

STUDIES ON NEOTROPICAL VIOLACEAE TRIBE RINOREEAE II.
FOUR NEW SPECIES AND SOME NEW COMBINATIONS IN RINOREA.

W.H.A. Hekking

Institute for Systematic Botany, State University Utrecht,
Heidelberglaan 2, de Uithof, 3584 CS Utrecht, Netherlands.

Rinorea hirsuta Hekking from Panama and Colombia, R. pectino-squamata from French Guiana and R. villosiflora from Maranhão, Brazil, are published here as new in anticipation of a revision in Flora Neotropica. R. ramiziana Glaziov ex Hekking from S.E. Brazil is validated based on Alsodeia ramiziana Glaziov nom. ined.

R. passoura (DC) Kuntze var. andersonii Sandwith ex Hekking 1979 fo. leiosperma is placed in the synonymy of R. passoura (DC) Kuntze var. grandifolia (Eichler in Martius) Hekking comb. nov. based on Alsodeia falcata Martius ex Eichler var. grandifolia Eichler 1871.

Subsequently R. passoura (DC) Kuntze var. andersonii Sandwith ex Hekking 1979 is renamed R. passoura (DC) Kuntze var. grandifolia (Eichler in Martius) Hekking fo. andersonii (Sandwith ex Hekking) stat. nov.

Rinorea hirsuta Hekking sp. nov., pl. 1, 2 f. 1

Arbuscula. Folia spurie opposita ovata acuminata vel cuspidata, venis lateralibus 9-14 (apice excluso), supra in costa et venis hirsuta, subtus fusco-hirsuta; venulis reticulatis, apice obtuso vel acutiusculo; marginibus subserratis vel subcrenatis; basi rotundata vel cuneata. Inflorescentia solitaria racemosa. Sepala subaequalia apice pilosella. Petala aequalia, obtusiuscula, cili-(ol)ata. Stamina libera, thecis apiculatis; connectivo dorsaliter glabro, producto in squama fusca glabra ovata obtusa. Ovarium globosum dense pilosellum, ovulis 3xl. Stylus basi curvatus, stigmatibus pulvinato papilloso. Capsula subglobosa vel trigona, dehiscens in 3 valvis subaequalibus dense velutinis. Stamina subglobosa, glabra, 3xl.

Treelet, 1.0-4.0 m tall. Branchlets hispid(ulous), later on glabrate with lenticles. Leaves apparently opposite; two kinds of stipules, deciduous; narrowly subulate 2.0-9.0 mm long, 0.5 mm wide, hispidulous, black-purple mucronulate; and deltoid 3.0 mm long and wide, herbaceous, appressed goldish pilosellous, ciliate, purple-mucronulate; petioles 0.3-1.5 cm long, densely hispidulous; lamina papery 8.0-20.0 cm long, 3.25-9.0 cm wide, (narrowly) ovate, at widest in 1/2-1/3 basal part, tapering into the apex or acuminate to cuspidate, underneath densely fusco-hirsute; costa and veins hispidulous above, densely fusco-hirsute underneath; lateral veins 9-14 (apex excluded); veinlets reticulate densely fusco-hirsute underneath;

apex 0.0-3.5 cm, acutish to obtusish, black-purple mucronulate; base rounded to cuneate, sometimes obtusish at the very base. Racemes solitary, axillary or apparently terminal, 5.25-10.0 cm long, 1.0 cm wide, hispidulous; pedicels articulate at the base, 2.0-6.0 mm long, hispidulous; rhachis and pedicels of frutescence subligneous; bracts and bractlets close together at the base of the pedicels, soon deciduous, + 1.5 mm long and wide, deltoid, herbaceous, densely appressed pilosellous, ciliate. Flower buds conical, acutish, nodding. Sepals subequal 1.25-2.0 mm long, 1.25-1.5 mm wide, ovate to deltoid, herbaceous, appressed pilosellous near the apex, ciliate. Petals 4.25 mm long, 1.75 mm wide, ovate to deltoid, acuminate, obtuse to acutish, appressed pilosellous at the apex; margin ciliolate. Stamens 3.0 mm long; filaments free, 0.5-0.75 mm long, + 0.25 mm wide, glabrous, + $1/2$ x as long as the thecae; glands free, connate with the filaments, slightly longer than the filaments, 0.6-0.8 mm long, + 0.25 mm wide, carnose, glabrous, apex obtuse and free; thecae + 1.5 cm long, 0.50-0.75 mm wide, ovate, acuminate; connective outside 1.0-1.25 mm long, + 0.25 mm wide, narrowly ovate to lineary, obtuse, glabrous; connective scales + 2.5 mm long, 0.8-1.1 mm wide, scarious, ovate, obtuse, subentire, suberose at the base, fuscous. Ovary globose, + 0.75 mm long and wide, densely goldish pilosellous, placentation 3x1. Style 2.5 mm long, filiform, curved at the base, + 0.25 mm exceeding the stamens; stigma 0.1 mm long and wide, pulvinate, papillose. Capsula ovoid or trigonous; valves subequal + 1.5 mm long, + 0.5 mm wide, acuminate, subligneous, subvenose, velutinous. Seeds 3x1, subglobose to pyriform, 6.0-8.0 mm, glabrous.

