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**FLORISTIC STUDY OF MORNE LA VISITE AND
PIC MACAYA NATIONAL PARKS, HAITI**

Walter S. Judd

**THREE NEW ANGIOSPERMS FROM PARC NATIONAL
PIC MACAYA, MASSIF DE LA HOTTE, HAITI**

Walter S. Judd and James D. Skean, Jr.



UNIVERSITY OF FLORIDA

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FLORISTIC STUDY OF MORNE LA VISITE AND PIC MACAYA NATIONAL PARKS, HAITI¹

Walter S. Judd²

ABSTRACT

A floristic and vegetational survey of two recently established national parks in the poorly known mountains of southern Haiti, i.e. Parc National Pic Macaya (in the Massif de La Hotte) and Parc National Morne La Visite (in the Massif de La Selle), clearly documents the rich and highly endemic nature of the tracheophyte (especially angiosperm) flora of the parks, and confirms E.L. Ekman's early reports of the region's flora. This study resulted in the recollection of most of the region's described endemic species, along with the discovery of several new angiosperms, i.e. Wallenia formonensis, Ilex blancheana, Micropholis polita subsp. hotteana, Mecranium revolutum, Meriania parvifolia, M. brevipedunculata, Miconia macayana, Ossaea woodsii, Lobelia hotteana, Salvia sp., Rhytidophyllum sp., Pilea sp., and Ditta sp. One new combination, Garcinia barkeriana, is made.

A total of 470 species of tracheophytes (including 367 angiosperms, but excluding orchids), 99 mosses, and 63 liverworts was collected in Parc National Pic Macaya, and of these, 136 vascular plants (ca 29%) are endemic to Hispaniola. The vegetation of the park may be divided into two major types. A very diverse wet forest on limestone occurs from ca 800 to 1250 m alt. At higher elevations this forest is replaced by a complex mosaic of pine forest and cloud forest, both of which contain many local endemics.

A total of 325 species of tracheophytes (including 262 angiosperms, but excluding orchids), 76 mosses, and 19 liverworts was collected in Parc National Morne La Visite, and of these, 112 vascular plants (ca 34%) are endemic to Hispaniola. The plant communities occurring in the La Visite region may be placed in two general categories: pine forest and cloud forest. The former occupies the bowl-shaped plateau of the Massif de La Selle while the latter occurs on the steep more or less north facing slopes along the edge of the plateau and in the major ravines dissecting it.

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² The author is an Associate Professor of Botany, University of Florida, Gainesville FL 32611.

The forests of both parks are being despoiled by cutting and burning by the local inhabitants. Protection of the forested localities remaining in the parks is mandatory to preserve the region's many endemic species and natural beauty.

RESUMEN

Se presenta un estudio florístico y de vegetación de dos parques nacionales recién establecidos en las serranías poco conocidas del sur de Haití, o sean Parc National Pic Macaya (en el Massif de La Hotte) y Parc National Morne La Visite (en el Massif de La Selle). El estudio documenta nitidamente la riqueza y la endemidad de las traqueófitas (esp. las angiospermas) de los parques y confirma los informes antiguos de E.L. Ekman sobre la flora de la región. En el muestreo se recolectaron la mayoría de las especies endémicas descritas, y a la vez se encontraron varias angiospermas nuevas, o sean Wallenia formonensis, Ilex blanchiana, Micropholis polita ssp. hotteana, Mecranium revolutum, Meriania parvifolia, M. brevipedunculata, Miconia macayana, Osea woodsii, Lobelia hotteana, Salvia sp., Rhytidophyllum sp., Pilea sp., y Ditta sp. Se publica una combinación nueva, Garcinia barkeriana.

En el Parc National Pic Macaya se han colectado un total de 470 especies de traqueófitas (incluyendo 367 angiospermas, pero excluyendo las orquídeas), 99 musgos y 63 hepáticas, y de estas, 136 traqueófitas (aprox. 29%) son endémicas de Hispaniola. La vegetación del parque se puede dividir en dos tipos principales. Una selva húmeda en piedra caliza muy diversa se encuentra de aprox. 800 a 1250 metros de altura. A mayores alturas esta selva se reemplaza por un mosaico complejo de pinar y selva nebulosa, ambas con muchas especies endémicas locales.

En el Parc National Morne La Visite se han colectado un total de 325 especies de traqueófitas (incluyendo 262 angiospermas, pero excluyendo las orquídeas), 76 musgos y 19 hepáticas, y de estas, 112 traqueófitas (aprox. 34%) son endémicas de Hispaniola. Las comunidades vegetales de la región de La Visite pueden clasificarse en dos categorías generales: pinar y selva nebulosa. La primera se encuentra en la meseta cóncava de Massif de La Selle, mientras que la segunda se encuentra en las laderas empinadas norteñas por el borde de la meseta y en las barrancas principales de la meseta.

Las selvas de ambos parques están sujetas a tala y quema por los moradores de la región. Es obligatorio proteger los sitios selváticos que quedan en los parques para conservar las muchas especies endémicas y la belleza natural de la región.

