LEAVES.—Dark green, scarcely hairy above, but with silky hairs below, 3, 5, or 7 leaflets, which are stalked, ovate, broadly and irregularly toothed, or sometimes with three distinct lobes. They are in opposite pairs.

FLOWERS.—In leafy panicles, or without leaves. Flower stems thickly covered with short hairs. Flowers greenish white about  $\frac{1}{4}$ " in diameter. Sepals usually four, spreading or reflexed, silky hairs outside but nearly smooth and hairless inside. No petals; a thick ring of yellow tipped stamens surrounds the bunch of pappus-like styles. As the seed ripens these styles become more hairy and longer, finally about 2 inches long, with dark tips, the seed is then distributed by wind.

DISTRIBUTION.—Common around Nairobi, and in other parts of the Colony, also found in Abyssinia, Angola, Zambesi and in Asia.

*Clematis inciso-dentata*, A-Rich.—Perhaps this is the commonest of the Kenya species, it occurs from about 6,000 feet, upwards to about 8,000 feet, and is very conspicuous along the Lumbwa-Kericho roadside.

The leaves vary greatly but are usually smaller and rounder than those of *C. grata*, the nerves being depressed on the upper and very prominent on the lower surface.

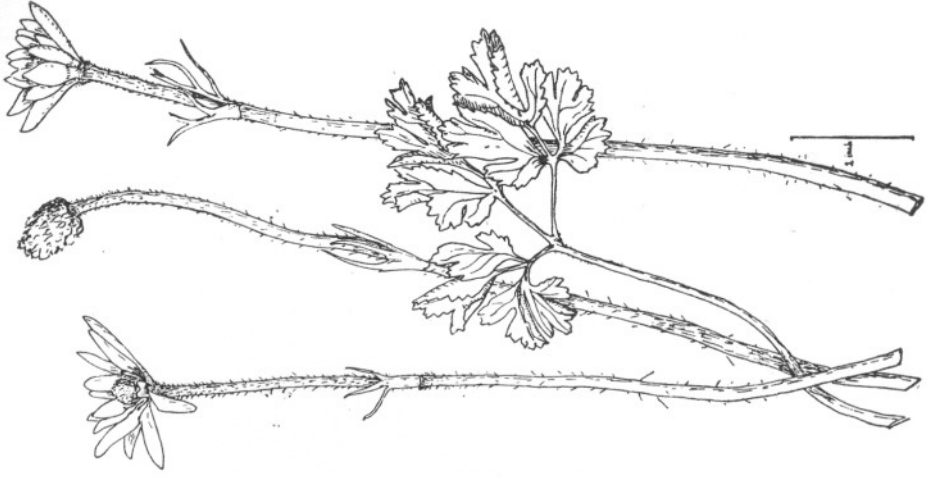
The flowers are about 1" in diameter, creamy white in colour.

*Clematis Simensis*, Fresen, easily distinguished from the above species by the narrow shiny glabrous leaves, leaflets are longer and narrower, stems usually dark red, flowers greenish white.

The following species were found by the Fries brothers in 1930.

*C. Friesiorum*, Ulbrich, Meru district.

PLATE I.