Type: Hartman 12230, 29 December 1980 (fl.) (holotype U, isotype MO (not seen). "Shrub to 1 m. tall, flowers yellow, Río Balso between Manene and Río Coasi riverside; Darién, Panamá."

Paratypes: Romero Castañeda 4671, 2 July 1954 (fr.), (COL). "Arbusto de 4 metros. Alrededores del Salto del Río Truandó, Departamento Chocó, Colombia." Gentry 15173, 15 July 1975 (fr.) (MO, U) "Shrub 3 m., fruit green. Trail from Unguía toward base of Cerro Tacaruna, near Río Tigre, altitude 200-300 m. Departamento Chocó, Colombia."

R. hirsuta is named for its hirsute indument on the underside of the lamina of the leaves. This new species occurs in N.W. Colombia and adjacent Panama. As to its relatives, R. antioquiensis is known from N.W. Colombia only, while R. viridifolia occurs over a wider area of western S. America; R. squamata is endemic to C. America.

Smith & Fernández (1954) identified the Colombian species Castañeda 4671 (fr.) as R. riana (DC) Kuntze, because of the shape of the leaves and the fuscous velutinous capsula. This species differs completely from R. riana by the densely fuscous hirsute indument on the underside of the leaves.

In R. riana, the underside of the leaves is completely glabrous. In R. hirsuta the venation is widely reticulate, in R. riana densely reticulate. The branchlets of R. riana are often reddish when dried and provided with large whitish callose lenticels. In R. hirsuta such lenticels are wanting. The pedicels of R. hirsuta are articulate at the base; therefore the bracts and bractlets are inserted closely together at the base of the pedicels. By this character this species belongs to the cluster of R. viridifolia, R. antioquiensis and R. squamata, but R. hirsuta is distinguished by:

1. the larger leaves with a lamina up to 20 cm long and 9 cm wide;
2. the lamina, costa, veins and veinlets densely fusco-hirsute;
3. the thecae 2.0-3.0 x as long as the filaments (in the other species only 0.75-1.5 x);
4. the fusco-velutinous capsula;)'
5. the fuscous connective scales (orange-brown in the three other species).

Rinorea pectino-squamata Hekking sp. nov., pl. 1, f. 2

Arbuscula. Folia spurie opposita, ovata, acuminata vel cuspidata; costa supra glabra, subtus glabrata; venis lateralibus 9-11 (apice excluso); venulis reticulatis; apice obtusiusculo vel acutiusculo, interdum falcato; marginibus subintegris; basi rotundata vel cuneata. Inflorescentia racemosa. Sepala subaequalia vel inaequalia, pilosella, cili(ol)ata. Petala aequalia, sparse ciliolata. Stamina anteriora filamentis cum glandulis connatis; filamentis et glandulo posteriore libris; connectivo dorsaliter lineari glabro, producto in squama glabra apice erosa, basi pectinata. Ovarium globosum pilosum, ovulis 3x2. Stylus filiformis erectus vel leviter curvatus; stigmatibus truncato.

