

New Hawaiian Plants.—III.

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**Hibiscus kahilii**, sp. nov.

Arbor 75-90 dm. alta; foliis ellipticis vel cuneiformis, serratis, scabro-pubescentibus, 5-6 cm. longis, 2.5-.5 cm. latis; petiolis pubescentibus, .5-1 cm. longis. Flores solitarii, axillares; pedunculis pubescentibus, articulatis prope summis, 1.5-2 cm. longis; involucri-bracteis lanceolatis, pubescentibus, 11 mm. longis; calyce tomentosi, tubulato, brevi dentato, marginati, 2.5-2.7 cm. longo; petalis oblongo-spatulatis, rubris, extus pubescentibus, 6.5 cm. longis, 11 mm. latis; columna staminea 5 cm. longa, stylis hirsutis, 9 mm. longis. Capsula ignota.

Type locality, near the Wahiawa swamp, on the slopes of Kahili, Kauai. Specimens first collected by Mr. J. M. Lydgate a number of years ago. C. N. Forbes, No. 259, K. August, 1909.

A tree 75-90 dm. high. Leaves elliptical to cuneiform, serrate on the upper two-thirds, lower third generally entire, scabro pubescent, 5-6 cm. long, 2.5-3.5 cm. wide; with pubescent petioles of .5-1 cm. long. Flowers solitary in the axils; with pubescent peduncles, articulate near the top, 1.5-2 cm. long. Involucral bracts lanceolate, pubescent, 11 mm. long. Calyx pubescent, tubular, marginate, shortly dentate, 2.5-2.7 cm. long. Petals oblong-spatulate, red, pubescent on the outside, 6.5 cm. long, 11 mm. wide. Staminal column 5 cm. long. Styles hirsute, 9 mm. long. Capsule unknown.

This species differs from *H. kokio* Hillebr. in its pubescent calyx, and in other minor characters. A red hibiscus growing on Hauopu, Kauai, although very different in habit, has flowers very similar, and is probably a variety. Another specimen, originally from Napali, which has been under cultivation a number of years in Mr. Lydgate's garden at Lihue, Kauai, is probably another species, or distinct variety. It has much shorter involucral bracts, and a wider corolla of a different shade of red. As I have never seen it in its native locality, I hesitate to describe it at present. I observed still another form, growing on the cliffs near Kalalau, which I was unable to obtain, which had a staminal column which protruded beyond the petals.



HIBISCUS KAHILII FORBES.

***Kadua fluviatilis*, sp. nov.**

Frutex 6-9 dm. alta; foliis lanceolatis, acuminatis, basi acuminata, glabris, 21 cm. longis, 4.5 cm. latis, cum petiolis 2.5 cm. longis; stipulis triangularis, mucronatis. Flores axillares vel sub-axillares; pedicellis 2.5 vel 4 cm. longis; calycis lobis lanceolatis, 11 mm. longis; corolla alba, glabra; tuba 2 cm. longa, lobis reflexis, 9 mm. longis; antheris linearis, sessilis, inclusis; stilo glabro, bifido, 7 mm. longo; lobis 4 mm. longis, linearis. Capsula obconica, calycis laciniis coronata; seminibus angulariis, marginatis, minutissimis pustulatis.

Type locality, on the borders of the upper Wahiawa stream, Oahu. To be expected along the streams of the Koolauloa mountains, Oahu. C. N. Forbes, No. 1621, O. December 18, 1910.

Bushy, 6-9 dm. high. Leaves lanceolate, acuminate, base acuminate, glabrous, 21 cm. long, 4.5 cm. wide, with petioles 2.5 cm. long. Stipules triangular, mucronate. Flowers axillary or sub-axillary, on pedicels 2.5-4 cm. long. Calyx lobes lanceolate, 11 mm. long. Corolla white, glabrous, tube 2 cm. long, lobes reflexed, 9 mm. long. Anthers linear, sessile, inclosed below the throat. Style glabrous, bifid for one-third of its length, with broad linear lobes. Capsule obconical, strongly marked by four ridges, alternating with four grooves, drawn out into the slightly elongated pedicel, crowned by the calyx lobes. Seeds angular, margined, minutely pustulate.

This species is closely related to *Kadua acuminata* Cham. & Schl., but is very different in appearance. Its leaves are larger and more typically acuminate than *K. petiolata* Gray, while its flowers are pure white, the latter species having greenish flowers. The corolla is considerably longer and larger than in these two species.



KADUA FLUVIATILIS FORBES.



