

New species of *Hiraea* (Malpighiaceae) from the Guianas and adjacent Brazil

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Anderson, William R. (University of Michigan Herbarium, North University Building, Ann Arbor, MI 48109-1057, U.S.A.). New species of *Hiraea* (Malpighiaceae) from the Guianas and adjacent Brazil. *Brittonia* 46: 126–133. 1994.— Four species of *Hiraea* are described and discussed: *H. gracieana* and *H. morii* from Saül, French Guiana, *H. longipes* from the Oyapock region of French Guiana and Amapá, Brazil, and *H. propinqua* from French Guiana and Suriname. *Hiraea gracieana* is illustrated.

Key words: Malpighiaceae, *Hiraea*, Guianas, Brazil.

The Malpighiaceae of the Guianas are well known in comparison with those of Peru and central Brazil. Nevertheless, continued collection, especially intensive collection by informed botanists like Scott Mori and his collaborators, is providing a steady stream of interesting surprises. Four of those additions are described here.

***Hiraea gracieana* W. R. Anderson, sp. nov.**
(Fig. 1)

TYPE: FRENCH GUIANA, Saül, 3°37'N, 53°12'W, vicinity of Eaux Claires, Sentier Botanique, on gentle slope to plateau ca. 500 m above *Huberodendron* trees, near first large gap along ridge, elev. ca. 300 m, non-flooded moist forest, 2 Nov 1992 (fl/fr), *S. Mori, C. Gracie, J. Knudsen & B. Ståhl* 22751 (HOLOTYPE: MICH; ISOTYPES: CAY, GB (not seen), K, MO, NY, P, U, US).

Liana caulibus velutinis minimum 1 cm diametro; folia decussata; lamina foliorum majorum 19–28 cm longa, 11.5–18 cm lata, pertinaciter velutina, margine distali glandulis parvis instructa; petiolus 20–30 mm longus, velutinus; stipulae 3–5 mm longae, 2–4 mm infra apicem petioli gestae; inflorescentia cyma ex 3–7 umbellis 4-floris constans; petala lutea, 2 antico-lateralis erosa, 2 postico-lateralis dentata, posticum glanduloso-dentatum; antherae 1.6–2 mm longae; samara alis lateralibus membranaceis, 22–25 mm latis, 34–38 mm altis, tenuiter sericeis, ala dorsali 1.5 mm lata, 5 mm alta.

Liana, the woody stems at least 1 cm in

diameter, densely and persistently velutinous with the hairs 0.2–0.4 mm long, Y-shaped. *Leaves* decussate; *lamina* of larger leaves 19–28 cm long, 11.5–18 cm wide, broadly elliptical or more often obovate, broadly cuneate or rounded at base, distally obtuse or rounded and abruptly short-acuminate and often apiculate, eglandular on abaxial surface but bearing a series of small buttonlike glands on distal half of margin, adaxially relatively thinly but persistently velutinous with weak Y-shaped hairs that often collapse in age, abaxially densely and persistently velutinous with the hairs Y- to T-shaped and standing ca. 0.3 mm high, the lateral veins 10–15 and connected by many fine parallel cross-veins 2–4 mm apart, the lateral and cross-veins raised below, slightly impressed above; *petiole* 20–30 mm long, densely and persistently velutinous like stems, bearing at the apex a pair of swollen glands 1.5–2 mm in diam.; *stipules* borne on petiole 2–4 mm below apex, 3–5 mm long, curved or bent near middle, tapering from base to apex but more abruptly so in distal half, proximally persistently velutinous, distally subsericeous or glabrescent. *Inflorescence* a short compact velutinous axillary cyme of 3–7 4-flowered umbels, occasionally 2 cymes, one borne above the other; bracts and bracteoles ca. 1 mm long, broadly ovate, persistent; pedicel 16–25 mm long. *Flowers* with a “sweet, lemon-like aro-