Treelet. Branchlets appressed pilose when young, later on glabrate. Leaves apparently opposite; stipules (narrowly) deltoid, acutish, 0.5-1.25 mm long, 0.25 mm wide, herbaceous, appressed pilose to glabrate, slightly ciliolate; petioles 5.0-12.0 mm long, sparsely appressed pilose when young, later on glabrous; lamina papery to herbaceous, glabrous, 7.0-17.25 cm long, 3.0-6.5 cm wide, (narrowly) ovate, at widest in 1/2-1/3 basal part, acuminate to cuspidata; costa above glabrous, underneath glabrate, sparsely pilosellous when young; lateral veins 9-11 (apex excluded), glabrous; veinlets reticulate; apex 1.0-2.0 cm long, sometimes falcate, obtusish to acutish, purple mucronulate; margin subentire; base rounded to cuneate, sometimes attenuate at the very base or slightly decurrent into the petiole. Racemes solitary, axillary or apparently terminal, (0.5)1.25-17.25 cm long, 0.25 cm wide, pilosellous; pedicels $\pm$ 1.0 mm long, articulate in 1/5 basal

)' The fruits of R. antioquiensis are unknown

part, pilose(ulous); bracts and bractlets separated, although closely together, deltoid to ovate, acutish to obtusish, purple mucronulate, herbaceous, carnose along the costa, indistinctly 4-5 venose, pilosellous along the costa, ciliolate; bracts 1.0-1.25 mm long, 1.0 mm wide; bractlets 0.3 mm long, + 0.25 mm wide. Flower buds ovoid, conical, erect, later on deflexed. Sepals subequal to unequal, 0.5-1.25 mm long, 0.3-0.6 mm wide, ovate to deltoid, obtuse, purple mucronulate, herbaceous, sometimes purple punctate, pilose(ulous) along the costa, cili(ol)ate. Petals 2.5-3.25 mm long, 1.5-1.75 mm wide, ovate, obtuse, herbaceous, carnose along median part, scarious along margin, glabrous, + purple striate at the base or along the costa, sparsely ciliolate. Stamens 2.0 mm long; filaments of the 4 anterior filaments connected by fused dorsal glands; posterior filament and gland free; filament 0.25 mm long, 0.2 mm wide; glandular tissue 0.3 mm high, glabrous; thecae 0.75 mm long, 0.5 mm wide, glabrous, unappendaged; connective scales 1.75 mm long, 0.75 mm wide, ovate, obtuse, erose near the apex, pectinate near the base, scarious, orange brown. Ovary subglobose 1.0 mm long and wide, containing 3x2 ovules, orange-brown pilose. Style 1.5 mm long, erect to slightly curved, filiform, glabrous, 0.2-0.5 mm exceeding the stamens; stigma truncate. Fruits unknown.

Type: Riera 470, 18 July 1982, (alab, fl.) (holotype U, isotype CAY, not seen) "Piste de St. Elie, km 13" French Guiana.

R. pectino-squamata is named for its deeply erose connective scales, that are pectinate-erose just behind the thecae. The species is related to R. deflexa and R. ovalifolia because the anterior filaments are united by fusion of the dorsal glands; the posterior filament is still free because its dorsal gland is not fused. This species is characteristic by its large obovate leaves at widest in 1/2-1/3 basal part and by the distinctly smaller flowers.

R. pectino-squamata differs from R. deflexa and R. ovalifolia by:

1. the branchlets glabrate (in the other species distinctly hairy);
2. the short pedicels, only 1.0 mm long (in R. deflexa 2.0-2.5 mm long; in R. ovalifolia 3.0-6.0 mm long);
3. the sepals only 0.5-1.25 mm long, 0.3-0.6 mm wide (in R. deflexa 1.4-1.8 mm long, 0.75-1.0 mm wide; in R. ovalifolia 1.5-3.0 mm long, 1.0-1.75 mm wide);
4. the petals 3.0-5.0 x as long as the sepals (in the both other species 2.0-2.5 x);
5. the petals 2.0-2.5 x as long as wide (in R. ovalifolia 3.0 x and in R. deflexa 4.0 x);
6. the petals tend to be carnose (in the other species herbaceous);
7. the stamens 2.0 mm long (in the other species + 3.0 mm long);
8. the connective scales distinctly pectinate-erose at the base;
9. the style 1.5 mm long (in the other species + 2.0 mm long);

R. pectino-squamata has only been collected in French Guiana; R. deflexa occurs endemic in N.W. Ecuador, W. of the Cordilleras near Atacama. R. ovalifolia occurs over a wide area of tropical S. America, E. of the Cordilleras (Amazonia s.l.); Venezuela (Orinoco), N. Bolivia, N. Paraguay and Maranhão and the areas in between; the species is unknown in the Guianas.