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INTRODUCTION

The island of Hispaniola in the Greater Antilles includes peaks of the highest elevations in the Caribbean, and its mountainous areas are covered with cloud forests, high to low elevation *Pinus occidentalis* forests, wet forests on limestone, and sclerophyllous thickets. Thus, the island's flora is quite diverse (see Urban 1920-21, 1923; Barker and Dardeau 1930; Ciferri 1936; Moscoso 1943; Howard 1973). In spite of this diversity, some areas of Hispaniola have been collected relatively poorly. No complete Flora of either

tracheophytes (i.e. vascular plants) or bryophytes (i.e. mosses, liverworts, hornworts) exists, although available currently are a generic Flora, i.e. La Flore D'Haiti (Barker and Dardeau 1930), a checklist of seed plants, i.e. Catalogus florae Domingensis (Moscoso 1943; with supplement, Jiménez 1966), and treatments for certain groups, i.e. Flora of Hispaniola: part 1. Celastrales, Rhamnales, Malvales, Thymeleales, Violaes (Liogier 1981) and La Flora de la Española II, III, and IV (Liogier 1983, 1985, 1986). Urban's Flora Domingensis (1920-21) and Pteridophyta Domingensis (1925) are also useful. In addition, important information on the vascular flora of the island is contained in a series of papers by Urban (1921, 1926a, 1926b, 1927, 1928, 1929a, 1929b, 1930, 1931a, 1931b) and Christensen (1938) based on the collections of Erik L. Ekman, and in Urban's Symbolae Antillanae (1898-1928). A preliminary list of mosses of Hispaniola has been published (Buck and Steere 1983); other useful papers dealing with Hispaniolan bryophytes include Müller (1898), Williams (1930), Thériot (1944), Arnell (1956), Crum and Steere (1958), Crum (1965), and Judd (1980). Relatively few tracheophyte or bryophyte groups occurring in Hispaniola have been monographed recently and there is a great need for increased monographic study of neotropical groups. Vascular Floras of the island are being prepared simultaneously by Alain H. Liogier (of the Botanic Garden of the University of Puerto Rico, at Río Piedras, Puerto Rico) and by Thomas A. Zanoni (of the Jardín Botánico Nacional, Santo Domingo, Dominican Republic) and contributors; William R. Buck (of the New York Botanical Garden) is working on a bryophyte flora of the West Indies. A very useful annotated bibliography of the flora and vegetation of Hispaniola is given by Zanoni, Long, and McKiernan (1984).

The diverse and highly endemic tracheophyte and bryophyte floras of the high elevations of the mountains of southern Haiti are among the most poorly known of the island of Hispaniola, and two Haitian national parks, i.e. Parc National Pic Macaya (in the Massif de La Hotte) and Parc National Morne La Visite (in the Massif de La Selle) have been established recently in this region (Fig. 1).

The area designated as Parc National Morne La Visite is located 22 km south of Port-au-Prince in the area of latitude 18° 20' 30" N and longitude 72° 20' W. The park is situated along the crest of the Massif de La Selle between Morne d'Enfer (1900 m) and Morne Kadeneau (2155 m). The highest spot in the park is Pic Cabaio (2282 m). The boundaries of the park have not been officially designated, but the official size of the park is 2000 hectares (Woods 1986). Access to the park is via the mountain road from Port-au-Prince via Furcy and Ca Jacques, a distance of ca 55 km, and normally takes ca 4 hrs to drive. Parc National Pic Macaya is located 36 km northwest of Les Cayes and 195 km west of Port-au-Prince at latitude 18° 21' N and 74° 01' W. The park