ma." *Sepals* 2–2.5 mm long, 2.5 mm wide, ovate, appressed in anthesis, abaxially sericeous, adaxially glabrous, the anterior eglandular, the lateral 4 bearing 8 elliptical, apically slightly detached glands 3 mm long. *Petals* "bright yellow, with orangish-red line in middle, older petals pale yellow"; lateral 4 petals spreading to reflexed, with the claw 3 mm long and the limb 5.5–7 mm long, 7 mm wide, orbicular, eglandular, the anterior-lateral pair dentate at base and erose distally, the posterior-lateral pair distinctly dentate all around the margin; posterior petal with the claw 5 mm long and held nearly erect, the limb 3.5 mm long, 5 mm wide, reflexed, glandular-dentate all around the margin with the divisions short and terminating in small, subspherical glands. *Stamens* glabrous; filaments connate for ca. 1 mm at base; filaments opposite sepals ca. 3.5 mm long, that opposite anterior sepal erect and straight, the 2 opposite anterior-lateral sepals curved sideways toward posterior petal and inward to center of flower, the 2 opposite posterior-lateral sepals curved sideways toward stamen opposite posterior petal; filaments opposite petals (2) 2.5–3 mm long, always shorter than adjacent filaments, erect, straight; anthers 1.6–2 mm long, similar but those opposite sepals with the locules more pendent below insertion of filaments than those opposite petals, the connective bicolored, probably yellow with a reddish center. *Ovary* hirsute; styles ca. 3.5–4 mm long, sparsely sericeous or glabrate, the anterior slightly bowed outward, the posterior 2 curved strongly from base toward posterior petal and then back toward center of flower, all with a very short dorsal point at the apex. *Samara* butterfly-shaped; lateral wings membranous, 22–25 mm wide, 34–38 mm high, roughly semicircular, irregularly sinuous or shallowly lobed, thinly sericeous with all hairs fine, sessile, appressed; dorsal wing 1.5 mm wide, 5 mm high; nut globose, 4–5 mm in diam.

This most impressive plant is known only from the type. Its epithet honors Carol Gracie, enthusiastic student of the flora of Saül, whose excellent photographs are a joy to see and provide a valuable supplement to herbarium specimens.

I have seen nothing like this plant from

the Guianas or elsewhere in northern South America. Among the few species with four-flowered umbels and velutinous leaves, the one that is geographically closest is *Hiraea ternifolia* (H.B.K.) Adr. Juss., but that is a plant of slender stems and much smaller leaves that generally grows in drier vegetation. *Hiraea gracieana* is most like *H. grandifolia* Standley & Williams, a species of Costa Rica and Panama, which differs from *H. gracieana* in the following ways: The hairs are 1.6–2 mm long on the stem and 1–1.4 mm long on the petiole; the cross-veins connecting the lateral veins in the lamina are 2–7 mm apart; the inflorescence seems to be unbranched or a cyme of three umbels, like that found in many species of *Hiraea* with four-flowered umbels, but the material available for study has few, poorly preserved inflorescences; the anthers are only 1–1.2 mm long; and the wing of the samara has two kinds of hairs, fine appressed medifixed hairs like those found in *H. gracieana* and longer, darker hairs that appear to be basifixed (most actually consist of a long stalk and two short erect branches, but one of the branches may be rudimentary or absent). When more collections of these two species are available, a better comparison will be possible.

***Hiraea longipes* W. R. Anderson, sp. nov.**

TYPE: FRENCH GUIANA. Oyapock, 1 km en amont des Ilets Yacarescin, 10 Dec 1965 (fl), *Oldeman 1719* [HOLOTYPE: MICH; ISOTYPES: CAY, P (not seen)].