Rinorea villosiflora Hekking sp. nov., pl. 1, 2 f. 3

Arbuscula. Folia spurie opposita obovate cuspidata, venis lateralibus 8-14 (apice excluso), venulis scalariformibus, apice acuto, marginibus serr(ul)atis seu cren(ul)atis; basi obtuso-rotundata. Inflorescentia thyrsoida solitaria; cymulis 3-7(?) floris. Sepala subaequalia, pilosella. Petala aequalia, anguste ovata vel deltoidea, acuminata, acutiuscula, villosa. Stamina subsessilia, filamentis brevibus, thecis apiculatis; connectivo dorsaliter dense villoso, producto in squama ovata obtusa cinnamomea dorsaliter dense villosa. Ovarium subglobosum vel pyriforme, dense pilosellum et leviter pilosum, ovulis 3xl. Stylus erectus, basi pilosellus. Capsula globosa, dehiscens in 3 valvis inaequalibus coriaceis. Semina subglobosa, glabra, 3xl.

Treelet of 4 m 50 tall. Branchlets hispidulous to puberulous. Leaves opposite, sometimes also ternate; stipules deciduous, herbaceous, strigillose; petioles + 1.0 cm long, hispidulous to puberulous; lamina papery 4.0-11.5 cm long, 2.0-5.0 cm wide, elliptic to (ob)ovate, cuspidate, glabrous on both sides; costa above glabrous, slightly hispidulous near the base; costa underneath hispidulous near the base; domatia wanting; lateral veins 8-14 (apex excluded); veinlets scalariform; apex 0.1-0.6 cm, acute; margin cren(ul)ate to serr(ul)ate, purple mucronulate; base rounded to cuneate. Inflorescence thyrsoid, solitary, terminal or axillary, 7.5 cm long, 1.0 cm wide, hispidulous, cymules with 3-7(?) flowers; common peduncles 2.0-4.0 mm long, hispidulous; pedicels 2.0-3.5 mm long, articulate near the middle, hispidulous; bract(let)s + 1.0 mm long and wide, ovate to deltoid, hispidulous, ciliolate. Sepals subequal, 2.0 mm long, 1.0-1.5 mm wide, ovate, obtuse, herbaceous, + 3-venose, costa strongly ribbed, pilosellous outside, glabrate inside, ciliate. Petals 4.25 mm long, 1.0 mm wide, narrowly deltoid to ovate, acuminate, herbaceous, densely whitish pilose along the median costa on both sides; margin glabrous; apex acute or acutish. Stamens 2.0 mm long, subsessile; filaments and dorsal glands 0.2 mm high, connate to a tube, secondarily broken into free parts 0.5 mm wide; tube glabrous; thecae 1.5 mm long, 0.75 mm wide, appendaged by 2 cusps; connective 1.75 mm long and 0.25 mm wide on both sides, dorsally villose, ventrally glabrous; connective scales 1.75 mm long, 1.0-1.25 mm wide, ovate, obtuse, suberose, scarious, partly brownish, partly transparent, dorsally villose. Ovary subglobose to subconical, + 1.25 mm long, + 1.0 mm wide, goldish hispidulous, placentation 3xl. Style 2.0 mm erect, filiform to subclavicate,

exceeding stamens + 0.3 mm; stigma truncate, slightly thickened. Capsula ovoid to globose, acuminate; valves unequal, 0.5 cm long, 0.25-0.50 cm wide, outside densely hispidulous to velutinous and less densely erect pilose, inside densely villose. Seeds 3x1, globose to pyriform, 3.0 mm long, 2.5 mm wide, glabrous.

Type: Rosa & Villar 3025, 17 December 1978, (fl., fr.)

(holotype U, isotype INPA (not seen), NY (not seen)).

"Arbusto de 4.50 m. da altura, frutos imaturos verde. Maranhão, fazenda Sta Maria, margem esquerda de Rod. BR-222, km 45 de Açailândia. Floresta de terra firme, relevo plano."

R. villosiflora is named for its villose indument of the connective and connective scales. The species has hitherto been collected only in the state of Maranhão, Brazil; R. sprucei and R. vaupesana occur endemic along the R $\acute{o}$ Vaup $\acute{e}$ s; R. racemosa is widely spread over Amazonia.

R. villosiflora is related to R. racemosa, R. sprucei and R. vaupesana by its opposite leaves with scalariform veinlets, its thyrsoïd inflorescences, its dorsal glands and filaments united to a tube and the chartaceous capsula dehiscent into three unequal valves. This new species differs however by:

1. the smaller leaves only up to 11.5 cm long;
2. the lower number of lateral veins of only 8-14 (in the other species 10-21);
3. the underside of the lamina glabrous (in the other species densely appressed pilosellous);
4. the margin of the lamina crenulate to serrulate (in the other species subentire);
5. the petals narrowly deltoid to acuminate;
6. the upper margin of the filamental tube glabrous (in the other species hairy);
7. the dorsal side of connective and connective scales densely villose (glabrous in the other species);
8. the capsula densely hispidulous to velutinous and less densely pilose (in R. vaupesana only densely pilosellous, in the other species glabrous);
9. the valves inside densely villose (in the other species glabrous).

