The Kanehira-Hatusima 1940 Collection of New Guinea Plants. XVII.

By

R. Kanehira and S. Hatusima

Received October 2, 1942.

R. KANEHIRA & S. HATUSIMA: **Dilleniaceae.**

?Dillenia philippinensis var. **pubiflora** MERR. Enum Philip. Fl. Pl. 3 (1923) 61.

No. 13234 KANEHIRA-HATUSIMA, Waren March 27, 1940. In high rain-forests at 2 m. altitude.

A very large tree up to 40 m. in height and 1.5 m. in diameter, bark reddish.

Distrib. Philippines. A new addition to the flora of New Guinea.

Hibbertia novo-guineensis GIBBS, Contrib. Phytog. & Fl. Arfak Mts. (1917) 148.

Nos. 14054, 13487 KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 5-9, 1940. In edge of low spinneys on the summit of Mt. Koebre at 2200 m. altitude; scandent.

Distrib. Endemic; the type was from Angi.

Teracera moluccana MARTELLI in BECC. Malesia 3 (1886) 153; DIELS in ENGL. Bot. Jahrb. 57 (1922) 440.

No. 12403 KANEHIRA-HATUSIMA, Patema, Nabire, March 6, 1940. In edge of rain-forests at 300 m. altitude. No. 11582 KANEHIRA-HATUSIMA, Nabire, Feb. 25, 1940. In edge of secondary forests at 2 m. altitude; a scandent shrub, up to 5 m. high.

Distrib. Amboina.

R. KANEHIRA & S. HATUSIMA: **Actinidiaceae.**

§ *Setosae*.

Saurauia (§ *Setosae*) **angica** KANEHIRA et HATUSIMA, sp. nov. Fig. 1.

Frutex ad 3 m. altus, rami ramulique teretes, setosi, brevissimi (vix 1 mm. longi) dense vestiti. Folia parva, obovato-elliptica ad obovato-

Fig. 1. *Saurauia angica* KAN. et HAT. (No. 13851)A Branchlet with flowers $\times \frac{3}{4}$. B Inflorescence $\times 2$. C Flower in l. s. $\times 3$.

oblonga, chartacea, 3–5 cm. longa, 1.5–2.3 cm. lata, apice acuta, basi obtuse rotundata, margine integra spinulosa, utrinque adpresse fusco-hirta, supra in sicco fusco-brunnea, subtus pallida, nervi laterales 6 vel 7, arcuatim adscendentes; petiolo 0.5–1 cm. longo setoso. Inflorescentiae axillares, pedunculatae, saepius 3-florae, pedunculi circ. 1.5 cm. longi sparse setulosi, pedicelli 5–11 mm. longi, densiuscule setulosi, bracteolati, bracteolis oblongo-lanceolatis circ. 1.5 mm. longis dorso setulosis. Flores in alabastro circ. 5 mm. diametro; sepala ovato-orbicularia inaequiformia, 2 exteriora minora extus sparse setulosa, 3 interiora majora circ. 5 mm. longa dorso tantum sparsissime setulosa; petala 5, ovato-elliptica circ. 4 mm. longa glabra; stamina numerosa, antherae circ. 1 mm. longae; ovarium glabrum, stylo 1, circ. 1 mm. longo.

No. 13851 KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 8, 1940. In mossy forests, Iray, Lake Giji at about 1900 m. altitude.

This is well characterized by its small leaves and simple styles. In its small leaves, this may be contrasted with *Saurauia calyptrata* LAUTB.

***Saurauia bifida* WARB.** in ENGL. Bot. Jahrb. **13** (1891) 380; K. SCHUM. et LAUTB. Fl. Deutsch. Schutzg. Süds. (1901) 445; DIELS in ENGL. Bot. Jahrb. **57** (1922) 448.

No. 11879 KANEHIRA-HATUSIMA, Chaban, Nabire, Feb. 28, 1940. In rain-forests at 300 m. altitude. A shrub 2.5 m. in height, flowers white. *Distrib.* Endemic; north-eastern New Guinea.

***Saurauia* (§ *Setosae*) *momienensis* KANEHIRA et HATUSIMA sp. nov.** Fig. 2.

Frutex circ. 5 m. altus, ramuli dense fusco-hispidi. Folia oblongo-

oblanceolata vel late oblanceolata, chartacea, apice breviter acuminata, basi angustata, margine setoso-serrata, 12–17 cm. longa, 4.5–6.5 cm. lata, utrinque sparse hispida, nervi laterales 12 vel 13, ad prope marginem arcuatim adscendentes, ut costa subtus hirti; petiolo circ. 1.5 cm. longo, dense hispido. Inflorescentiae axillares saepe triflorae, circ. 2–3 cm. longae, pedunculis 1–1.5 cm. longis, pedicelli circ. 5 mm. longi ut pedunculis dense setosi,

Fig. 2. *Saurauia momiensis* KAN. et HAT. (No. 14157)

A Branchlet with flowers $\times \frac{3}{4}$. B Young fruit $\times 2$. C The same in l. s. $\times 2\frac{1}{2}$.

bracteolis subulatis circ. 3 mm. longis. Sepala ovato-elliptica, apice obtusa, 6–7 mm. longa, dorso dense hirta; petala obovato-elliptica, circ. 7 mm. longa, glabra; stamina numerosa, antherae circ. 1 mm. longae, filamentis circ. 2 mm. longis; ovarium apice tantum sparse hirtum, styli 5, liberi, circ. 3 mm. longi.

No. 14157 KANEHIRA-HATUSIMA, Momi, 60 miles south of Manokwari, April 10, 1940. In edge of rain-forests along the trail to Lake Angi at about 300 m. altitude.

This is well characterized by its very short inflorescences and its glabrous ovaries with hispid tips. This may be contrasted with *Saurauia altissima* ZIPPEL which has different leaves with round bases.

Fig. 3. *Saurauia obvallatoides* KAN. et HAT. (No. 11880)
A Branchlet with flowers $\times \frac{2}{3}$. B Flower $\times 1\frac{1}{3}$. C The same in l. s. $\times 1\frac{1}{2}$.