Liana vel frutex usque ad 4 m altus; lamina foliorum majorum 13–23.5 cm longa, 6.5–10 cm lata, basi cordata vel rotundata, mox utrinque glabrata, margine distali glandulis parvis instructa; petiolus 5–10 mm longus; stipulae 5–8 mm longae; inflorescentia cyma brevipedunculata ex 3 umbellis 4-floris constans; bractae 2–3 mm longae; bracteolae 1.5–2.2 mm longae; pedicellus 22–34 mm longus; petala lutea per anthesin, 4 lateralia ungue 3–3.5 mm longo, limbo 6–7.5 mm longo, 6–8 mm lato, eglanduloso; petalum posticum ungue 3.5–4.5 mm longo, limbo 6–6.5 mm longo, 5–7 mm lato, toto circuito glanduloso-dentato glandulis parvis.

Liana or shrub to 4 m tall, the woody stems at least 0.6 cm in diam., initially sericeous, soon glabrescent. *Leaves* decussate; *lamina* of larger leaves 13–23.5 cm long,

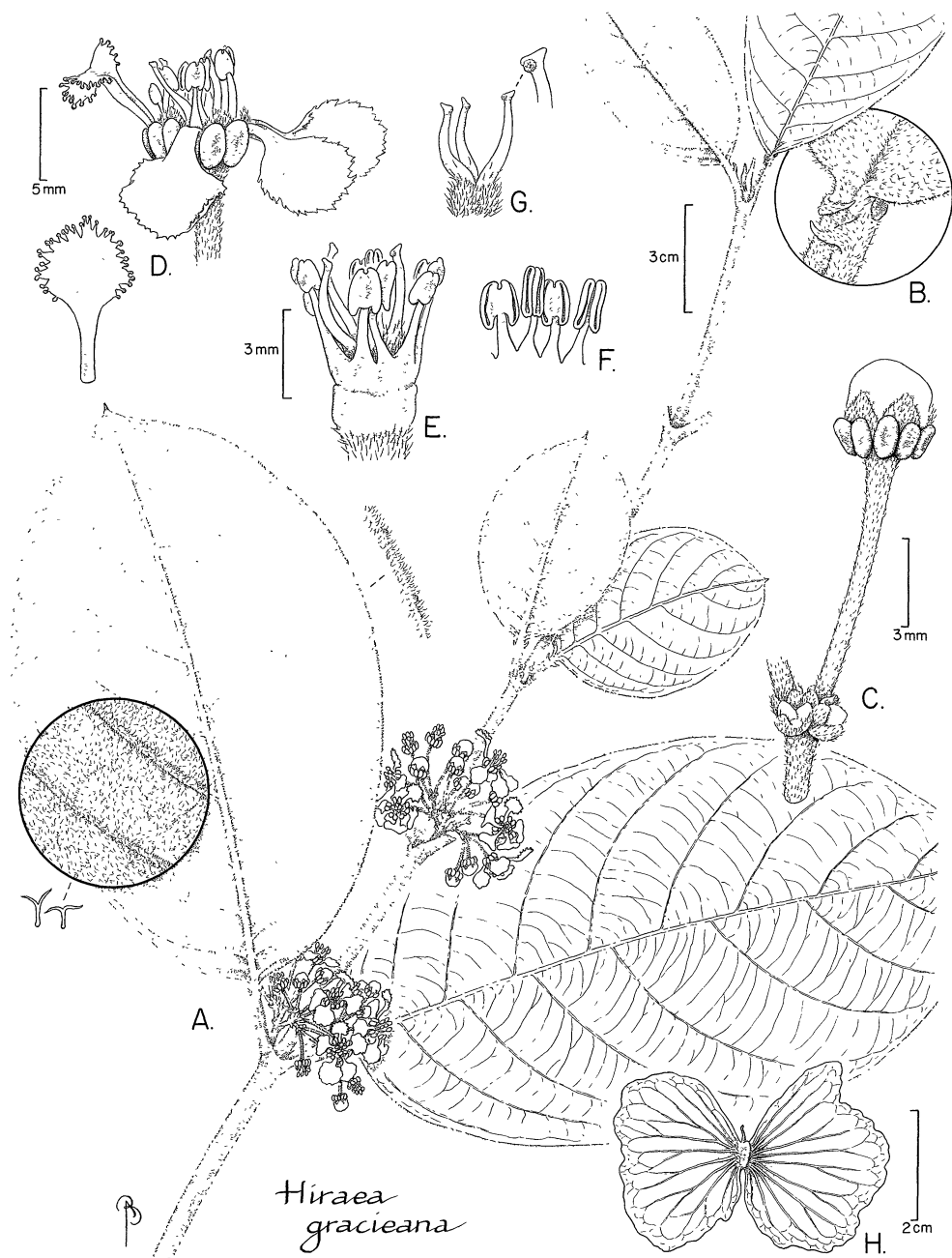


FIG. 1. *Hiraeta gracileana* (Mori et al. 22751). A. Flowering branch, with enlargements of the abaxial surface and margin of the lamina. B. Enlargement of the petiole apex, showing stipules and gland. C. Four-flowered umbel with two flowers removed. D. Flower, side view with posterior petal to left, and posterior petal. E. Androecium and gynoecium, same view as in D. F. Stamens, adaxial view. G. Gynoecium, the anterior style to right, its apex enlarged. H. Samara, abaxial view.

6.5–10 cm wide, shallowly cordate or rounded at base, obovate, or rounded and often apiculate at apex, eglandular on abaxial surface but bearing a series of small buttonlike glands on distal $\frac{2}{3}$ of margin, initially densely sericeous on both sides but nearly or quite glabrate at maturity or with some hairs persisting especially at base of midrib, the lateral veins 9–13, parallel, connected by \pm parallel cross-veins 2–4 mm apart, the lateral veins raised below and slightly sunken above, the cross-veins hardly prominent on either surface; *petiole* 5–10 mm long, densely and persistently sericeous, bearing at or near apex a pair of glands 1.5 mm in diam.; *stipules* borne on petiole near middle or occasionally nearer base or apex, 5–8 mm long, somewhat flattened, sericeous or glabrescent. *Inflorescence* loosely