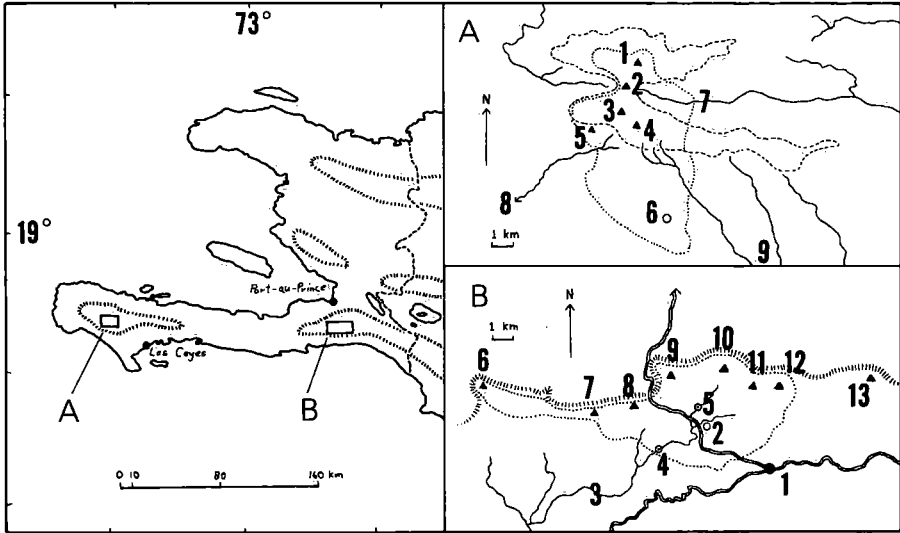


Figure 1. Map of Haiti (western portion of Hispaniola) showing location of two national parks. A. Massif de la Hotte with box delimiting region in which Parc National Pic Macaya is located: 1, Pic Macaya (2347 m); 2, Tete Ravine (location of "Saddle Camp," ca 1900 m); 3, Pic Formon (2219 m); 4, Pic lo Ciel (2170 m); 5, Morne Cavalier (ca 1550 m); 6, Ville Formon; 7, Rivière Ravine du Sud, forming "Gran Ravine" in park; 8, Rivière de Port-au-Piment; 9, Rivière l'Acul; dashed line=1700 m contour line; dotted line=region surveyed in floristic study. B. Massif de la Selle with box delimiting region in which Parc National Morne la Visite is located: 1, Seguin; 2, Park Headquarters; 3, Rivière Blanche; 4, lower cascade; 5, upper cascade; 6, Morne d'Enfer (1920 m); 7, Morne Fè Noir (1945 m); 8, Morne Nacel (ca 1900 m); 9, Morne la Visite (2170 m); 10, Morne Cabaio (2282 m); 11, Morne Bellfontaine (2242 m); 12, Tete Opaque (2269 m); 13, Morne Kadeneau (2155 m); 6-13, peaks along La Selle Escarpment; dotted line=region surveyed in floristic study; double lines=roads.

is situated around the two dominant mountains of the region, Pic Formon (2219 m) and Pic Macaya (2347 m), and includes the large and steep ravine between these two mountains that serves as the headwaters of the Rivière Ravine du Sud. The park also includes the rocky plain south of Pic Formon (Plaine de Formon and Plaine de Deron--mainly agricultural areas) as well as the karst hills along the southern boundaries of these plains, i.e. Bois Formon. Exact park boundaries have not been established; the official size of the park is 2000 hectares (Woods 1986). Access to Parc National Pic Macaya is difficult. The journey is via the route to the southwest from Port-au-Prince passing through Les Cayes. Beyond Les Cayes the route is via a gravel road

to Le Duc and then a rough dirt road to Le Pretre that crosses the Rivière l'Acul. From Le Pretre the route ascends to the plateau of the Plaine de Formon by a series of sharp switchbacks to the town of Les Platons. At this point it is necessary to hike for ca 10 km across the southern edge of the Plaine de Formon through Marché Sous Bois to Ville Formon, an agricultural community just south of the park, although a poor quality dirt road has been constructed recently from Les Platons to Ville Formon. Since 1983 both parks have been under the administration of the Institut National Haitien de la Culture et des Arts (INAHCA) and the Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural (MARNDR).

This preliminary floristic study of the two parks was undertaken as part of a larger study of the systematic biology, ecology, and geology of these parks by the Florida State Museum (see Woods and Harris 1986; MacFadden 1986).

The first botanist in the Morne Formon/Pic Macaya region (Parc National Pic Macaya, Massif de La Hotte) was probably L. C. Richard (Dod pers. comm.), who collected in the area in the late 1700s. The next and most important plant collectors in the Morne Formon/Pic Macaya region were Erik L. Ekman and Henry D. Barker, who visited and collected in the area from December 1926 to January 1927, and climbed Morne Formon; the results of this fascinating excursion are presented in an article by Ekman (1928). The many new species resulting from their collections were described mainly by Ignatius Urban or Urban and Ekman. The valuable field work of Ekman and Barker in the Massif de La Hotte is commemorated in the names of several distinctive endemics of this region (see lists). A xerographic copy of Ekman's field notes (University of Florida herbarium, FLAS, library; original set at Swedish Museum of Natural History, S) has also been studied, and reveals (along with Ekman's published account) a fairly detailed picture of the flora of the region as it existed in the 1920s. Erik Ekman again collected in the high elevations of the Massif de La Hotte and climbed Pic Macaya from the north (Morne La Hotte, above Les Roseaux) in September 1928. Leslie R. Holdridge (former Division Manager, Pine Forest Project, Haiti) botanized on Morne Macaya (to near the peak) in February 1941. The natural history of the Massif de La Hotte is outlined by Dod (1984), who comments briefly on the distinctive and highly endemic flora of the region. Donald D. Dod (of the Jardín Botánico Nacional, Santo Domingo, Dominican Republic) has botanized in the region on several occasions between 1981 and 1984 and has prepared a report on the indigenous orchids (Dod and Judd 1986).