***Saurauia* (§ *Setosae*) *obvallatoides* KANEHIRA et HATUSIMA sp. nov. Fig. 3.**

Frutex ad 6 cm. altus, ramuli subteretes paleis pallide fusciscentibus circ. 2 mm. longis dense vestiti, circ. 4–5 mm. crassi. Folia elongato-obovata, papyracea, 16–20 cm. longa, 6–8 cm. lata, apice breviter acuminata, basi sensim angustata, margine remote setuloso-serrulata vel repandata, supra glabra, subtus ad costam nervosque paleis conspersa cetera glabra, nervi laterales circ. 15, adscendentes, petiolo 1.5–2.5 cm. longo. Inflorescentiae axillares dichasiali-triflorae, pedunculatae, pedunculis 1–2 cm. longis, 1.5 mm. crassis ut pedunculi paleis pallide fusciscentibus densiuscule vestitis, pedicelli 1–1.5 cm. longi, 1 mm. crassi, bracteis foliaceis ovato-ellipticis, apice

rotundatis basi amplexis, circ. 1 cm. longis, dorso ad medium paleaceis, bracteolis ovatis apice obtuse 6–7 mm. longis, dorso praesertim ad medium hispidis. Flores in alabastro circ. 1 cm. diametro; sepala ovato-rotundata, concava, circ. 9 mm. longa, dorso longe denseque hispida margine glabra excepta; petala obovata apice rotundata circ. 8 mm. longa glabra; stamina numerosa, antherae lineari-oblongae apiculatae circ. 3 m. longae; ovarium villosum, styli 5, liberi, circ. 2 mm. longi.

No. 11880 KANEHIRA-HATUSIMA, Chaban, 30 km. inward of Nabire, Feb. 29, 1940. In rain-forests at 300 m. altitude.

This species is to be referred to the series *Setosae* and represents a transition to the *Obvallatae*; it seems to be related to *Saurauia alkamaarensis* LAUTB. and *Saurauia trachlasia* DIELS, but it is easily distinguished from the first by its much larger leaves with more numerous lateral nerves and different inflorescences; from the latter by its somewhat smaller and narrower leaves which are glabrous above.

Saurauia (§ *Setosae*) **purpurellofolia** KANEHIRA et HATUSIMA sp. nov.

Fig. 4.

Frutex ad 2–3 m. altus, rami novelli paleis pallide fuscis circ. 5 mm. longis molliter vestiti, circ. 5–6 mm. crassi. Folia papyracea, oblanceolata, 20–28 cm. longa, 5.5–7.5 cm. lata, apice acuta, basi sensim angustata, margine subintegra, supra sparse fusco-hirsuta, subtus ad costam nervosque paleis fuscis dense vestita, nervi laterales circ. 14 vel 15, adscendentes, supra paullo subtus prominente elevati; petiolo 2–2.5 cm. longo ut ramulis paleis fuscescentibus dense vestito. Flores polygami ?, solitarii raro terni, axillares, longe pedunculati, pedunculo 3–4 cm. longo, bractee inconspicuae; sepala 5, ovato-elliptica, apice obtusa, extus longissime setosa circ. 1 cm. longa, 5–8 mm. lata; petala anguste obovata circ. 1 cm. longa, 3.5 mm. lata; stamina numerosa, circ. 3 mm. longa; ovarium glabrum depresso-globosum circ. 4 mm. latum, styli 5, liberi, 4 mm. longi.

No. 12489 KANEHIRA-HATUSIMA, Patema, Nabire, March 6, 1940; in rain-forests at about 300 m. altitude. No. 11811 KANEHIRA-HATUSIMA, Chaban, Nabire, Feb. 28, 1940; in rain-forests at about 300 m. altitude. A shrub, leaves purplish underneath.

This may be referable to *Saurauia mamberana* DIELS and *Saurauia idenburgensis* A. C. SM.

§ *Squamulosae*.

! **Saurauia monadelphae** SCHEFF. in Ann. Jard. Bot. Buit. **1** (1876) 8; DIELS in ENGL. l. c. 447.

No. 13338 KANEHIRA-HATUSIMA, Momi, about 60 miles south of Mano-

Fig. 4. *Saurauia purpurellofolia* KAN. et HAT. (No. 11811)

A Branchlet with fruits $\times \frac{1}{2}$. B Immature fruit $\times 1$. C The same in l. s. $\times 1\frac{1}{8}$.
D Ovary $\times 1\frac{1}{8}$. E Petal $\times 1\frac{1}{8}$.

kwari. April 3, 1940. In high rain-forests at about 100 m. altitude. A small tree up to 5 m. in height.

Distrib. Endemic, the type was from Andai, north-western New Guinea.

Saurauia (§ *Squamulosae*) ***nabirensis*** KANEHIRA et HATUSIMA sp. nov.

Fig. 5.

Frutex ad 3 m. altus, ramuli squamulis pallidis vestiti mox glabrati, 3–4 mm. crassi. Folia obovato-oblonga, 9–13 cm. longa, 3.5–4.5 cm. lata, chartacea, apice acute acuminata, basi angustata, margine calloso-serrulata, supra glabrata sparse papillosa, subtus pilis stellatis rufescentibus in costa

nervosque densiuscule vestita, costa media supra vix elevata, squamis rufis, sparse vestita, subtus bene elevata, infra medium squamis pallidis circ. 1 mm. longis et pilis stellatis conspersa, nervi laterales circ. 10, arcuatim adscendentes, ut nervulis pilis fasciculatis rufis densiuscule vestiti; petiolo 0.8–1.8 cm. longo pallide squamato. Inflorescentiae axillares longe pedun-

Fig. 5. *Saurauia nabirensis* KAN. et HAT. (No. 12528)

A Branchlet with flowers $\times \frac{2}{3}$. B Flower in l. s. $\times 1\frac{1}{2}$. C Stamens $\times 5$

culatae, pauci florum (4 vel 5) rufo-tomentosae, pedunculis circ. 5 mm. longis 1 mm. crassis, pedicellis 1.5–2 cm. longi bracteolis subulatis 2–6 mm. longis; sepala majora 3 ovato-orbicularia, apice obtusa, circ. 5 mm. longa, dorso sparse rufo-pubescentia; petala rosea, anguste ovata, apice obtusa, circ. 8 mm. longa, glabra; stamina numerosa, antherae lineari-oblongae, circ. 2 mm. longae, apice usque ad medium bifidae; ovarium glabrum, stylo 1, circ. 2 mm. longo, stigmate capitato.

No. 12528 KANEHIRA-HATUSIMA, Sennen, Nabire, March 7, 1940. In rain-forests at about 400 m. altitude.