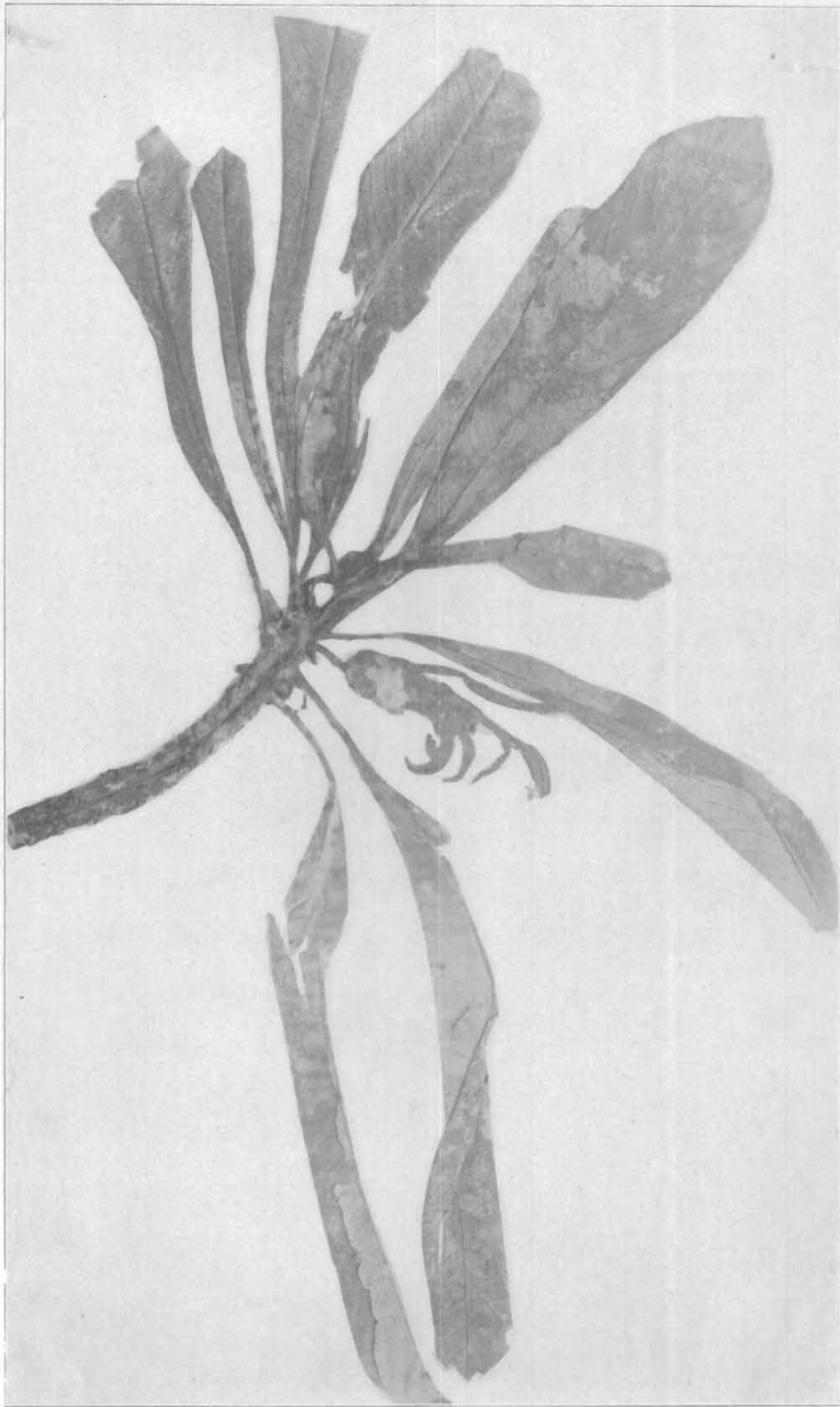
**Clermontia tuberculata**, sp. nov.

Arbor 45 dm. alta; foliis obovatis vel oblongis, serrulatis, coriaceis, glabris, cum nerviis subter minutim tuberculatis, 19.5 cm. longis, 4 cm. latis, petiolis 2-3 cm. longis; pedunculis bi-floribus vel uni-flori, 5 mm. longis, pedicellis 3 cm. longis cum parvis tuberculatis. Flores grandes; calyce tubo campanulato, extero tuberculato, 1.7 cm. longo, cum lobis obtusis, tuberculatis, 3 mm. longis; corolla carnosae, parum curvatae, extera tuberculata, viridis, intra rubrae 5 cm. longa; antheris rubris, glabris. Bacca globosa tuberculosa, 1.3 cm. crassa, seminibus ovoidis, levibus, flavis.