Erik L. Ekman was also the most important plant collector in the Morne La Visite/Pic Cabaio region (Parc National Morne La Visite, Massif de La Selle). Ekman botanized in this region on several occasions in 1917 and the 1920s. Others who collected either in localities now within the La Visite park

or in adjacent regions include: W. Buch, Padre E. Christ, and Padre L. Picarda; see Moscoso (1943) for brief outlines of their activities. More recently (Nov. 1982) W. Buck, T. Zanon, and M. Mejía also have collected in this area. The work of these botanists is commemorated in the names of many plants occurring in the Massif de La Selle (see list). A brief description of Ekman's collecting experiences in the Massif de La Selle has been published (Ekman 1926), and additional information on the diverse and highly endemic flora of this region is present in Ekman's personal field notes (S, copy at FLAS, library). Holdridge's (1947) and Marie-Victorin's (1943) accounts of the similar pine forests of the Morne des Commissaires are also of interest.

From a study of published accounts of the flora of the localities now contained in the Pic Macaya and Morne La Visite National Parks, and from Ekman's personal field notes, it appears that most of the members of the vascular flora present in the 1920s still occur within (or adjacent to) the two national parks--despite the extensive human-caused disturbances in some localities. Noteworthy species collected in these areas by Ekman (unpubl. field notes) but not recollected in this floristic study are listed in Tables 1 and 2. It should be noted that these lists are not complete but stress endemic and/or conspicuous woody taxa. Additional collecting in the parks will likely reveal the presence of these, as well as other, species.

In addition, two endemic bryophytes described from the high elevations of the Massif de La Hotte have not been recollected; these are: *Hymenostomum castaneum* Crum and Steere and *Campylopus haitensis* Thér.

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Table 1. Noteworthy seed plants not recollected in Parc National Morne La Visite

Apium graveolens, *Callicarpa selleana*, *Calyptanthes temifolia*, *Catesbaea ekmaniana*, *Cestrum dolichopus*, *Cleyera vaccinioides*, *Coccothrinax montana*, *Cordia anisodonia*, *Eupatorium selleanum*, *Herodontia mikanioides*, *Ilex cubana*, *Liabum subacaule*, *L. selleanum*, *Ossaea limon*, *Passiflora ekmanii*, *Peperomia cabaianum*, *P. ramosa*, *Pilea cardiophylla*, *P. diandra*, *Proustia stenophylla*, *Rhynchospora aristata*, *Salvia tippenhaueri*, *Scolosanthus selleanus*, *Senecio constanzae*, *Temstroemia gracilifolia*, *Tillandsia fendleri*.

Table 2. Noteworthy seed plants not recollected in Parc National Pic Macaya.

Arceuthobium bicarnatum, *Arthrostylidium multispicatum*, *Cleyera vaccinioides*, *Graffenrieda chrysandra*, *Guarea sphenophylla*, *Guettarda torbeciana*, *Hottea torbeciana*, *Hypericum fueresii*, *Meriania ekmanii*, *Mikania hotteana*, *M. rhomboidea*, *Ossaea allotricha*, *Palicourea torbeciana*, *Piqueria trinerva*, *Pilea godetiana*, *Podocarpus aristulatus*, *Rubus barkerianus*, *Schlegelia brachyantha*, *Scolosanthus densiflorus*, *Vernonia ekmanii*.

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Timothy Plowman (*Brunfelsia picardae*), Elizabeth Kellog (*Eremolepis wrightii*), Grady L. Webster (*Hyeronima domingensis*), and Tom Soderstrom (*Chusquea abetifolia*). I thank William G. D'Arcy for assistance with the identification of certain species of *Solanum*.

Last, I thank my wife, Beverly, for her understanding and patience throughout this study.

ENDANGERED SPECIES

Top priority for protection should be given to species endemic to Hispaniola, and especially to those endemics with ranges restricted to the Massif de La Hotte and/or the Massif de La Selle (or with more local distributions within these mountain ranges). Species very susceptible to disturbance (e.g. *Juniperus ekmanii*) should be given special concern. Ecological/biological studies of these species are urgently needed; unfortunately very little is known beyond the most basic taxonomic information for most plant species endemic to these regions.

Juniperus ekmanii may be the woody species most in danger of extinction. This species has a very limited range, and does not sprout vegetatively after fire or cutting, both very common in the region. Thus, in many parts of the La Visite park (even places seemingly little disturbed and with diverse native vegetation) the species is present only in the form of dead stumps and logs. The species is surviving in the Tete Opaque region, and urgent efforts should be made to protect the few remaining individuals. Other endemics that seem to be rare or very restricted in distribution within the parks include: *Hypericum millefolium*, *Miconia rigidissima*, *Gesneria hypoclada*, *Siphocampylus caudatus*, *Ilex blancheana* (Parc La Visite); *Rondeletia domatiata* (Morne d'Enfer); and *Myrsine magnoliifolia*, *Meliosma abbreviata*, *Calycogonium torbecianum*, *Ossaea woodsii*, *O. curvipila*, *Miconia macayana*, *Miconia xenotricha*, *Mecranium tricostatum*, *Mecranium alpestre*, *Ekmaniocharis crassinervis*, *Wallenia formonensis*, *Tabebuia conferta*, and *Brunfelsia picardae* (Parc Macaya). But it should be stressed again, that *all* endemic species should be considered taxa of special concern, and protected from further destruction by human-caused disturbances. Endemic species of tracheophytes (excluding orchids) are listed in Table 3. The degree of endemism is much greater in the flowering plants than in the ferns, mosses, or liverworts. Genera occurring in the parks with many endemic species include: *Cestrum*, *Dendrophthora*, *Eupatorium*, *Lyonia*, *Mecranium*, *Miconia*, *Ossaea*, *Pilea*, *Rondeletia*, *Salvia*, *Senecio*, and *Wallenia*.