Rinorea ramiziana Glaziov ex Hekking sp. nov., pl. 1, 2 f. 4.

Alsodeia ramiziana Glaziov, Bull. Soc. Bot. France 52 (= serie 4: 5)

mém. 3a: 22. 1905, nomen nudum; Blake, Contr. U.S. Nat.

Herb. 20(13): 517. 1924 as "species dubia ob nomine nudo et ab auctore non observata."

Arbuscula. Folia alternantia, in apicibus ramulorum congesta; anguste elliptica obovatave glaberrima; venis lateralibus 8-16 (apice excluso); venulis reticulatis; apice acuminato, acuto vel obtuso; marginibus subintegris, incrassatis, reflexis; basi rotundata. Inflorescentia thyrsoidea. Sepala aequalia, anguste ovata,

in apice pilosella; marginibus ciliolatis. Stamina filamentis connatis; thecis 2-mucronatis; connectivo dorsaliter pro majore parte glabro, producto in squama dorsaliter dense villosa. Ovarium ovoideum, ovulis 3xl. Stylus erectus, filiformis vel apice claviformis; stigmatе truncato. Capsula elliptica vel orbicularis, dehiscens in valvis subaequalibus, coriaceis vel subligneis, venosis, sparse pilosis. Semina subglobosa, glabra, 3xl.

Treelet, 3.0-5.0 m tall. Branchlets glabrous, in sicco porphyreous. Leaves alternate, congested on nodia near the apex of the branchlets; stipules deciduous, deltoid, + 2.0 mm long, + 1.0 mm wide, acutious, purple mucronulate, herbaceous to coriaceous, hispid(ulous) along the costa, margin glabrate; petioles 1.5-5.0 mm long, minutely pilosellous above; glabrous underneath; lamina papery to coriaceous 5.25-12.75 cm long, 2.0-5.5 cm wide, narrowly elliptic to narrowly obovate, glabrous; costa and veins glabrous on both sides; lateral veins (8)11-16 (apex excluded); veinlets reticulate; apex 0.0-0.2 cm long, acutish to obtuse, minutely purple mucronulate; margin subentire thickened and slightly reflexed, purple mucronulate; base cuneate to rounded, sometimes slightly oblique rounded at the very base. Thyrses 5.0-10.0 cm long, 1.0-2.0 cm wide, solitary or 2-fasciculate, laxiflorous, slightly pilosellous to glabrous; cymules containing 1-3 flowers often together with 2-5 undeveloped flower buds; common peduncles 1.25-3.0 mm long, slightly pilosellous; pedicels 1.25-2.0 mm long, articulate in 1/3 basal part, slightly pilosellous; bracts and bractlets subequal 0.75-1.0 mm long, 0.5-0.75 mm wide, acutish, purple mucronulate, herbaceous, glabrous, margin scarious and ciliolate. Flower buds ovoid to conical, apex acutious. Sepals subequal, 1.75 mm long, 1.25-1.50 mm wide, deltoid to ovate, acute to obtusious, black-purple mucronulate, herbaceous, 1-3 venose, glabrous, margin scarious, cilioate. Petals 4.75-5.25 mm long, 1.50-1.75 mm wide, narrowly ovate, acuminate, herbaceous, pilosellous at the apex; apex obtusious to acutious; margin glabrous. Stamens 3.25 mm long; filaments 0.1-0.2 mm long, connate to a tube, glabrous; glandular tissue fused; thecae subsessile 2.0 mm long, 0.75 mm wide, narrowly elliptic to narrowly ovate, 2-mucronate; connective outside + 0.75 mm long, 0.1-0.2 mm wide, narrowly deltoid, glabrous, or only hairy at the apex; connective scales 3.0 mm long, 1.0 mm wide, ovate, obtuse, erose, scarious, densely villose outside. Ovary ovoid, + 1.25 mm long, + 0.75 mm wide, pilose to villose, containing 3xl ovules, inserted at the base of the placenta. Style + 2.5 mm long, erect, glabrous, pilose(1lous) at the base, filiform, slightly clubshaped near the apex, + 0.5 mm exceeding the stamens; stigma truncate, at the apex open. Capsula elliptic or orbicular, acuminate; bract(1et)s, sepals, petals, stamens and style subpersistent; valves unequal + 10 mm long, 4.5-7.0 mm wide, coriaceous to slightly laneous, venose, sparsely pilose; seeds 3xl, subglobose, 4.0 mm long, 5.0 mm wide, glabrous.