Type locality, wet woods on the slopes of Haleakala, Maui, to the east of and between Olinda and Ukulele. C. N. Forbes, No. 201, M. July, 1910.

A tree about 45 decimetres high, with the habit of *Clermontia arborescens* (Mann) Hillebr. Leaves obovate to oblong, serrulate, glabrous, coriaceous, the veins on the under side minutely tuberculate, 19.5 cm. long, 4 cm. wide, with petioles 2 to 3 cm. long. Flowers in cymes or single, the peduncle 5 mm. long, pedicels 3 cm. long, both covered with small tubercles. Calyx tube campanulate, with short obtuse lobes, covered with tubercles on the outside. Tube 1.7 cm. long, lobes 3 mm. long. Corolla thick, fleshy, slightly curved, covered with tubercles of a reddish tinge on the outside, green on the inside, a dark rich reddish color on the inside, 5 cm. long. In maturing the lobes converge, the lower lobes split about half way down the tube, the upper nearly to the base as in *Clermontia grandiflora*. Anthers dark red, glabrous. Berry globose, glabrous, strongly tuberculate on the outside, 1.3 cm. in diameter. Seeds smooth, yellow, shiny, and ovoid.

This species belongs to the group *Clermontioideae* as constituted by Hillebrand. While very distinct from other species, I believe it is most closely related to *Clermontia arborescens* (Mann) Hillebr.



CLERMONTIA TUBERCULATA FORBES.

***Rollandia parvifolia*, sp. nov.**

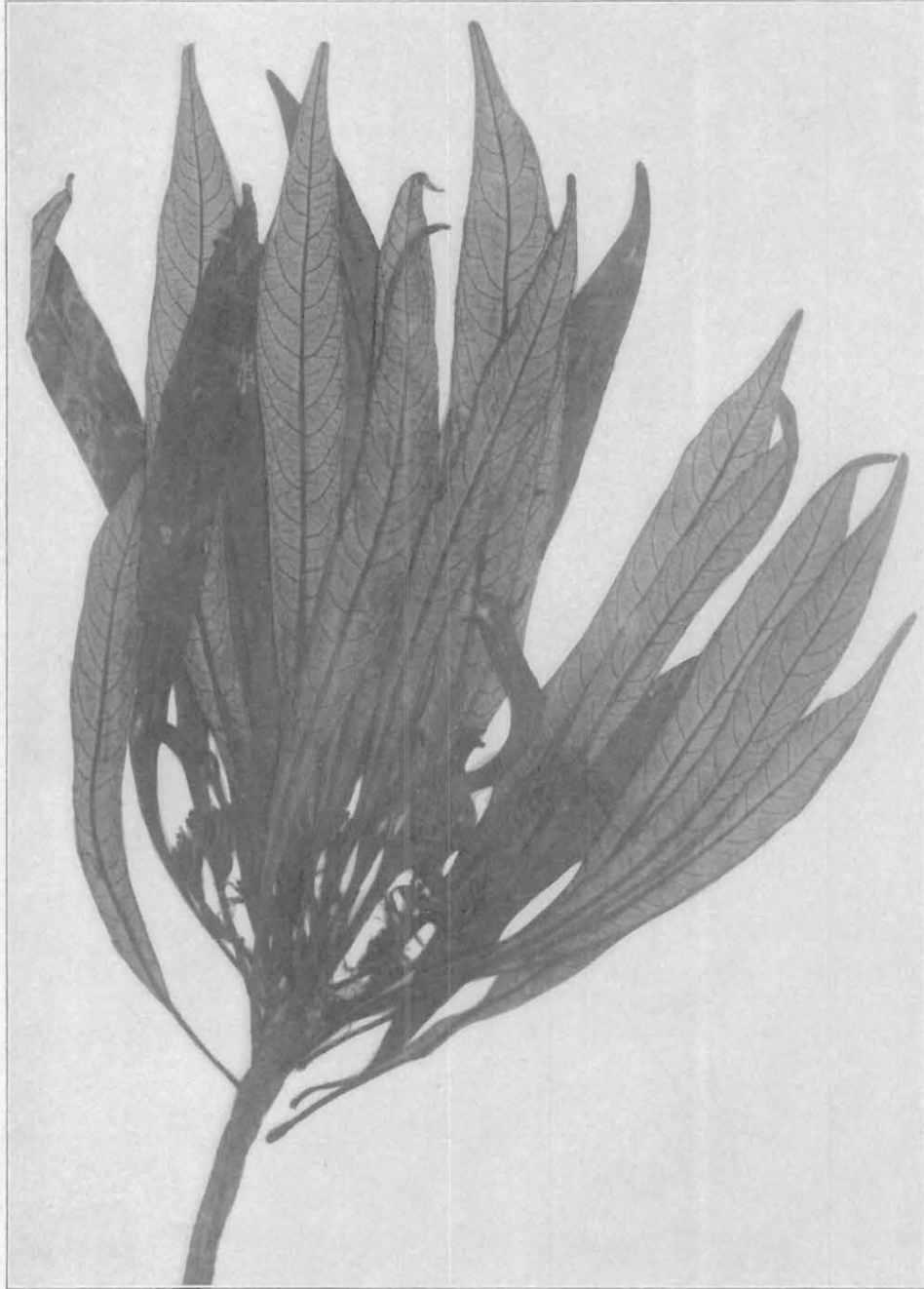
Caulis 9 dm. altus; foliis lanceolatis, acuminatis, apexe cum minuto microni, integerrimis, glabris, coriaceis, subter albidis, cum petiolis 4.8 cm. longis, 2.3-4 cm. latis; floribus 5-6 in racemis, pedunculo 3-4 cm. longo, pedicellis 1 cm. longis, glabris. Flores grandi; calycis tubis cylindricis, glabris, 8 mm. longis, lobis oblongis, obtusis, minutim mucronatis, 1 cm. longis; corolla purpurea, sigmoidea, 6.5 cm. longa; columna staminea adnata, supera pubescens; antheris pubescentis. Bacca ignota.