PLANT COMMUNITIES IN PARC NATIONAL
PIC MACAYA, MASSIF DE LA HOTTE

The vegetation of this region may be divided into two major types. The first is an extremely diverse wet forest on limestone; see discussion of this formation in Howard (1973). This vegetation type occurs at the lower elevations of the park. It extends upward to ca 1250 m alt, and collections were made in this plant community to elevations as low as ca 850 m. The second vegetation type at Parc Pic Macaya is composed of a complex mosaic of the pine forest and cloud forest (Fig. 2); see Howard (1973) for discussion of these vegetation types. These forests intergrade with the lower elevation wet limestone forest in several areas, and localities with mixed species compositions occur (e.g. moist forest below "1650 m camp" on southern slope of Morne Formon, and in Morne Cavelier region). The higher elevation forests show all variation between moist dense cloud forest and open, savanna-like pine forest depending upon edaphic factors, e.g. soil, exposure, local rainfall, wind patterns, and time since last disturbance, especially by fire, but also by hurricane or cutting (see Figs. 3, 4). Some conspicuous subtypes include: (1) cloud forest, an extremely moist forest with few or no overstory pines (*Pinus occidentalis*), large and conspicuous individuals of Bois Tremble (*Didymopanax tremulum*), a diverse selection of shrubs and small trees such as *Garrya fadyenii*, *Myrsine coriacea*, *Brunellia comocladifolia*, *Persea anomala*, *Weinmannia pinnata*, *Cestrum coelophlebium*, *Miconia* spp., *Cyathea harrisii*, *Alsophila minor*, and a climbing bamboo, *Arthrostylidium haitiense*; (2) moist pine forest with scattered shrubs or small trees, blackberries (*Rubus* spp.), and ferns; and (3) open, extremely rocky, pine forest with *Agave antillarum*, *Rhytidophyllum auriculatum*, *Eupatorium flavidulum*, *Baccharis myrsinites*, *Gyrotaenia myriocarpa*, and *Senecio stenodon*. Open windswept ridges near Pic Formon are dominated by dense thickets of *Ilex obcordata*, *I. macfadyenii*, *Myrica picardae*, *Baccharis myrsinites*, *Symplocos hotteana*, *Miconia hypoides*, *M. apiculata*, *M. barkeri*, *Ternstroemia barkeri*, *Weinmannia pinnata*, *Vaccinium racemosum*, *Lobelia rotundifolia*, and *Psychotria liogieri*. The cloud forests and moister pine forests are better developed on Morne Formon (especially the northern slope) than Morne Macaya; the southern slopes of Pic Macaya are especially open and dry, and fire seems to be more frequent in these areas. Frequent fires kill young broad-leaved species (e.g. *Myrsine coriacea*, *Miconia* spp., *Cestrum* spp., *Weinmannia pinnata*, *Didymopanax tremulum*, *Citharexylum caudatum*, *Persea anomala*, *Psychotria alpestris*, *Rondeletia formonia*, *Garrya fadyenii*) and favor pine germination, a diverse fern understory (especially *Lophosoria quadripinnata*, *Histiopteris incisa*, *Pteridium aquilinum*, *Culcita conifolia*, *Gleichenia* spp., and *Blechnum*



Figure 2. High elevation forests—moist pine forest/cloud forest: A, view northeast from ridge of Morne Formon; B, Grande Ravine du Sud, with Morne Macaya to left (dominated by pine forest) and Morne Formon to right (dominated by cloud forest).

tuerckheimii), and the growth of fire-adapted species (such as *Rubus* spp. and *Senecio stenodon*).