Type: Glaziou 12425, April-May 1881, comm. A. Glaziou, Feb. 1882, (fl.) (holotype P (Herbier de Glaziou), isotypes K, LE, P) "campos à Itacca, (Estado do) Rio (de) Janeiro, Brésil."
Paratypes: Brade, Altamiro & Apparicio 18087 (6 May 1946) (alab., fl., fr.) (RB) "Vitoria, Vila velha, Estado de Espiritu Santo, Brazil"; Kuhlmann 215, 15 April 1934, (alab.) (RB) "Lagao do Durao, Rio Doce, Espiritu Santo" Brazil;

This species occurs on "Campos" and "Mata" in S.E. Brazil (States of Espiritu Santo and Rio de Janeiro).

R. ramiziana differs from R. physiphora as well as R. maximiliana by:

1. its pedicels shorter than 3.0 mm;
2. its thyrsoid inflorescence;
3. its style shorter than 3.0 mm.

In R. ramiziana the ovules are inserted at the base of the placenta, in the two other species on the middle of the placenta. In R. ramiziana and R. maximiliana the connectives are dorsally glabrous and the connective scales dorsally hairy. In R. physiphora the presence of the indument is just reversed, i.e. the connective is dorsally hairy and the connective scales are glabrous.

R. ramiziana, R. physiphora and R. ramiziana occur endemic in the coastal area of S.E. Brazil in the understory of the local rain-forests. R. physiphora is also recorded from the Plan Alto and along the Rio Paraguay; the other species are not collected there till yet.

Rinorea passoura (DC) Kuntze

var. grandifolia (Eichler in Martius) Hekking comb. nov.
fo. grandifolia

Alsodeia falcata Martius ex Eichler in Martius

var. grandifolia Eichler in Martius Fl. Bras. 13(1): 386.1871

Type: Martii iter brasiliense (lectotype Martius (123), (fr.); (isolectotypes Martius (124), (125), (126), (127). M) (alab., fr.) "Habitat in sylvis ad Ega (=Teffé), Provincia Rio Negro, Brasilia."

Rinorea grandifolia (Eichler) Melchior comb. nov. ined. in schedis.
Rinorea scandens Ule, Verh. Not. Ver. Prov. Brandenburg 47: 157. 1905 (1906).

Type: Ule 5018, October 1900, (alab., fl., fr.) (holotype B (burned during World War II); lectotype HBG; isolectotypes F (fragment + photograph), G. L.) "Kletterstrauch, Blüten strohgelb, Itanga (Marary), Juruá, Estado de Amazonas, Brazil." "seminibus ad valvam glabris" (seeds glabrous, teste Ule l.c. 1905 (1906)).

Rinorea passoura (DC) Kuntze

var. andersonii Sandwith ex Hekking, Phytologia 34: 480. 1979
fo. leiosperma Hekking l.c.

Type: Duque Jaramillo 2015, November 1945, (fragm. fl., fr.)
(holotype COL) "Trapezio Amazónico entre ríos Loretoyacu y
Hamacayacu, orilla del Loretoyacu, 250 m. alt." Departamento
Amazonas, Colombia.

Rinorea passoura (DC) Kuntze

var. grandifolia (Eichler in Martius) Hekking
fo. andersonii (Sandwith ex Hekking) Hekking stat. nov.

Rinorea passoura (DC) Kuntze

var. andersonii Sandwith ex Hekking, Phytologia 34: 479.
pl. 3. f. 13. 1979

Type: Fanshawe F. 2463 = FDG 5199, 8 April 1945, (fl., fr.)
"Barima River: opposite Anabisi Creek, 6 ft shrub of Mora
Forest. Flowers pale cream. "Mamusaré" Arawak. British Guiana."

Rinorea pulleana Melchior, nomen nudum in

Nat. Pflanzenfam. ed. 2. 21: 352. 1925; Lemée, Fl. Guian.
Franç. 3: 60. 1953.