sericeous, usually a short-stalked cyme of 3 4-flowered umbels; bracts and bracteoles triangular, persistent, the bracts 2–3 mm long, the bracteoles 1.5–2.2 mm long; pedicel 22–34 mm long. *Sepals* 2.5–3 mm long, 2–3 mm wide, triangular, appressed in anthesis, abaxially sericeous, adaxially glabrous, all eglandular or the lateral 4 or all 5 biglandular, the glands (1) 1.5–2.5 mm long, smallest on and beside the anterior sepal. *Petals* yellow; lateral petals with the claw 3–3.5 mm long and the limb 6–7.5 mm long, 6–8 mm wide, orbicular, eglandular, the anterior-lateral pair concave and erose, the posterior-lateral pair flat and dentate or short-fimbriate; posterior petal with the claw 3.5–4.5 mm long and held erect, the limb 6–6.5 mm long, 5–7 mm wide, glandular-dentate all around the margin with the glands very small, not or hardly wider than the teeth they terminate and occasionally hardly glandular. *Stamens* glabrous; filaments connate at base for ca. 1 mm; filaments opposite sepals 4–4.5 mm long, that opposite anterior sepal erect and straight, the 2 opposite anterior-lateral sepals curved sideways toward posterior petal and inward to center of flower, the 2 opposite posterior-lateral sepals curved sideways toward stamen opposite posterior petal; filaments opposite petals 2.5–3.5 mm long, always shorter than adjacent filaments, erect, \pm straight; anthers 1.3–1.8 mm long, the connective bicolored, yellow and dark red. *Ova-*

ry hirsute; styles 4–5 mm long, glabrous or sparsely sericeous proximally, the anterior bowed outward at base and then erect and nearly straight, the posterior 2 curved strongly from base toward posterior petal, then distally straight and ascending at an angle or bent somewhat back toward center of flower, all with a dorsal point or short hook at the apex. *Samara* unknown, the very young samaras of Cowan 38542 showing only that its structure is typical of the genus (2 well-developed lateral wings distinct at base and apex and a narrow dorsal winglet).

Habitat and distribution: Known only from high forest on *terra firme* in Amapá and adjacent French Guiana.