This is closely related to *Saurauia Gjellerupii* LAUTB., from which it differs by its smaller and narrower leaves with prominently ascendent lateral nerves and its rufous tomentum of the smaller inflorescences with fewer flowers.

§ *Rufae*.

Saurauia capitulata A. C. SMITH, MSS. Fig. 6.

Fig. 6. *Saurauia capitulata* SMITH. (No. 13886)

A Branchlet with fruits $\times \frac{2}{3}$. B Fruit $\times 1\frac{1}{2}$. C The same in l. s. $\times 1\frac{1}{2}$.
D Seed.

Nos. 13886, 13768 KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 7-8, 1940. In secondary forests, Lake Giji, Iray at about 1,900 m. altitude. A small tree, 3-5 m. in height, flowers pink, anther brownish.
Distrib. Endemic, the type probably from north-eastern Dutch New Guinea.

§ *Obvallatae*.

Saurauia Naumannii DIELS in ENGL. Bot. Jahrb. **57** (1922) 448;

var. ***longipedunculata*** KANEHIRA et HATUSIMA var. nov.

Saurauia Naumannii (non DIELS) sensu DIELS in Nova Guinea **14** (1924) 81.

A typo recedit capitulo circ. duplo majore, pedunculis longioribus ad 10 cm. longis, foliis majoribus, 30-32 cm. longis.

No. 12652 KANEHIRA-HATUSIMA, Slieber, Nabire, March 9, 1940. In rain-forests along Boemi River at about 300 m. altitude. A small tree, 4 m. in height, flowers white.

Distrib. Species Bismarck Archipelago, variety endemic.

Saurauia (§ *Obvallatae*) ***rufinervis*** KANEHIRA et HATUSIMA sp. nov. Fig. 7.

Frutex ad 4 m. altus, ramuli petiolique pilis cinereo-rufescentibus

et paleis stramineis circ. 2–3 mm. longis lanatim vestiti, circ. 5 mm. crassi. Folia obovato-lanceolata ad lanceolata, tenuiter coriacea, 20–25 cm. longa, 6.5–8 cm. lata, apice breviter acuminata, basi acuminato-angustata ad petiolum circ. 2 cm. longum $\pm$ decurrentia, margine setis antrorsum curvatis, circ. 2–3 mm. longis praedita, utrinque primo rufo-tomentella mox supra glabra, subtus araneosa, nervi laterales utrinsecus 14 vel 15, ut costa nervisque rufescento-tomentosi. Inflorescentiae axillares capitulae nutantes, 2.5–3 cm. diametro, pedunculis circ. 5 cm. longis paleis stramineis 3–4 mm. longis et pilis cinereo-rufescentibus tomentosim vestitis; bractae suborbiculares circ. 3 cm. longae, primo a se alte adnatae, dorso ad medium longe paleaceae, cetera glabrae. Flores saepius 2, sessiles, polygamo-dioeci?, bracteolae sepalaque dorso paleis stramineis ad 9 mm. longis basi 1 mm. latis dense praedita, bractae 2, late ovatae concavae, circ. 1.5 cm. longae; sepala 5 ovata vel late ovata, 1.2 cm. longa; petala et stamina nulla?; ovarium subglobosum dense pilosum, styli 5, liberi, 5 mm. longi.

No. 13335 KANEHIRA-HATUSIMA, Momi, 60 miles south of Manokwari, April 3, 1940. In rain-forests at about 100 m. altitude.

This species is to be referred to the series *Obvallatae* and represents

Fig. 7. *Saurauia rufinervis* KAN. et HAT. (No. 13335)

- A Branchlet with flowers $\times 3/10$.
- B Outer bract $\times 1/2$.
- C Inner bract (upper surface) $\times 1/8$.
- D The same (inner surface) $\times 1/8$.
- E Pistil $\times 1 1/2$. F Ovary in c. s.

a transition to the *Rufae*; it seems to be comparable with *Saurauia novoguineensis* SCHEFF. and *Saurauia decurrens* LAUTB. but differs from the both by having shorter petioles and fewer lateral nerves.

Fig. 8. *Saurauia warensis* KAN. et HAT. (No. 13107)

A Branchlet with flowers $\times \frac{2}{3}$. B Flower in l. s. $\times 2$. C Stamen.

§ *Ramiflorae*.

***Saurauia* (§ *Ramiflorae*) *warensis* KANEHIRA et HATUSIMA sp. nov.**

Fig. 8.

Arbor ad 15 m. alta, ramuli teretes, novelli squamulis fusciscentibus sparse vestiti, mox glabrescentes circ. 4–5 mm. crassi. Folia fasciculata, chartacea, oblonga ad oblongo-oblancoolata, 12–13 cm. longa, 4–5 cm. lata, apice brevissime acuminata, basi acuta vel obtusiuscula, margine callososerrata, squamulis supra in costa subtus in costa nervosque hinc inde dispersis praedita, ceterum glabra, in sicco supra castanea, subtus pallidiora, nervi laterales 14 vel 15, arcuato-patuli, petiolo circ. 1.5 cm. longo, 2 mm.

crasso, sparse squamuloso. Flores solitarii, raro bini e ramis defoliatis crassioribus orti, pedunculi graciles circ. 1.5 cm. longi, 0.8 mm. crassi, fere glabri, ad medium bractee squamiformes conspersi. Sepala late ovata glabra, circ. 3 mm. longa, 2.5 mm. lata, apice acutiuscula; petala anguste ovata, rosea, apice obtuse acuta, 6-7 mm. longa, 4-5 mm. lata, glabra; stamina numerosa, circ. 4 mm. longa, antherae oblongae, circ. 2 mm. longae, filamentis adnatis; ovarium subglobosum circ. 3 mm. longum, stylo 1, apice declinato, circ. 2 mm. longo.

No. 13107 KANEHIRA-HATUSIMA, Waren, 60 miles south of Manokwari, March 26, 1940. In rain-forests on a limestone mountain at about 600 m. altitude. A tree with straight bole, up to 15 m. in height and 40 cm. in diameter.

This may be referred to the series *Ramiflorae*, though it shows a transition to the *Squamulosae*; it seems to be related to *Saurauia Rodatzii* LAUTB., which has five liberate styles and smaller calyxes.

§ *Armatae*.

Saurauia (§*Armatae*)
horrida KANEHIRA et
HATUSIMA sp. nov.