Type locality, Waioli valley, Kauai. Only one specimen was seen amongst the dense undergrowth on a wet talus slope. C. N. Forbes, No. 103, K. August 1, 1909.

Single stem 9 dm. high. Leaves lanceolate, acuminate with a minute mucro at the apex, gradually narrowing from the upper third to the petiole, entire, glabrous, coriaceous, pale whitish below, 18-22 cm. long, 2.3-4 cm. wide; with petioles 2.8 cm. long, which are occasionally sparingly marked with small lenticels. Flowers five to six in a raceme, the peduncles 3-4 cm. long, bracteate, the pedicels 1 cm. long, bracteolate above the centre, glabrous. Calyx tube cylindrical, glabrous, 8 mm. long; with the lobes oblong, obtuse, minutely mucronate, thin, 1 cm. long. Corolla purple, strongly sigmoid, 6.5 cm. long, the lower lobes split less than one-half the distance of the tube, 1.5-2 cm. long. Staminal column adherent to the corolla for about one-third its length, the upper half puberulent, as long as the corolla. Anthers puberulent. Berry not seen.

This is the first *Rollandia* to be reported off the island of Oahu. Its arrangement of characters easily separates it from the other species, while its relatively much smaller leaves give it quite a different appearance in the field.





ROLLANDIA PARVIFOLIA FORBES.