Additional collections seen: FRENCH GUIANA. Oyapock, Mariaflor, 2 Dec 1965 (fl), Oldeman 1846 (CAY).

BRAZIL. Amapá: Left bank of Amapari, 2–3 mi above Serra do Navio, 23 Nov 1954 (fl), R. S. Cowan 38542 (MG, MICH, NY, US); margem E. F. Amapá, Cupixi, 23 Oct 1976 (imm. fl), B. G. S. Ribeiro 1545 (MO, NY).

The epithet of this species refers to the unusually long pedicel. The habit of the plant is somewhat in doubt. One collection was described by its collector as a liana, two were described as shrubs of 2 m and 4 m, and one was described as a tree 8 m tall. The latter report I discount as a probable error, but it is not uncommon for woody vines of this family to take the form of shrubs when there is nothing nearby on which to climb.

Hiraea longipes seems most closely related to *H. reclinata* Jacq. sens. lat., from which it differs in its larger leaves, much longer pedicels, longer bracts and bracteoles, and larger petals. *Hiraea reclinata* is a plant of dry forests, and probably does not get as large or thick-stemmed as *H. longipes*. I have not seen “true” *H. reclinata* from the Guianas or northeastern Brazil. In French Guiana, the only species with which one might confuse *H. longipes* is *H. morii*, described below. Those two can be separated with the following key:

- 1 Petals yellow in anthesis; pedicel 22–34 mm long; lamina shallowly cordate or rounded at base; petiole 5–10 mm long; stipules 5–8 mm long; axillary cyme of umbels dis-

tinctly stalked; bracts 2–3 mm long; bracteoles 1.5–2.2 mm long; posterior petal with the limb 5–7 mm in diam., the marginal glands very small, poorly developed or occasionally little thicker than teeth *H. longipes*

- 1 Petals red in anthesis; pedicel 15–17 mm long; lamina rounded at base; petiole 8–15 mm long; stipules 2.5–5.5 mm long; axillary cyme of umbels nearly or quite sessile; bracts ca. 1.5 mm long; bracteoles ca. 1 mm long; posterior petal with the limb 4–5 mm in diam., the marginal glands thick, well-developed *H. morii*

***Hiraea morii* W. R. Anderson, sp. nov.**

TYPE: FRENCH GUIANA. Saül, 3°37'N, 53°12'W; near Saül, on airport road in secondary vegetation; elev. 200–400 m; 14 Apr 1983 (fl), *S. Mori & J. Pipoly 15619* (HOLOTYPE: MICH; ISOTYPES: CAY (not seen), K, MO, NY, P, U, US).

Liana caulibus minimum 0.8 cm diametro; lamina foliorum majorum 16–19 cm longa, 7.5–11 cm lata, basi rotundata, adaxialiter glabra, abaxialiter costa nervisque lateralibus sericea cetera glabrescens, margine distali glandulis parvis instructa; petiolus 8–15 mm longus; stipulae 2.5–5.5 mm longae, 2–5 mm infra apicem petioli gestae; inflorescentia cyma sessilis ex 3 umbellis 4-floris constans; pedicellus 15–17 mm longus, pilis fusiformibus subsericeus; petala rubra per anthesin, 2 antico-lateralia erosa, 2 postico-lateralia denticulata vel dentata, posticum glanduloso-dentatum.

Liana, the woody stems at least 0.8 cm in diam., initially thinly and loosely sericeous with some hairs sessile but most raised on a short stalk much finer than the straight crosspiece, glabrescent in age. *Leaves* decussate; *lamina* of larger leaves 16–19 cm long, 7.5–11 cm wide, obovate, rounded at base, short-acuminate to rounded at apex, eglandular on abaxial surface but bearing a series of small buttonlike or short-cylindrical glands on distal half of margin, adaxially glabrous at maturity except velutinous at very base of midrib, abaxially persistently sericeous on midrib, thinly sericeous on lateral veins, otherwise very sparsely sericeous to glabrate, the lateral veins ca. 9 and connected by many fine parallel cross-veins 2–4 mm apart, the lateral and cross-veins raised below, the finest reticulum visible above in dried leaves; *petiole* 8–15 mm long, densely and persistently sericeous abaxially,