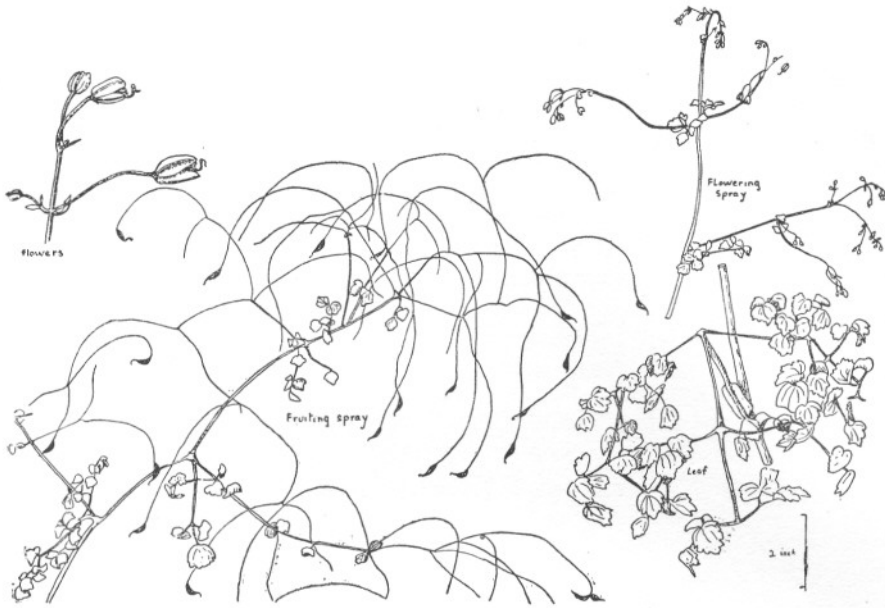


*Anemone thomsonii*, Oliv.



*Clematis grata*, Wall.

PLATE II.



*Thalictrum rhynchocarpum*, Dill et Rich.



*Berberis holstii*, Engl.

*C. Whightiana*, Wall. on Mount Kenya and the Aberdares.

*C. Stolzii*, Eng., Meru forest, also Nyassaland.

*Anemone*.—About 120 cosmopolitan species, of which "15 species come from North, South, and East Africa, several are poisonous, some are used as ornamental or medicinal plants." (Thonner's Flowering Plants of Africa). The genus was described by Linnaeus.

#### PLATE I.

*Anemone Thomsonii*, Oliv. described in 1883, inhabits the mountainous country, growing in moorlands, usually near streams. Ulbrich describes a variety of this species from the Aberdares, but it is very much like the original *A. Thomsonii*.

**STEMS.**—Erect, rather thick and hairy, the hairs are thicker and longer near the flower head than on the lower part of the stem. Height varies from a few inches to just over a foot. The stem bears a few sessile leaflets below the flower head.

**LEAVES.**—Radical, on stems varying from a few inches to a foot, compound with three stalked main divisions each consisting of three divided and toothed leaflets, hairy or nearly glabrous.

**FLOWERS.**—At the apex of unbranched stems, about  $1\frac{1}{2}$ " diameter. The outer perianth segments purple, the inner ones cream, but colours vary slightly.

The numerous stamens of different lengths form a thick circle around the tightly packed knob of achenes, which are clothed in whitish down, the stigmas protrude and are of a darker colour.

**DISTRIBUTION.**—Kilimanjaro, Elgon, Aberdares, Mount Kenya. This includes the variety *A. Thomsonii* var *Friesiorum* Ulbrich. There are no other species recorded from Kenya.

*Thalictrum*.—A other of the numerous genera first described by Linnaeus, it is really a N. Temperate genus. It is however represented in the tropics by one species.

#### PLATE II.

*Thalictrum rhynchocarpum*, Dill et Rich.—The plant when not in flower bears a strong superficial resemblance to a maiden hair fern, not only in form but in its choice of habitat, growing in shade and on river banks.

**STEMS.**—Main stems reddish green, erect smooth, 2—10 feet high, much branched.

**LEAVES.**—Compound, curiously branched, leaflets about  $\frac{1}{3}$ " long, ovate, and toothed. Delicate colour and texture, leaf stems dark red or reddish green.

**FLOWERS.**—In a diffuse panicle, numerous green flowers on hair like pedicels, which grow after flowering up to 6 inches in length. There is one, and occasionally two achenes (the other members of the family having several to many), it is dark green, brown or black and strongly 3 ribbed on each side, and tapering at both ends, not unlike a large carroway seed.

**DISTRIBUTION.**—Cosmopolitan.

### BERBERIDACEAE.

*Berberidaceae* belongs to the group or order of *Berberidales*, which consists of five families, but only two are represented in Kenya. The *Berberidales* are more advanced than the *Ranales* in Mr. Hutchinson's opinion. the flowers being hermaphrodite or unisexual the stamens instead of being numerous are fewer and definite in number.