Fig. 9.

Frutex ad 1 m. altus, rami ramulique subteretes, rubescentes, aculeis 3-5 mm. longis, basi 1.5-4 mm. latis dense vestiti. Folia oblonga, chartacea, 11-22 cm. longa,

Fig. 9. *Saurauia horrida* KAN. et HAT. (No. 13552)

- A Branchlet with flowers $\times \frac{1}{2}$.
B A portion of branchlet. C Flower $\times 1\frac{1}{2}$.
D The same in l. s. $\times 1\frac{1}{2}$.
E Sepal $\times 1\frac{1}{2}$. F Petal $\times 1\frac{1}{2}$.

4–6.5 cm. lata, apice breviter acuminata, basi subrotundata, margine spinuloso-serrulata, supra in sicco brunnea, hirtis cystolithiformibus densiuscule notata, subtus setulosa, costa media impressa, subtus prominente elevata, aculeis et setis rigidis densiuscule conspersa. Inflorescentiae paniculatae axillares ad 15 cm. longae, aculeatae, pedunculis ad 8 cm. longis, bracteolis linearibus 3–10 mm. longis extus setulosis, pedicelli 3–10 mm. longi setulosi. Flores polygamo-dioeci ? (masculi tantum visi); sepala ovata, acutiuscula circ. 4 mm. longa dorso setulosa; petala ovato-elliptica circ. 8 mm. longa, dorso glabra; stamina numerosa, antherae circ. 2.5 mm. longae, ovarii rudimentum nullum.

No. 13552 KANEHIRA-HATUSIMA, Angi Arfak Mts., April 5, 1940. On edge of mossy forests, Lake Gita at about 1,900 m. altitude.

This is well characterized by its paniculate inflorescences with polygamo-dioecious flowers. The nearest alliance of this species may be with *Saurauia aculeata* LAUTB., from which it differs by its much robust spines of the branchlets and petioles, its larger leaves with more numerous lateral nerves, and its large panicles with polygamo-dioecious flowers.

R. KANEHIRA and S. HATUSIMA: **Sapindaceae.**

Allophylus timorensis (DC.) BL. Rumph. 3 (1847) 130; RADLK. in ENGL. Bot. Jahrb. 56 (1920) 306 et ENGL. Pflanzenr. 98 (1934) 587.

No. 11799 KANEHIRA-HATUSIMA, Papaya, Nabire, Feb. 27, 1940; in secondary forests at about 100 m. altitude. No. 12888 KANEHIRA-HATUSIMA, Nabire, March 15, 1940; in edge of high rain-forests at 3 m. altitude.

Distrib. Formosa to the Nicobar Islands, though Malaya to Samoa and New Caledonia.

Cupaniopsis (§ *Elattopelatum*) **longifoliolata** KANEHIRA et HATUSIMA sp. nov. Fig. 10.

Arbusecula 4–5 m. alta, rami teretes circ. 1 cm. crassi petiolique pallide rufo-villosuli. Folia abrupte pinnata, longe petiolata, petiolo 12–22 cm. longo circ. 4 mm. crasso, rhachis 19–34 cm. longa. Foliola subopposita, papyracea, subsessila, plerumque 15–17, anguste oblonga vel oblonga, 13–23 cm. longa (maxima 27 cm. longa) circ. 5 cm. lata, apice breviter acuminata basi oblique cuneato-subrotundata, margine serrato-dentata, supra in sicco fusco-viridia glabra, subtus ad nervos venasque dense pilosa, nervis lateralibus utrinsecus 15–27, venulis reticulatis subtus prominentibus. Paniculae supraaxillares, masculae amplae ad 15 cm. longae et latae; ramis elongatis thyrsoides apice flores singulos pedicellatos gerentibus, pedicellis 2.5–3 mm. longis, bractaeae bracteolaeque subulatae ut sepala villosulae. Sepala latiuscule imbricata,

interiora obovato-elliptica 2.5 mm. longa, 1.5 mm. lata, basi unguiculata dorso toto intus basi tantum sericeo-pilosa. Petala sepalis angustiora brevioraque oblongo-elliptica, apice obtusiuscula, circ. 1 mm. longa, 0.5 mm. lata, dorso basin versus pilosa, intus glabra, squamulis 2 villosulis. Discus

Fig. 10. *Cupaniopsis longifoliolata* KAN. et HAT. (No. 14135)

- A Branchlet with staminate flowers $\times \frac{1}{2}$. B Staminate flower $\times 3\frac{3}{4}$.
C The same in l. s. $\times 3\frac{3}{4}$. D Stamens and disc. $\times 3\frac{3}{4}$.

glaber. Stamina 8, filamentis villosulis circ. 2 mm. longis, antherae ovato-oblongae circ. 1.5 mm. longae; ovarii rudimentum nullum. Capsula rubra subglobosa, subsessilia, circ. 1 cm. lata, extus tomentella.

No. 12940 (fr. type) KANEHIRA-HATUSIMA, Waren, 60 miles south of Manokwari, March 21, 1940; in rain-forests at about 200 m. altitude. No.

14135 (fl. type) KANEHIRA-HATUSIMA, Momi, April 11, 1940; in high rain-forests at 100 m. altitude.

This may be contrasted with *Cupaniopsis curvidens* RADLK., from which it differs chiefly by its much fewer and larger leaflets and its larger flowers.

Dodonaea viscosa (LINN.) JACQ. var. **vulgaris** BENTH. Fl. Austr. 1 (1836) 476; RADLK. in ENGL. Pflanzenr. 98 (1934) 1368.

Nos. 13639, 13900 KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 8, 1940. Abundant in secondary forests on an inundation area, Lake Giji, Iray at about 1900 m. altitude.

Distrib. A common strand plant in Tropics, but rare at high altitude.

Elattostachys Zippeliana (BL.) RADLK. Sap. Holl.-Ind. (1877) 12, 43 (82, 113) et ENGL. Pflanzenr. l. c. 1264.

No. 12665 KANEHIRA-HATUSIMA, Slieber, Nabire, March 9, 1940. In edge of fringing rain-forests at 300 m. altitude. A tree up to 15 m. in height.

Distrib. Endemic.

Erioglossum rubiginosum (ROXB.) BL. Rumph. 3 (1847) 118 in obs; RADLK. in ENGL. Bot. l. c. 266 et ENGL. Pflanzenr. l. c. 493.