velutinous adaxially, bearing at or just below apex a pair of glands 1.5–2 mm in diameter; *stipules* borne on petiole 2–5 mm below apex, 2.5–5.5 mm long, often decurved, tapering gradually from base to apex, sericeous or glabrescent. *Inflorescence* sericeous to subvelutinous, usually seeming to comprise 3 short-stalked 4-flowered umbels side-by-side in each axil but actually a single cyme of 3 branches whose common stalk is \pm completely suppressed; bracts and bracteoles triangular, persistent, the bracts ca. 1.5 mm long, the bracteoles ca. 1 mm long; pedicel 15–17 mm long, thickened at apex, thinly sericeous with fusiform, short-stalked hairs ca. 0.5 mm long. *Sepals* 2.5–3.5 mm long, 2.5 mm wide, ovate, rounded at apex, fleshy, appressed in anthesis, abaxially sericeous, adaxially glabrous, the anterior eglandular, the lateral 4 bearing 8 small flat elliptical glands 1.5–2 mm long. *Petals* yellow in bud, red in anthesis; lateral petals spreading, with the claw 2–2.5 mm long and the limb 5–6 mm long, 6–7 mm wide, suborbicular, eglandular, the anterior-lateral pair concave and erose, the posterior-lateral pair nearly flat and denticulate or dentate; posterior petal with the claw 3 mm long and held erect, the limb 4–5 mm long and wide, erect but distally bent forward, glandular-dentate all around the margin except across the truncate base. *Stamens* glabrous; filaments free or connate up to 0.6 mm at base; filaments opposite sepals 3–3.5 mm long, that opposite anterior sepal erect and straight, the 2 opposite anterior-lateral sepals curved sideways toward posterior petal and inward to center of flower, the 2 opposite posterior-lateral sepals curved sideways toward stamen opposite posterior petal; filaments opposite petals 2–2.5 mm long, always shorter than adjacent filaments, erect, straight; anthers 1–1.5 mm long, the anterior 7 larger than the posterior 3, the connective yellow or, in most, proximally yellow and distally dark red. *Ovary* hirsute; styles 4–4.5 mm long, glabrous or bearing a few hairs proximally, the anterior erect and straight or slightly bowed outward, the posterior 2 moderately bowed toward posterior petal and then back toward center of flower, all with a short acute dorsal projection at the apex. *Samara* unknown.

I am pleased to name this plant for Scott A. Mori, whose energy and persistence have given substance to the dream of a floristic survey in central French Guiana. This is only one of the many plants new to science or to French Guiana that have been discovered through his efforts. I have seen only the type.

Hiraea morii is distinguished first by its red petals, which are unique in the genus. It is not uncommon in Malpighiaceae for yellow petals to turn orangish or even reddish in age, but in this species they are quite red at the height of anthesis, and that is otherwise unknown in *Hiraea*, in which the petals are usually described as yellow or occasionally whitish in the open flower. The species is further set apart by its large leaves, its long stipules, its leaf and petal glands, its sessile inflorescence, and the fusiform hairs of the pedicel. A key for separating this species from *H. longipes* is given above under that species.

***Hiraea propinqua* W. R. Anderson, sp. nov.**

TYPE: FRENCH GUIANA. Rivière Tampoc ["Tampok"], dans une île, 6 Apr 1977 (fr), C. Moretti 696 (HOLOTYPE: MICH; ISOTYPE: CAY, not seen).