ACKNOWLEDGEMENTS:

The author wishes to express his gratitude to Professor Dr. A.L. Stoffers, under whose directorship the present study was carried out. Thanks are also due to Dr. S.R. Gradstein and Mr L.Y.Th. Westra for reading and correcting the manuscript, Mrs. Jhakrie for typing the manuscript. The Netherlands Organization for the Advancement of Pure Research (Z.W.O.) enabled the author to visit some herbaria.

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ILLUSTRATIONS (by the author)

Pl. 1. Flowers , f.1., f.2., f.3., f.4.

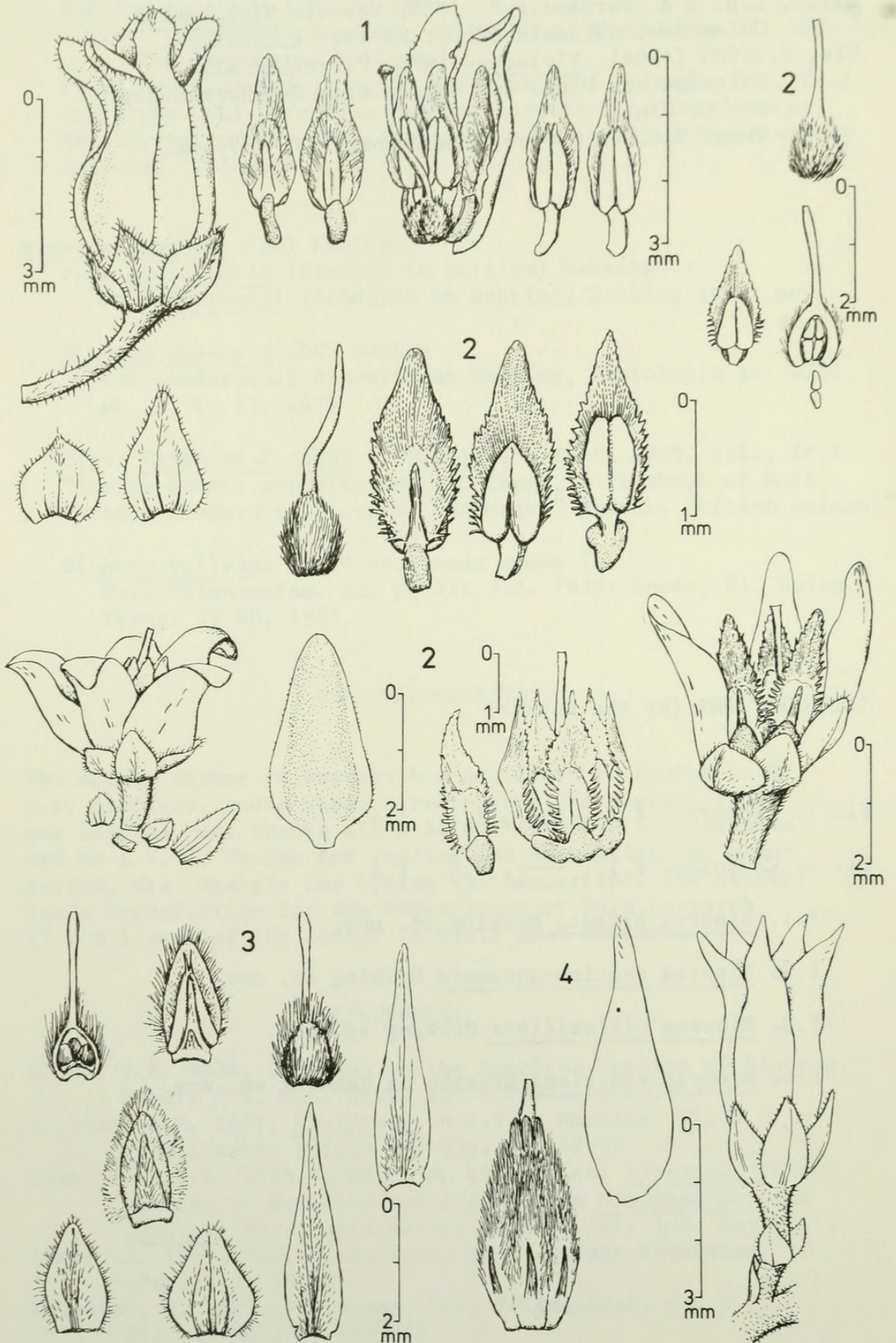
Pl. 2. Capsulas, f.1., ----, f.3., f.4.

f.1. Rinorea hirsuta Hekking sp. nov.