The family *Berberidaceae* is common in cold or temperate countries; in the tropics it is found at an altitude of about 8,000 ft. to 10,000 ft. The chief characteristics are; the petals and sepals are similar, but in two to several series, the stamens are opposite the petals and open either by longitudinal slits or more commonly by valves (as illustrated). There is only one carpel.

---

*Berberis.*—The only East African genus of the three African genera, the other two occur in North and West Africa, none are to be found in South Africa. The genus consists of four species of woody shrubs, with undivided leathery leaves. "They yield timber, tanning, and dyeing materials, fish poison, medicaments, and edible fruits which are also used for the preparation of drinks and confectionery." (Thonner's "Flowering Plants of Africa.")

### PLATE II.

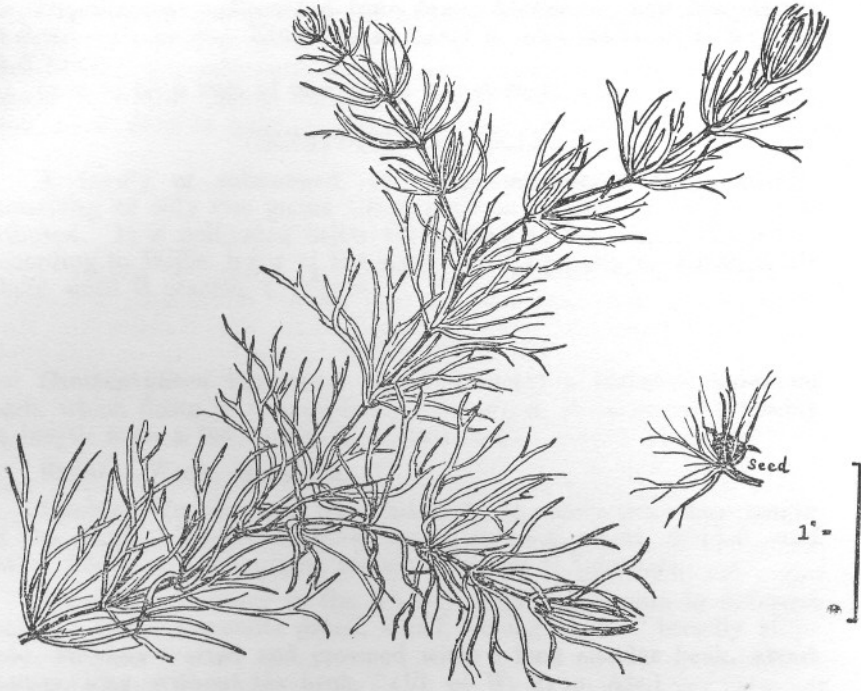
*Berberis Holstii*, Engl.—A bush growing to 12 ft. or more in height, much branched.

**STEM.**—Woody, dark brown, ribbed, branches somewhat drooping.

**LEAVES.**—Oblong, narrowing towards the base (cuneate), with spines on the margins, or entire. First leaves of the shoots reduced to spines.

**FLOWERS.**—In racemes, yellow, consisting of three or four small pink tinged bracts, and nine yellow corolla segments, stamens 6, opening by valves. Ovary superior, green, conspicuous; stigma, flat and round, persistent in fruit. Fruit, a blue-black berry covered with a bloom when ripe.

PLATE III.



*Ceratophyllum demersum*, L.



*Nymphaea capensis*, Thunb.

**DISTRIBUTION.**—Recorded from Mau, Aberdares, and Mt. Kenya at 9,000—10,000 ft. Kinangop at 8,000 ft. and grows in cultivation at 5,700 ft.

Said to be a host of one of the wheat rusts.

#### CERATOPHYLLACEAE.

A family of submerged, or partly submerged water plants, consisting of only one genus *Ceratophyllum* which is widely distributed. It is pollinated below the surface of the water, the pollen according to Willis, being of the same specific gravity as water, drifts about until it reaches a stigma.

#### PLATE III.

*Ceratophyllum demersum* L., Hornwort; a glabrous perennial herb, which floats or is completely submerged, it varies considerably in length from a few inches to several feet.