Liana caulibus dense et pertinaciter sericeis; lamina foliorum majorum 11–14.3 cm longa, 8.4–9.7 cm lata, abaxialiter pertinaciter sericea, margine distali glandulis parvis instructa; petiolus 13–20 mm longus, sericeus; stipulae 0.4–0.6 mm longae, triangulares, basi petioli gestae; inflorescentia panicula axillaris ex 7 umbellis 4-floris constans; bractee 2–2.5 mm longae, eglandulosae; pedunculus 1.5–2.5 mm longus; bracteolae 1–1.5 mm longae, in quoque pari una bracteola uniglandulifera glandulo excentrico versus centrum umbellae protuberanti; sepala apice revoluta; petala lutea, 4 lateralia laciniata eglandulosa, posticum limbo toto circuitu fimbriato fimbriis distaliter plus minusve glandulosus; samara subcircularis, 48–56 mm lata, 42–50 mm alta, ala laterali apice usque ad nucem incisa, basi continua, nuce basi collosa.

Liana, the woody stems at least 0.7 cm in diam., densely and persistently sericeous. *Leaves* decussate with the members of a pair often subopposite; *lamina* of larger leaves 11–14.3 cm long, 8.4–9.7 cm wide, broadly ovate, rounded or truncate at base, obtuse or abruptly short-acuminate at apex, eglandular on abaxial surface but usually bearing

a series of tiny buttonlike glands on distal half of margin and occasionally 1–2 somewhat larger glands on margin near base, adaxially sparsely sericeous to glabrate at maturity with the midrib usually persistently sericeous, abaxially densely and persistently sericeous, the lateral veins 7–9 and connected by many fine parallel cross-veins 3–6 mm apart, the veins and reticulum prominent below and visible above in dried leaves; *petiole* 13–20 mm long, densely and persistently sericeous, bearing at or slightly below apex a pair of glands 1.1–1.8 mm long; *stipules* borne on petiole at very base, 0.4–0.6 mm long, triangular. *Inflorescence* densely and persistently sericeous, 2–5 cm long, an axillary panicle of usually 7 short-stalked 4-flowered umbels; floriferous bracts 2–2.5 mm long, triangular or ovate, abaxially sericeous, adaxially glabrous, eglandular; floriferous peduncle 1.5–2.5 mm long; bracteoles 1–1.5 mm long, ovate, borne at apex of peduncle, 1 of each pair bearing 1 bulging eccentric gland toward center of umbel; pedicle 7–10 mm long in flower, 12–14 mm long in fruit, thickened at the apex. *Sepals* 3.5–4.5 mm long, 2.5–3 mm wide, ovate, acute at apex and revolute in anthesis, abaxially sericeous, adaxially glabrous, all eglandular or the anterior eglandular and the lateral 4 bearing 8 elliptical or subcircular glands 1.5–1.8 mm long. *Petals* yellow; lateral 4 petals with the claw 3–3.5 mm long, the limb 4.5–5 mm long and wide, lacinate, eglandular; posterior petal with the claw 5 mm long, the limb ca. 6 mm long, 7 mm wide, fimbriate with the long slender divisions somewhat glandular-thickened at apex. *Stamens* glabrous; filaments nearly distinct; filaments opposite sepals ca. 4 mm long, erect but curved distally toward posterior petal; filaments opposite petals 2.5–3 mm long, erect, straight; anthers 1–1.3 mm long, the connective yellow. *Ovary* sericeous; styles bowed outward (i.e., curved outward from base and then back toward center of flower), sparsely sericeous in proximal half, dorsally acute or apiculate at apex, the anterior style 4 mm long, the 2 posterior styles 4.7 mm long. *Samara* depressed-circular with the nut positioned below the center, 48–56 mm wide, 42–50 mm high; lateral wing membranous, continuous at base,

incised to nut at apex but with the two sides overlapping so that little or no gap is evident, thinly sericeous with very fine white appressed hairs; dorsal wing 3–5 mm wide, 5–7 mm high; nut subglobose, ca. 3 mm in diam., finely sericeous, bearing along each side at base an irregular swelling up to 1 mm thick.

Additional collection seen: SURINAME. Forest near Brownsweeg, distr. Brokopondo, 17 Feb 1977 (fl), J. C. Lindeman, E. A. Mennega, et al. 51 (MICH, NY).