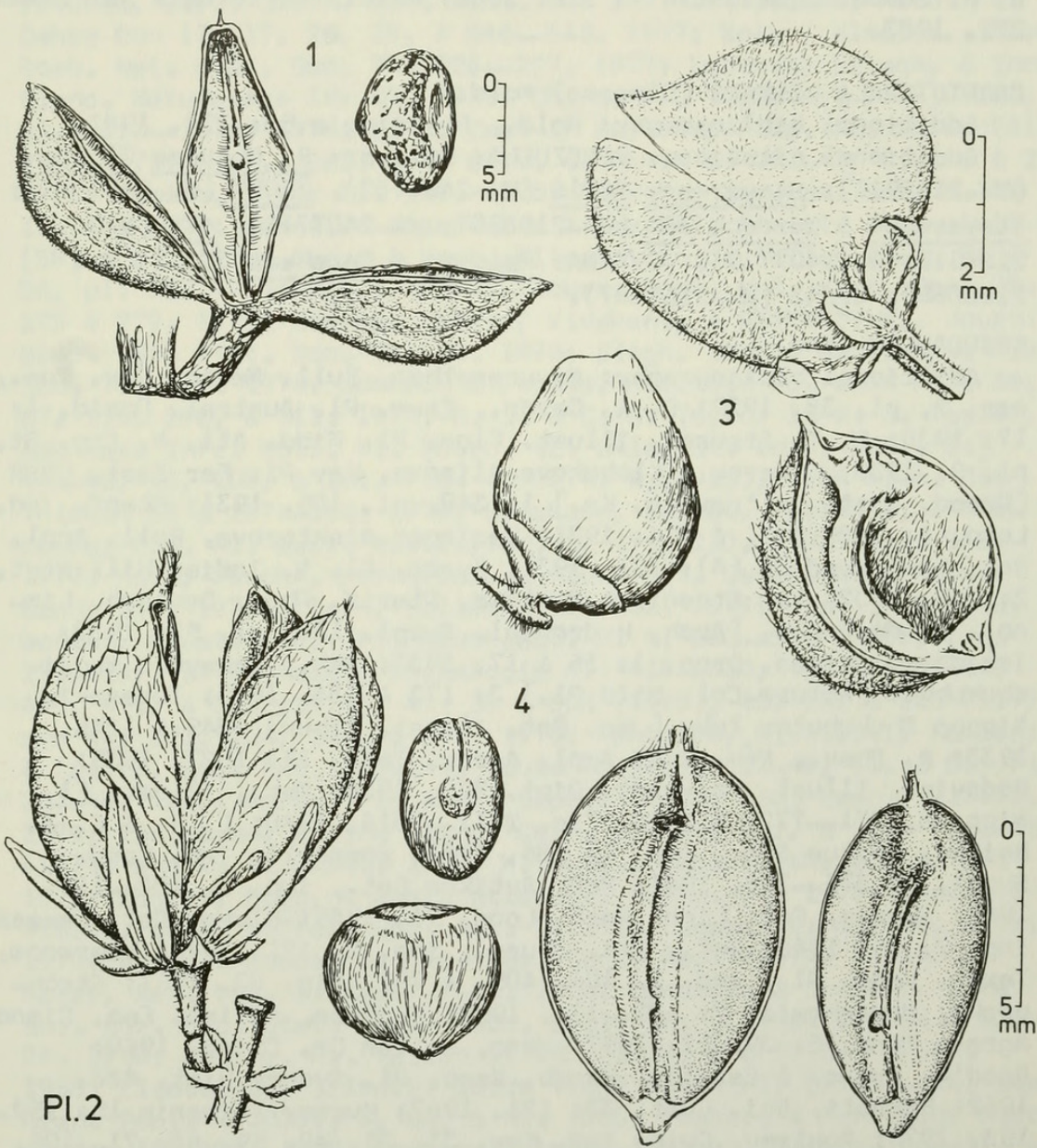
f.2. Rinorea pectino-squamata Hekking sp. nov.

f.3. Rinorea villosiflora Hekking sp. nov.

f.4. Rinorea ramiziana Glaziou ex Hekking sp. nov.



Pl. 1





Hekking, W H A. 1983. "Studies on neotropical Violaceae tribe Rinoreae II. Four new species and some new combinations in Rinorea." *Phytologia* 53, 250–261. <https://doi.org/10.5962/bhl.part.6894>.

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