Dominant and/or characteristic trees and shrubs of the pine forest/cloud forest zone (above ca 1300 m) on Morne Formon and Pic Macaya include *Pinus occidentalis*, *Brunellia comocladifolia*, *Didymopanax tremulum*, *Dendropanax arboreus*, *D. selleanus*, *Myrsine coriacea*, *Weinmannia pinnata*, *Cyathea harrisii*, *Alsophila hotteana*, *A. minor*, *Miconia hypoides**, *M. subcompressa*, *M. barkeri**, *M. apiculata**, *M. tetrastoma*, *M. ossaeifolia*, *Haenianthus oblongifolius*, *Hyptis schusteri**, *Citharexylum caudatum*, *Trema micrantha*, *Persea anomala*, *Ocotea foeniculacea**, *Gyrotaenia myriocarpa*, *Psychotria liogieri*, *P. alpestris**, *Lobelia rotundifolia*, *L. robusta*, *Garrya fadyenii*, *Cestrum coelophlebium*, *C. filipes**, *Palicourea alpina*, *Symplocos hotteana**, *Calyptanthes hotteana**, *C. nummularia*, *Ilex obcordata**, *I. macfadyenii**, *Rondeletia formoniana**, *Temstroemia barkeri**, *Myrica picardae**, *Blechnum underwoodianum*, *Eugenia formonica**, *Heterotrichum umbellatum*, *Senecio stenodon*, *Besleria lutea*, *Vaccinium racemosum*, *Solanum formonense**, *S. hotteanum**, *Sapium haitiense*, *Trichilia havanensis*, *Eupatorium flavidulum*, *E. urbanii*, *Tabebuia berteri*, *Zanthoxylum haitiense*, *Agave antillarum*, *Ardisia fuertesii*, *Daphnopsis crassifolia*, *Baccharis myrsinites*, *Rhytidophyllum auriculatum*, *Vernonia buxifolia*, *V. saepium*, *Pluchea symphytifolia*, *Henriettea barkeri**, *Pachyanthus cubensis* subsp. *blancheanus**, *Meriania* spp., and *Banara splendens*. (Species especially characteristic of Pic Formon and the upper elevations of the Formon ridge are indicated with an asterisk.) It is of interest that the primitive taxon, *Illicium ekmanii*, occurs in this forest on Morne Cavalier (and also at lower elevations near Formon). The most showy-flowered species are *Fuchsia pringsheimii* and *Lobelia rotundifolia*, and both are characteristic of moist forest.

Vines include a conspicuous bamboo, *Arthrostylidium haitiense*, as well as *Smilax havanensis*, *Mikania* spp., *Cissus dissecta*, *Passiflora sexflora*, *P. murucuja*, *Rajania ovata*, *Senecio hotteana*, and *Columnnea domingensis*, along with the ferns, *Hypolepis hispaniolica* and *Odontosoria aculeata*. Herbs are not a major element of this forest; however, characteristic herbaceous species include *Rubus selleanus*, *R. eggersii*, *Peratanthe ekmanii*, *Isachne rigidifolia*, *Zeugites americana*, *Uncinia hamata*, *Panicum glutinosum*, *Andropogon glomeratus*, *Relbunium hypocarpium*, *Erigeron domingensis*, *Hydrocotyle pusilla*, *Scrophularia minutiflora*, *Begonia plumieri*, *Psychotria uliginosa*, and many species of *Pilea* and *Peperomia*. The epiphytic bromeliads *Tillandsia caribaea* and *Vriesea sintenisii* are abundant, as are various epiphytic stem parasites, such as *Dendrophthora carnosa*, *D. cupressoides*, *D. brachystacha*, *D. versicolor*, and *Dendropemon parvifolius*. Many terrestrial and epiphytic ferns also occur (see species list).

The moist pine forest of the peak and ridge of Morne Formon contains a fair number of local endemics (e.g. *Miconia apiculata*, *M. barkeri*, *M.*