**STEMS.**—Weak, branched.

**LEAVES.**—In whorls at close intervals on nearly the whole length of the stems. Twelve or fewer leaves in each whorl, divided, and either linear or with minute recurved thorns at intervals.

**FLOWERS.**—Solitary in the whorls, male and female in different whorls. Calyx segments green, small, oblong, fruit "broadly ellipsoid, strongly warted and crowned with a long slender beak, about 5 m.m. long, without the beak." (Fl. of W. Trop. Afr.)

**DISTRIBUTION.**—Cosmopolitan.

#### NYMPHACEAE.

This family ends the order or cohort of *Ranales* in Mr. Hutchinson's classification. It consists of water plants growing from submerged rhizomes with large floating undivided leaves, and showy and sometimes sweet scented flowers.

#### WATER LILY.

*Nymphaea* L.—The only East African genus of the family. "There are 20 species in Africa, some used as ornamental and fodder plants; the root stocks and seeds are edible and yield a drink, medicaments and a dye." (Thonner's Flowering Plants of Africa).

#### PLATE III.

*Nymphaea capensis* Thunb.—Described in 1800. *N. caerulea*, and *N. sanzibarensis* are synonyms. It is a very variable species as regards size and colour.

**STEM.**—Shiny, hairless, varying in length according to the depth of the water. Unbranched.

**LEAVES.**—Oval or nearly round, split up to the centre. Hairless nerves showing on the under side, but not as numerous as in *N. Lotus*, often reddish in colour. Margins either irregularly toothed or entire.

**FLOWERS.**—Colour from blue to pink including the intermediate shades of mauve. Sepals narrow compared with *N. Lotus*. Petals numerous, stamens numerous, stigmatic rays short. Size varies from 1 inch to 10 inches in diam. Sometimes sweet scented.

**DISTRIBUTION.**—Egypt, through East Africa to the Eastern Cape, Angola and in Madagascar.

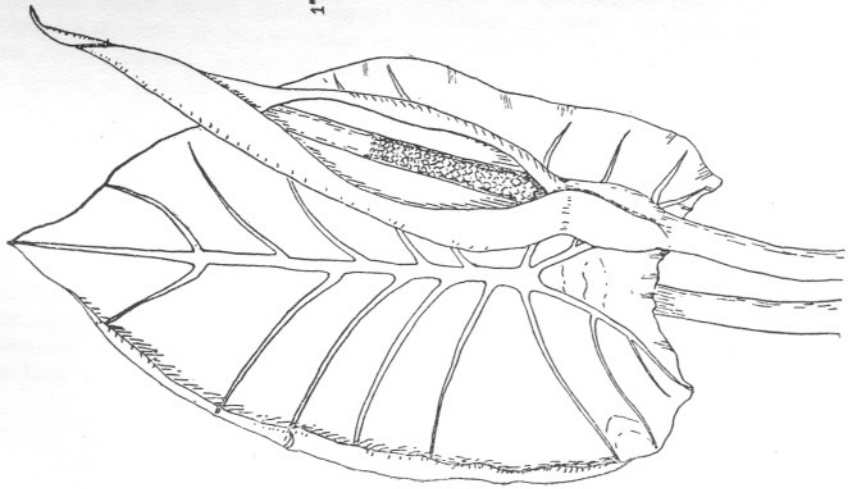
*Nymphaea Lotus L.*—This differs from *N. capensis* in colour of flower which is white or pinkish or blueish white, the sepals are broader. The leaves, are regularly and sharply toothed, with numerous nerves on the hairy under surface. The distribution of this species is from Egypt through East Africa, to Nyassaland and across to Angola, also in Madagascar.

Plate IV should face page 224 of the journal No. 49—50. On page 221 Agricultural Show should be Horticultural Show. On page 223 *Gonatopus Bovinii* should be *G. Bovinii*



PLATE IV.

[ = 1 inch ]



*Culcasia antiquorum*, Schott.



*Gonatopus boivinii*, Hook f.