No. 13274 KANEHIRA-HATUSIMA, Momi, March 30, 1940. In rain-forests at 30 m. altitude. A shrub about 2 m. in height, rare.

Distrib. From India to Cochin-China, through Malaya to north-eastern Australia.

Fig. 11. *Guioa amabilis* KAN. et HAT. (No. 13147)

A Branchlet with flowers $\times \frac{2}{3}$.

B Fruit $\times 1\frac{1}{3}$.

C The same in c. s. $\times 1\frac{1}{3}$.

Guioa (§ *Euguioa*) **amabilis** KANEHIRA et HATUSIMA sp. nov. Fig. 11.

Frutex ad 3 m. altus, rami nigrescentes, teretes, ramuli juniores dense fuscescento-puberuli circ. 1–1.5 mm. crassi. Folia abrupte pinnata, 4–5 cm. longa; foliola plerumque 4- vel 5-juga, subopposita, coriacea, ovato-elliptica, apice rotundata vel paullo emarginata, margine ad prope apicem tantum uni-crenata cetera integra,

valde revoluta, basi inaequilatera ad petiolulum perbreve cuneatim angustata, 1.5–2 cm. longa 8–11 mm. lata, in sicco supra brunnea nitida, subtus glaucina dense adpresseque hirsuta, nervis lateralibus 4–6, supra vix subtus tenuiter elevatis, rhachis foliorum insignius alata ut petiolo circ. 1.5 cm. longo 1 mm. crasso fuscescento-puberula. Infructescentiae axillares paniculatae foliis subaequantes, dense puberulae, ramis thyrsoideis cincinnos breviter stipitatos paucifloros gerentibus. Sepala (sub fructu) sub-orbicularia, margine ciliata, utrinque glabra, 1.5–2 mm. longa. Discus annularis, sublobatus, glaber. Capsula late obcordata, 3-alato-lobata in stipem brevem 3-angularem attenuata, glabra, apice stylo circ. 2.5 mm. longo coronata, 8–9 mm. longa, 1–1.2 cm. lata, pedicellis (fructigeris) circ. 1 mm. longis dense puberulis.

No. 13999 KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 9, 1940. In open spinneys on the summit of Mt. Koebre at about 2300 m. altitude.

This is closely related to *Guioa venusta* RADLK. but differs by its fewer leaflets which are glabrous on both surfaces.

Guioa membranifolia RADLK. in Sap. Holl.-Ind. (1877) 11, 40, 90 et ENGL. Bot. l. c. 282 et ENGL. Pflanzenr. l. c. 1174.

No. 12658 KANEHIRA-HATUSIMA, Slieber, Nabire, March 9, 1940. In edge of fringing rain-forests at about 300 m. altitude. A tree about 10 m. in height, fruits red.

Distrib. Bismarck Archipelago and north-eastern New Guinea.

Harpullia cauliflora K. SCHUM. et LAUTB. Fl. Deutsch. Schutzg. Süd. (1901) 424; RADLK. in Nova Guinea 8 (1912) 618 et ENGL. Bot. l. c. 312 et ENGL. Pflanzenr. l. c. 1440.

No. 12633 KANEHIRA-HATUSIMA, Ayerjat, Nabire, March 9, 1940; in edge of fringing rain-forests at 300 m. altitude. No. 12388 KANEHIRA-HATUSIMA, Sennen, Nabire, March 6, 1940; in rain-forests at 300 m. altitude. A shrub, 3–4 m. in height, fruits red.

Distrib. North-eastern New Guinea.

Harpullia cf. fruticosa BL. Rumph. 3 (1847) 179; RADLK. in ENGL. Bot. l. c. 313 et Pflanzenr. l. c. 1443.

No. 12896 KANEHIRA et HATUSIMA, Nabire, March 16, 1940. In high rain-forests at 3 m. altitude. A shrub 3 m. in height.

Distrib. Endemic.

Harpullia cf. hirsuta RADLK. in Nova Guinea 8 (1912) 618 et ENGL. Bot. l. c. 315 et Pflanzenr. l. c. 1450.

No. 12597 KANEHIRA-HATUSIMA, Sennen, Nabire, March 8, 1940; in rain-

forests at 300 m. altitude. Nos. 11714, 11704 KANEHIRA-HATUSIMA, Papaya-Nabire, Feb. 27, 1940; in rain-forests at about 100 m. altitude. A shrub 2-3 m. in height.

Distrib. North-eastern New Guinea.

***Harpullia longithyrsifera* KANEHIRA et HATUSIMA, sp. nov. Fig. 12.**

Arbor parva ad 4-5 m. alta, ramuli juniores teretes pilis stellatis fuscis sparse vestiti mox glabri. circ. 4 mm. crassi. Folia abrupte pinnata, 5- vel 6-juga, subopposita, petiolo tereti 4-5 cm. longo, rhachi tereti 16-21 cm. longa; foliola chartacea, ovato-oblonga 10-18 cm. longa 4.5-6.5 cm. lata, inferiora minora ovata vel anguste ovata, apice obtuse breviterque acuminata, basi acuta subaequilatera, margine integra, petiolulo 3-5 mm. longo, utraque facie prominule reticulato-venosa, glabra, nitidula, in sicco flavo-viridia. Inflorescentiae ad apicem ramorum axillares 20-48 cm. longae, stellato-puberulae, fere a basi polychasia subsessilia

Fig. 12. *Harpullia longithyrsifera* KAN. et HAT.
(No. 14234)

A Branchlet with flowers $\times \frac{1}{2}$. B Flower bud $\times 3$.
C The same in l. s. $\times 3$. D Petal $\times 3$. E Stamen $\times \frac{3}{4}$.

brevia ramosa pluriflora remotiuscula gerentes, pedicelli 3-7 mm. longi ut sepala brevissime fusciscento-tomentosi. Sepala subelliptica circ. 5 mm. longa, 3 mm. lata. Petala carnosula ovato-oblonga vel suboblonga circ. 3 mm. longa, 2 mm. lata, glabra. Stamina 5, circ. 3 mm. longa, antherae circ.

2 mm. longae. Discus pubescens, ovarium tomentellum in stylum circ. 2 mm. longum subulatum attenuatum. Fructus ignotus.

No. 14234 KANEHIRA-HATUSIMA, Momi, April 19, 1940. In rain-forests at 3 m. altitude. A myrmecophilous plant.