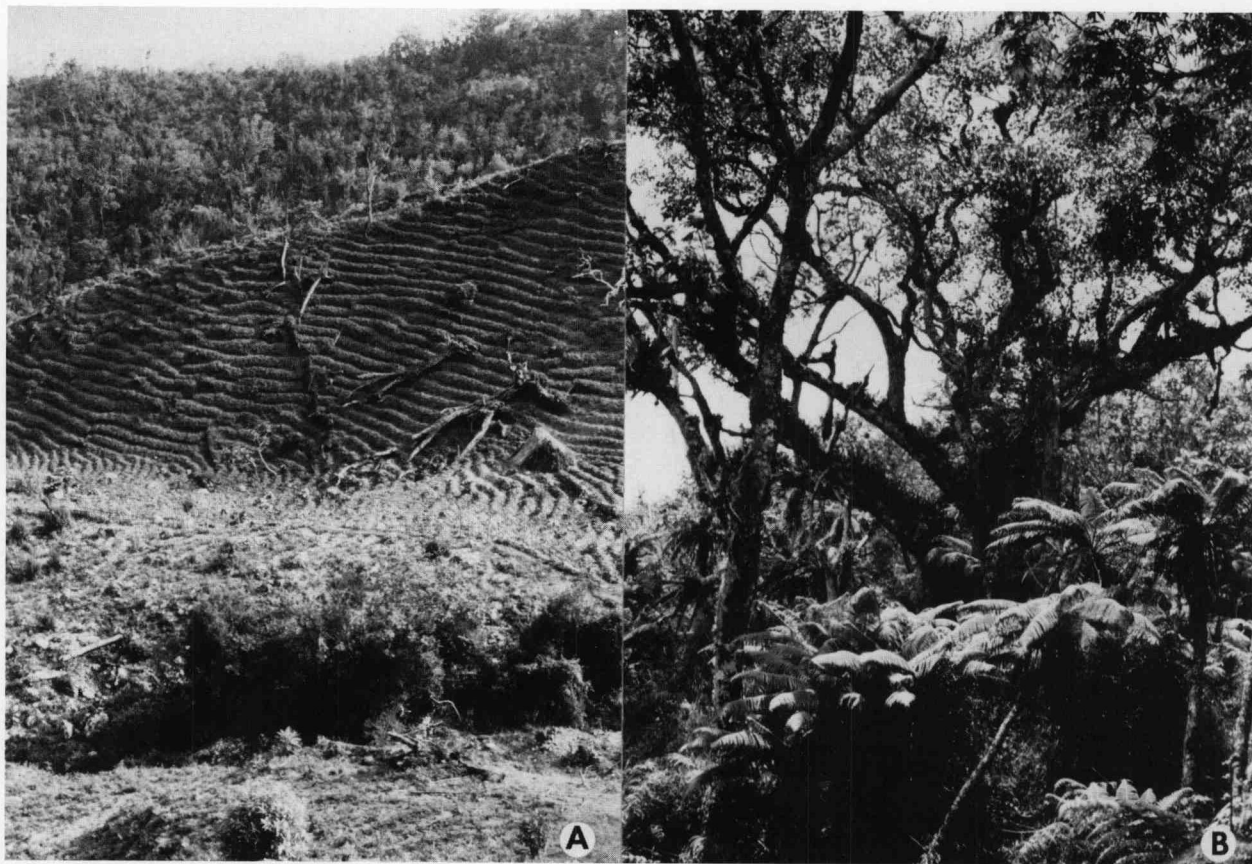


Figure 3. Cloud forests: A, southern slope of Morne Formon, note cleared area; B, ridge of Morne Formon, note large *Didmyopanax tremulum*, with *Brunellia comocladifolia* and *Alsophila minor*.



Figure 4. Forests of *Pinus occidentalis*: A, very moist forest with scattered overstory pines and numerous mixed broadleaved species, ridge of Morne Formon; B, open, frequently burned pine forest with various ferns, grasses, *Rubus* spp., and *Senecio stenodon*, ridge of Morne Formon above Morne Cavalier.

hypiodes, *Mecranium alpestre*, *M. tricoatum*, *Meriania parvifolia** [Judd and Skean 1987b], *Ossaea woodsii** [Judd and Skean 1987a], *Cestrum filipes*, *Psychotria alpestris*, *Rondeletia formonia*, *Ternstroemia barkeri*, *Myrsine magnoliifolia*, *Lobelia hotteana** [Judd and Skean 1987a], *Solanum formonense*, *Pilea formonica*; asterisk indicates undescribed or previously undescribed taxa discovered in the course of this study). In contrast, the drier forest of Pic Macaya contains fewer endemics (e.g. *Miconia apiculata*, *M. hypiodes*, *M. macayana** [Judd and Skean 1987a], *Lobelia hotteana** [Judd and Skean 1987a], *Salvia* sp.*, *Cestrum filipes*) and is not as diverse. However understory ferns are more conspicuous on Pic Macaya, probably because the increased frequency of fire on Pic Macaya allows a more open pine forest, thus providing more available habitat for this group.

The moist forest on limestone, occurring in the low hills in the vicinity of Ville Formon, at the southern base of Morne Formon, is very diverse and includes a large number of endemic species (Fig. 5). Much of this formation occurs outside the park boundaries, but it was sampled in order to contrast this forest with the higher elevation forests of Macaya and Formon. The area is much degraded with the forested areas limited to steep ravine slopes or dog-tooth limestone domes and hillsides, separated by open rocky hillsides and fields occupied by widespread tropical and warm-temperate weedy



Figure 5. Moist forest on limestone, near Ville Formon, below Morne Cavalier (reprinted with permission of Brittonia, Skean & Judd, 1986).