This species is phyletically and geographically near to *Hiraea adenophora* Sandwith, and the epithet refers to that double propinquity. In fact, from the inadequate specimens presently available to me I can see only one significant difference between the two. In *H. adenophora* the leaf is glabrate below at maturity, except for the persistently sericeous midrib and (often) lateral veins, whereas in *H. propinqua* the whole lamina is densely and persistently sericeous below. Many such pairs of sibling species are recognized in the Malpighiaceae. The two species seem to be geographically disjunct, but near neighbors. *Hiraea propinqua* is known from French Guiana and Suriname, and I have seen *H. adenophora* only from Guyana and adjacent Venezuela.

Hiraea propinqua, *H. adenophora*, and *H. primaeva* W. R. Anderson form a complex that is problematic in the genus. They have tiny triangular stipules borne at the base of the petiole instead of the elongated stipules borne well up on the petiole that are such a striking feature of most species of the genus, and the samara wing is continuous at the base, as in many species of *Mascagnia*, rather than incised to the nut at base and apex as in other species of *Hiraea*. On the other hand, several characters suggest that the *H. adenophora* group is a close sister to the rest of *Hiraea*. Among those are the marginal leaf glands, the scalariform cross-veins, the bending of filaments and styles, the glandular-fimbriate posterior petal, and the subglobose nut of the samara. The inflorescence is especially interesting. *Hiraea* always has a short dense inflorescence axillary to full-sized leaves. In most species the flowers are ultimately in umbels of four, and the

pedicels are sessile (i.e., the floriferous peduncle has been lost), so that the umbel has a characteristic aspect of four pedicels, each subtended by a cluster of three similar, eglandular “bracts” (actually one bract and two bracteoles). Those four-flowered umbels may be single, but more commonly they are grouped in cymes of three to seven, as in the three species described above in this paper. The other inflorescence found in one group of species is a single axillary umbel of many flowers, which I suspect evolved by secondary amplification of an ancestral four-flowered umbel. In the *H. adenophora* group the umbels of four are disposed in a relatively open cymose panicle, i.e., it terminates in an umbel but below that are two or three nodes on the same axis bearing lateral branches terminating in umbels. Such a branching pattern does not occur elsewhere in *Hiraea*, as far as I know, but by reduction it could easily have given rise to the three-umbellate cyme found in many species of *Hiraea*. In *H. adenophora* and *H. propinqua* the floriferous peduncle is still present, but it has been lost in *H. primaeva*, which puts that species one step closer to the rest of *Hiraea*. Finally, of special interest is the bulging eccentric gland present on one of each pair of bracteoles, oriented toward the center of the umbel. Those bracteole glands are found in all three species of the *H. adenophora* group. Although glands occur on the bracteoles of various other Malpighiaceae, I cannot recall seeing glands like these, with that particular distribution, in any other group.

I can see three options for dealing with this group of species: 1) transfer them to *Mascagnia*; 2) describe a new genus to accommodate them, or 3) leave them in *Hiraea*. Although it is possible that these plants represent near-relatives to the line that led from some part of *Mascagnia* to *Hiraea*, I would not consider that an adequate reason for moving them into *Mascagnia*. That “genus” is already an unnatural mixture, and introducing yet another discordant element to it would be indefensible. One might be able to justify a segregate genus on the basis of at least one synapomorphy (the bracteole glands), and possibly on the basis of the

inflorescence structure. However, I think it would be best to defer doing that until a thorough revision of *Hiraea* rules out the possibility that the segregate is basal in *Hiraea* and would be paraphyletic as a genus. For now, the best compromise seems to lie in treating these as species of *Hiraea*, anomalous but surely closest to that lineage, if not actually part of it.

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Utrecht (U) provided the specimens on which this paper is based. Bobbi Angell drew the beautiful illustration, and the cost of having that done was borne by the Fund for Neotropical Plant Research of The New York Botanical Garden. I thank Carol Gracie and Scott Mori for their friendly cooperation.