This may be contrasted with *Harpullia reticulata* RADLK. which has rufo-tomentellous branchlets.

Harpullia Peekeliana MELCHIOR in Notizbl. Bot. Gart. u. Mus. Berlin-Dahlem 10 (1928) 279; RADLK. in ENGL. Pflanzenr. l. c. 1461.

No. 13285 KANEHIRA-HATUSIMA, Momi, March 30, 1940. In rain-forests at 50 m. altitude. A small tree about 10 m. in height.

Distrib. Hitherto known only from Bismarek Archipelago.

Mischocarpus paradoxus RADLK. in Sitzungsb. Bayer. Akad. 20 (1890) 268 adnol. et ENGL. Bot. l. c. 306 et ENGL. Pflanzenr. l. c. 1310.

No. 12825 KANEHIRA-HATUSIMA, Bivak Prao, Nabire, March 12, 1940. In edge of fringing rain-forests at 100 m. altitude.

Distrib. South-eastern New Guinea.

Mischocarpus Guillauminiana KANEHIRA from Truk, Caroline islands does not seem to be distinct from this species.

Mischocarpus sundaicus BL. Bijdr. (1825) 238; RADLK. in ENGL. Bot. l. c. 303 et ENGL. Pflanzenr. l. c. 1299.

No. 12516 KANEHIRA-HATUSIMA, Sennen, Nabire, March 7, 1940. In edge of fringing rain-forests at 300 m. altitude. A tree 6 m. in height.

Distrib. Cochinchina, southern China, Malaya to Philippines and northern Australia.

Pometia pinnata J. et G. FORSTER Char. Gen. (1776) 110, t. 55, excl. syn.; RADLK. in Nova Guinea 8 (1912) 617 et ENGL. Bot. l. c. 271 et ENGL. Pflanzenr. l. c. 929.

No. 11504 KANEHIRA-HATUSIMA, Nabire, Feb. 24, 1940. In high rain-forests at 2 m. altitude.

Distrib. From Formosa through Malaya to Polynesia.

Rhysotoechia longipaniculata KANEHIRA et HATUSIMA nov. sp. Fig. 13.

Frutex 2 m. altus, rami teretes nigro-cinerascentes vel brunneo-cinerascentes, 3–5 mm. crassi, lenticellis magnis conspersi. Medulla ampla. Folia abrupte pinnata, petiolo 1.5–4.5 cm. longo 3 mm. crasso, lenticellato. Foliola obovato-oblonga vel oblongo-elliptica vel oblonga, coriacea, 19–27 cm. longa 6.5–10 cm. lata, apice breviter acuminata, basi acute acuminata, margine integra, in sicco utrinque viridia, nitidula, eglandulosa glaberrima, nervis lateralibus 9 vel 10, arcuatim adscendentibus ut venulis reticulatis utrinque

prominente elevatis, petioluli valde incrassati rugosi circ. 1 cm. longi 3–4 mm. crassi. Paniculae (♂) axillares ramosae laxiflorae, foliis longiores ad 37 cm. longae, sub lente fusco-puberulae, pedunculis 8–14 cm. longis 1.5 mm. crassis, pedicelli circ. 2 mm. longi. Sepala 5, petaloidea, elliptica vel late

Fig. 13. *Rhysotocchia longipaniculata* KAN. et HAT. (No. 11534)

A Branchlet with fruits $\times \frac{1}{2}$. B, C Staminate flowers $\times 3$.

elliptica, circ. 3 mm. longa, glabra, margine ciliolata. Petala ovato-elliptica, circ. 3.5 mm. longa, glabra, basi tantum pilosa, margine ciliata. Stamina 5, antherae ellipticae 1 mm. longae, filamentis infra medium incrassatis dense pilosis 2.5 mm. longis. Ovarii rudimentum clavatum glabrum, circ. 0.5 mm. longum. Discus obscurus.

No. 11534 KANEHIRA-HATUSIMA, Nabire, Feb. 25, 1940. In edge of

high diluvial rain-forests at 1 m. altitude.

This is well characterized by its long panicles and large leaflets.

Fig. 14. *Rhysotoechia momiensis* KAN. et HAT. (No. 14148)

A Branchlet with flowers $\times \frac{2}{3}$. B Flower bud $\times 5$. Perfect flower $\times 5$.
D Staminate flower, petals taken off $\times 6$.

***Rhysotoechia momiensis* KANEHIRA et HATUSIMA sp. nov. Fig. 14.**

Frutex glaber circ. 1.5 m. altus, ramuli novelli fusco-cinerascentes, vetustiores cinereo-nigrescentes, dense minuteque lenticellati, 2–3 mm. crassi. Medula ampla. Folia abrupte pinnata cum petioli 6–14 cm. longa, petiolo 1–4 cm. longo 2 mm. crasso basi incrassato. Foliola plerumque 6, subopposita, tenuiter coriacea, oblonga vel oblongo-elliptica, 7–15 cm. longa, 2.5–5 cm. lata, apice acutiuscula, basi subrotundata vel acutiuscula ad petiolulum 5–7 mm. longum 1 mm. crassum basi valde incrassatum contracta, margine integra, in sicco supra olivaceo-viridia, subtus virideo-fuscescentia, glabra, haud glandulosa, utrinque prominente reticulato-venosa, nervis lateralibus utrinsecus 9 vel 10, subtus prominetibus. Inflorescentiae in ramis vetustioribus 2–5-ni fasciculatae rarius simplices, paniculatae, polygamo-dioecae ?, pauciflorae, glabriusculae foliis longiores, ad 5–17 cm. longae, ramis elongatis, bracteae bracteolaeque minutae puberulae, pedicelli 1–2.5 mm. longi glabriusculi. Sepala 4 vel 5, petaloidea, 2 exteriora minora ovato-elliptica circ. 2 mm. longa, 2 vel 3 interiora majora late elliptica circ. 3 mm. longa glabra. Petala elliptica vel late elliptica circ. 3 mm. longa, utrinque glabra, basi squamulata, squamulis pilosis. Stamina 5, antherae late ellipticae, 1.5 mm. longae, filamentis 1 mm. longis basi incrassatis et pilosis. Ovarium ovoideum, pilosum. Ovarii rudimentum in floribus δ subnullum. Discus obscurus.

No. 14148 KANEHIRA-HATUSIMA, Momi, April 11, 1940. In rain-forests at 100 m. altitude.