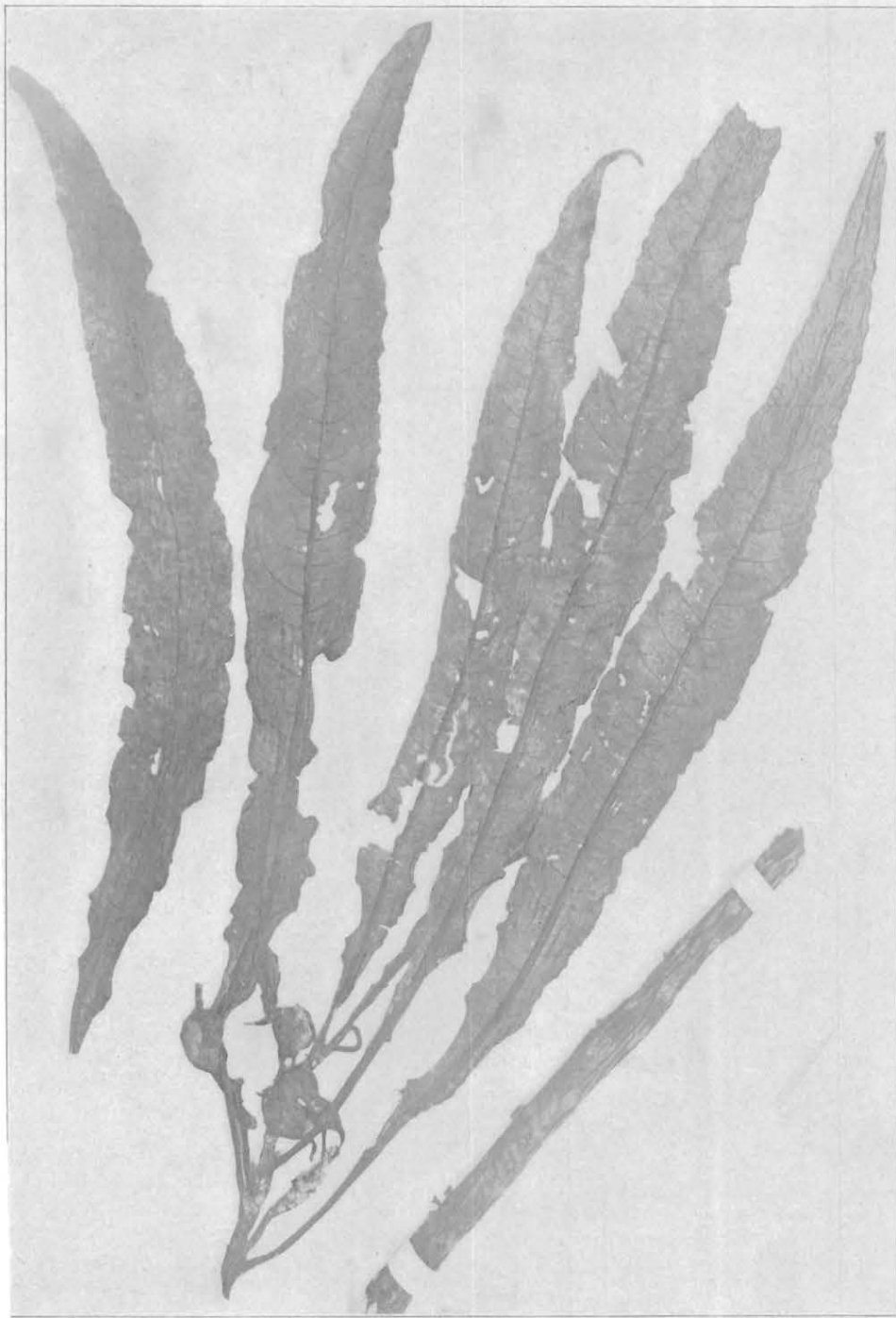
***Cyanea undulata*, sp. nov.**

Caulis 18-36 dm. altus; foliis lanceolatis, integerrimis, acuminatis, proxime marginibus undulatis, apexe interdum spirali, basi acuminata, subter hispidulis, coriaceis, nerviis subter rubigo-tomentosis, 36 cm. longis, 4 cm. latis; cum petiolis rubigo tomentosus, 5 cm. longis; floribus in racemis, pedunculis 4.3 cm. longis, pedicellis 1 cm. longis, rubigo-tomentosis. Flores (in gemma); calyci hirsuta, cylindrica, lobis triangularis, acutis, 4 mm. longis; corolla intra et exteriora rubigo-tomentosa, curvata, luteola; columna staminea hispidula, 22 mm. longa; antheris elegantis, glaberimis, 7 mm. longis. Bacca obovata, luteola, rubigo-fulvis, 17 mm. longa, 11 mm. crassa; seminibus obovoidis, levibus.

Type locality, damp woods surrounding the Wahiawa swamp, Kauai. Specimens were first sent me by Mr. J. M. Lydgate, who has thoroughly explored this region for a number of years. C. N. Forbes, No. 292, K. August, 1909 (fruit). J. M. Lydgate, May, 1908 (flower buds).

Single stem 18-36 dm. high. Leaves lanceolate, entire, acuminate, undulating near the edges, or the edges sometimes irregularly turned over, the apex sometimes spirulate, coriaceous, hispidulous on the under side, the veins on the under side rusty-tomentose, 36 cm. long, 4 cm. wide; with rusty-tomentose petioles 5 cm. long. Flowers 5-6 in racemes, peduncle 4.3 cm. long, pedicels 1 cm. long, both rusty-tomentose. Flowers in the bud. Calyx hirsute, cylindrical, the lobes triangular, acute, 4 mm. long. Corolla hirsute on the outside and inside, slightly curved, yellowish. Staminal column hispidulous, 22 mm. long. Anthers elongate, glabrous, 7 mm. long. Berry obovate, yellow, 17 mm. long, 11 mm. thick. Seeds obovoid, smooth, dark reddish brown.

This species can be easily recognized in the field by the unique appearance of its leaves.



CYANEA UNDULATA FORBES.