This is most closely related to *Rhysotoechia ramiflora* RADLK. from Celebes which chiefly differs by its larger and broader leaflets.

Sarcopteryx coriacea RADLK. Sapind. Holl. Ind. (1878) 98 (249) et ENGL. Bot. l. c. 296 et ENGL. Pflanzenr. l. c. 1235.

Nos. 13713 (fr.), 13651 (fl.), 14037 (fr.) KANEHIRA-HATUSIMA, Angi, Arfak Mts., April 6-9, 1940. On the open summit of Mt. Koebre at about 2000-2300 m. altitude. A shrub 3 m. in height.

Distrib. Waigiu Island.

Fig. 15. *Tristylopsis novo-guineensis* KAN. et HAT.
(No. 14249)

A Branchlet with fruits $\times \frac{1}{2}$. B Fruit in c. s. $\times \frac{3}{4}$.

Toechima hirsutum RADLK. in K. SCHUM et HOLLRUNG, Fl. Kaiser. Wilhelmsl. (1889) 67 et ENGL. Bot. l. c. 298 et ENGL. Pflanzenr. l. c. 1253.

No. 12835 KANEHIRA-HATUSIMA, Bivak Prao, Nabire, March 12, 1940. In fringing rain-forests at 100 m. altitude. A small tree, 10 m. in height, fruits red.

Distrib. Endemic.

Toechima subteres RADLK. Sapind. Holl. Ind. (1877), 19, 60 (89, 130) et Engl. Bot. l. c. 298 et ENGL. Pflanzenr. l. c. 1254.

No. 12987 KANEHIRA et HATUSIMA, Waren March 21, 1940. In open thickets on a hill at about 300 m. altitude. A small tree 100 m. in height, fruits red.

Tristylopsis * **novo-guineensis** KANEHIRA et HATUSIMA sp. nov. Fig. 15.

Arbor ad 30 m. alta, rami fusci sub lente fusco-pilosi et bene lenticellati, circ. 7 mm. crassi. Folia bipinnata ad 40 cm. longa, petiolo tereti circ. 5 mm. crasso fusco-piloso. Foliola oblongo-lanceolata $\pm$ falcata ad 13 cm. longa 2.3-4.5 cm. lata, apice obtusa, basi oblique subrotundata, utrinque glabra, supra nitidula, subtus opaca, chartaceo-coriacea. Infructescentiae amplae ad 40 cm. longae, rhachi dense brevissimeque fusco-hirsutae. Fructus subgloboseus vel ellipsoideus basi in stipitem circ. 2 mm. longum contractus, leviter 4- (rarius 3-5-) angulatus, apice stylo circ. 1.5 mm. longo coronatus, supra flavido-scriceus, circ. 2.2 cm. longus 1.8-2.2 cm. latus, pedicellis (fructigeris) 5-7 mm. longis 1.2 mm. crassis dense pilosis. Sepala (sub fructu) ovato-elliptica circ. 4 mm. longa 2 mm. lata.

No. 14249 KANEHIRA-HATUSIMA, Waren, April 19, 1940. In high rain-forests at 3 m. altitude.

This is very closely related to *Tristylopsis subfalcata* RADLK. from the Philippines, from which it differs chiefly by its somewhat broader and usually 4-gonous fruits.

金平・初島採集 ニューギニア植物研究 XVII.

金平亮三・初島住彦

Dilleniaceae 及 Actinidiaceae

今回我々ガ採集シタ Dilleniaceae ハ次ノ 3 屬 3 種デ總テ既知種デアル。

Dillenia philippinensis var. *pubiflora* MERR. 完全ナ花ヲ採集スルコトガ出来ナカ
ツタノデ確定困難デアルガ, 一般ノ様子ハ從來比島ノ特産ト考ヘラレテキタ上記ノ
種ト異ナラス様デアル。大キナ葉ト赤色ノ樹肌ヲ有スル大喬木デ樹高 40-50 米ニ達

* **Tristylopsis falcata** (KANEHIRA) KANEHIRA et HATUSIMA comb. nov.

Palaoea falcata KANEHIRA in Bot. Mag. Tokyo 49 (1935) 271, f. 25.

スルモノモ稀デナイ。モミ附近ノ低地林ニ普通デアル。

Hibbertia novo-guineensis GIBBS 本屬ノ植物ハニューギランド及濠洲ノ特産ト考ヘラレテキタガ 1917 年 GIBBS 女史ガ Angi 地方デ本屬ノ一種ヲ發見シニューギニヤニモ分布スルコトガ判ツタ。本種ハ高サ 2~3 米ノ蔓性灌木デ Angi 地方ノ尾根筋ノ疎林内ニ普通デアル。

Teracera moluccana MARTELL 低地ノ河岸林縁ニ見ラレル蔓性灌木デ Ambon 島ニモ分布シテキル。

利用方面 *Dillenia philippinensis* var. *pubifolia* MERR. 本種ハ長幹ノ大材ヲ産シ建築用材ニ適スル。材ハ帶紅色、強韌、加工容易デアリ、且木纖維長キ由ナレババルブ用材トシテモ有望デアラウ。

Actinidiaceae (さるなし科) 今回採集シタ本科ノ植物ハ *Saurauia* (たかさごしらたま屬) 一屬デ 12 種ヲ採集シタガ内 8 種ハ未記録ノ新種デアツタ。*Saurauia* 屬ハ南米、メキシコニ約 80 種、アジアノ熱帯ニ約 170 種、濠洲ニハ北部ニ只 1 種ヲ産スルノミデアル。アジアデハニューギニヤガ最モ分化發達シ、ソノ種類モ今回我我ノ新ニ發見シタモノヲ加ヘ約 60 種ニ達シテキルガ今後 100 種ニ達スルノモ遠イ將來デハアルマイ。ニューギニヤデハ低地カラ高地迄分布シテキルガイヅレカト云ヘバ低地林ガ種類ニ富ンデキル。殆ンド總テ灌木デ小喬木トナルモノハ稀デアル。

利用方面 *Saurauia warencensis* K. et H. ハ高サ 15 米位ノ喬木トナルモノデ材ヲ利用スルコトガ出來ルガ、ソノ他ノ種類ハ總テ灌木デ材ノ利用ハ問題トサルマイ。

Sapindaceae (むくろじ科)

ニューギニヤノむくろじ科ハ從來 26 屬 118 種知ラレテキタガ今回我々ハ更ニ 6 新種ヲ發見シタ。118 種中 91 種ハ固有種デアリ、屬ノ分布カラミテポリネシア系ト見ルコトガ出來ル。即チポリネシア産 29 屬中 16 屬(内 4 屬ハ濠洲系)ヲ、アジア系 37 屬中 9 屬ヲニューギニヤニ産スルノデアル。今回我々が採集シタ本科植物ハ *Allophylus* (1 種), *Cupaniopsis* (1), *Dodonaea* (1), *Elattostachys* (1), *Erioglossum* (1), *Guioa* (2), *Harpullia* (5), *Mischocarpus* (2), *Pometia* (1), *Rhysotoechia* (2), *Carcopteryx* (1), *Toechima* (2), *Tristylopsis* (1), 即チ 13 屬 21 種デアツタ。

今各屬ニ就キ略述スルト次ノ如クナル。

Allophylus 179 屬ヲ産シ、中 65 種ハアジア産デ、アジア系ノ屬デアル。ニューギニヤニハ 6 種ヲ産シ大部分ハ廣分布種デアル。

Cupaniopsis ポリネシア系ノ屬デニューカレドニヤ(17 種)、ニューギニヤ(12 種)、濠洲(8)、フィジー種諸島(3 種)ニ分布シテキル。

Dodonaea 濠洲ニ種類ノ多イ屬デニューギニヤニ 2 種ヲ産スル。今回我々ノ採集シタはうちはのきハ熱帶各地ニ廣ク分布シ、通常海岸ニ見ラレルノデアルガ、稀ニ高地帯ニ見ラレル。今回採集シタ所ハ海拔 1900 米モアル Angi 男潮湖畔ノ第二林デ殆ンド純林ヲ形成シテキタガ生態學上極メテ興味アルコトと思フ。

Elattostachys ポリネシア要素デ 12 種中馬來諸島ニ 2 種、濠洲ニ 3 種ヲ産スル。

Erioglossum アジア要素デ 1 屬 1 種ノ植物デアル。印度、マレーシアニ廣ク分布

シニューギニヤ、濠洲北部、東部迄分布シテキル。

Guioa ポリネシア要素デ、55 種中大部分ハオセアニヤニ分布シ一部ハ比島迄北上シテキル。ニューギニヤニハ 14 種ヲ産シ、今回我々が發見シタ *G. amabilis* K. et H. ハ Angi 地方海拔 2300 米附近ノ屋根ニ産シ、ニューカレドニヤ産ノ *G. venusta* RADLK. ニ一番近い種類デアル。

Harpullia ポリネシア要素デニューギニヤ (17 種)、濠洲 (7 種)、アルー群島 (1)、ソロモン群島 (1)、佛印 (1)、比島 (1)、チモール (1)、ニューカレドニヤ (1)、サモア群島 (1) ニ分布シテキル。今回我々ハ 5 種ヲ採集シタガ中 1 種ハ未記録ノ新種デアツタ。本屬ハニューギニヤニ種類多ク、今後更ニ増加スルモノト考ヘル。

Mischocarpus アジヤ要素デ濠洲 (5 種)、ニューギニヤ (4 種) ニ及ンデキル。今回我々ハ 2 種ヲ採集シタガ、中 *M. paradoxus* RADLK. ハ花ノ標本デアツタガ、實ノ標本デ記載シタトラック島産ノ *M. Guillauminiana* KAN. ト區別ナイ様デアル。

Rhysotoechia ポリネシア要素デニューギニヤ (2 種)、濠洲 (4)、馬來諸島 (3)、比島 (2) ニ分布シテキル。總テ 2~3 米ノ灌木デ *Connaraceae* ヲ思ハセル葉ヲ有シテキル。今回我々ハ 2 種ヲ採集シタガ兩者トモ未記録ノ新種デ、今後 *Harpullia* 屬ト共ニニューギニヤデソノ種類ハ増加スルモノト考ヘル。

Sarcopteryx ポリネシア要素デニューギニヤ (4 種)、濠洲 (2)、モルッカ群島 (1) ニ分布スル。

Tocchima ポリネシア要素デニューギニヤ (3 種)、濠洲 (4) ニ分布スル。

Tristylopsis ポリネシア要素デ太平洋ノ島ニ廣ク分布シ北ハ比島迄來テキル。從來ニューギニヤニ 3 種ヲ産シタガ今回我々ハ更ニ一新種 *T. novo-guineensis* K. et H. ヲ發見シタ。本種ハ比島産ノ *T. subfalcata* RADLK. ニ最も近い果實ヲ異ニシテキル。本新種ノ果實ハ通常 4 稜ヲ有シ稀ニ 3 稜及 5 稜ヲ有シテキルノガ特徴デアル。此點カラ考ヘ常ニ 5 稜 (稀ニ 4 稜) ヲ有スル *Palaoea falcata* KAN. モ本屬ニ移スガ至當デアラウ。

ニューギニヤノむくろじ科ハ大部分低地林ニ限ラレ、中高地又ハ高地帯ニハソノ種類ハ比較的少イ。Angi 湖方面ノ採集ノ折モモミ附近ノ海拔 300 米以上ニハ殆ンド本科ヲ見ズ、1900 米附近ノ男湖附近デはうちはのき採集シ、2300 米附近ノ尾根筋ノ森林デ *Guioa*, *Sarcopteryx* ヲ夫々一種ヅツ採集シタ状態デアル。本科ノ植物ハ一般ニ陽性ノモノガ多い關係シ下地林デモ河岸林縁又ハ第二次林等ニ限ラレテキル。

利用方面 *Pometia pinnata* FORST., *Tristylopsis novo-guineensis* K. et H. ノ兩者ハ樹高 40 米内外ニ達シ、通直ナ良材ヲ産スル。殊ニ前者ハナビレ、モミ方面ノ低地林ニ多産スルノデ將來利用上注目スベキモノト考ヘル。

尙 *Elattostachys Zippeliana* RADLK., *Guioa membranifolia* RADLK., *Mischocarpus paradoxus* RADLK., *M. sundaicus* BL., *Tocchima hirsutum* RADLK., *T. subteres* RADLK., *Dodonaea viscosa* L., 等ハ前二者ノ如ク大喬木トハナラナイガイヅレモ硬質ノ良材ヲ産スルカラ建築材其他ニ利用スルコトガ出來ヤウ。