species. In these forests dominance is shared by many species. Important and/or striking trees or shrubs include: *Dendropanax arboreus*, *Phyllanthus myriophyllus*, *Lunania mauritii*, *Prunus occidentalis*, *Prunus myrtifolia*, *Beilschmeidia pendula*, *Ardisia fuertesii*, *Tabebuia conferta*, *Mecranium haitiense*, *M. microdictyum*, *M. revolutum*, *Miconia subcompressa*, *M. laevigata*, *Amyris apiculata*, *Piper hispidum*, *P. confusum*, *P. amarum*, *Calycogonium apiculatum*, *C. calyopteris*, *Cestrum picardae*, *C. bicolor*, *Lobelia robusta*, *Psychotria berteriana*, *P. pubescens*, *Zanthoxylum haitiense*, *Z. martinicense*, *Alchornea latifolia*, *Chrysophyllum argenteum*, *Rhytidophyllum bicolor*, *Gesneria* spp., *Solanum antillarum*, *S. torvum*, *S. erianthum*, *Turpinia picardae*, *Allophylus crassinervis*, *Polygala penaea*, *Casearia sylvestris*, *Guarea guidonia*, *Comocladia pinnatifolia*, *Cupania americana*, *Meliosma recurvata*, *Palicourea alpina*, *Clusia clusioides*, *Gymnanthes lucida*, *Eugenia glabrata*, *E. christii*, *Eupatorium stigmaticum*, *E. nervosum*, *E. microchaetum*, *Besleria lutea*, *Cecropia peltata*, *Heliconia bihai*, *Daphnopsis americana*, *D. crassifolia*, *Brunfelsia picardae*, *Vernonia saepium*, *Jacquinea eggertii*, *Ossaea setulosa*, *Dipholis cubensis*, *Nectandra patens*, *N. membranacea*, *Phoebe* cf. *montanum*, *Ficus citrifolia*, *Cyathea furfuracea*, *Cnemidaria horrida*, *Alsophila hotteana*, *Senecio stenodon*, *Salvia* spp., *Garcinia barkeriana*, *Calyptranthes sintenisii*, *Pithecellobium oppositifolium*, *Coccothrinax* cf. *montana*, *Maytenus hotteanus*, *Hamelia patens*, *Didmyopanax tremulum* and *Micropholis polita*. Common vines include: *Cissampelos pareira*, *Serjania polyphylla*, *Cissus verticillata*, *Cayaponia americana*, *Stigmaphyllon emarginatum*, *S. angulosum*, *Philodendron consanguineum*, *Columnnea domingensis*, *Senecio hotteana*, *Marcgravia oligandra* and *Anthurium scandens*. Commonly found herbs are *Begonia pycnantha*, *Renealmia jamaicensis*, *R. densiflora*, *Ichnanthus pallens*, *Lasiacis divaricata*, and a great many species of *Pilea* and *Peperomia*. Terrestrial ferns are abundant (see species list). Members of the family Bromeliaceae are very common, including: *Tillandsia fasciculata*, *T. jenmanii*, *T. fendleri*, *Catopsis nitida*, *Guzmania lingulata*, *G. ekmanii*, and *Vriesea macrostachya*. Lorantheaceous parasites, such as *Dendrophthora serpyllifolia*, *Phoradendron anceps*, and *P. piperoides*, are frequent. The epiphytic ericad *Sphyrnospermum majus* is very common; this forest also includes a great diversity of epiphytic ferns (see list), including *Ophioglossum palmatum*, a striking plant with broad palmately lobed leaves. The very showy, herbaceous scroph *Castilleja arvensis* occurs in disturbed areas, along with many other weedy species, e.g. *Phytolacca rivinoides*, *Cerastium glomeratum*, *Stellaria media*, *Chamissoa altissima*, *Triumfetta semitribloba*, *Anoda hastata*, *Sida acuta*, *S. rhombifolia*, *Urena lobata*, *Chamaesyce hypericifolia*, *Desmodium axillare*, *Kalanchoe pinnata*, *Tibouchina longifolia*, *Asclepias nivea*, *Lantana camara*, *L. trifolia*, *Stachytarpheta jamaicensis*, *Verbena urticifolia*, *Cynoglossum amabile*, *Solanum capsicoides*, *S. nigrescens*, *Dichondra repens*, *Bidens alba*, *Conyza canadensis*, *Eclipta prostrata*, *Emilia fosbergii*, *Youngia*

japonica, *Vernonia saepium*, *Andropogon bicornis*, *A. leucostachyus*, *Lasiacis divaricata*, *Panicum glutinosum*, *Paspalum fimbriatum*, *Setaria corrugata*, and *Sporobolus indicus*. The woods in the vicinity of Ville Formon form a mosaic of habitats caused by the extensive human-induced destruction in this region; every intermediate exists between fairly undisturbed forest and cultivated fields or bare limestone rock.

As mentioned earlier, this plant community contains a great many endemics, and some are even limited to the Formon area (see species list and Table 3). The melastome genus *Ekmaniocharis* is an example; the area is also the center of diversity for the related genus *Mecranium*. The endemic euphorb *Phyllanthus myriophyllus* is especially striking because of its distinctive, norfolk-island-pine-like habit. Other noteworthy endemics include *Tabebuia conferta*, with its showy dull-red flowers, *Renalmia densiflora*, *Meliosma recurvata*, *Rhytidophyllum bicolor*, *Amyris apiculata*, and *Wallenia ekmanii*. Previously undescribed local endemics discovered in the course of this study include *Mecranium revolutum* (Skean and Judd 1986), *Meriania brevipedunculata* (Judd and Skean 1987b), *Micropholis polita* subsp. *hotteana* (Judd 1986b), and *Wallenia formonensis* (Judd 1986a).

The vegetation of lower elevations (ca 1000 m) in the Grande Ravine du Sud is a distinctive open, often rocky, pine forest, which is drier than the higher elevation pine forests of Morne Formon and Pic Macaya. Associated shrubs include *Heterotrichum angustifolium*, *Gyrotaenia myriocarpa*, *Wigandia pruritiva*, *Trema lamarkianum*, *Hyptis schusteri*, *Senecio stenodon*, *Senna ligustrina*, *Garrya fadyenii*, *Besleria lutea*, *Rhytidophyllum bicolor*, *R. auriculatum*, *Piper aduncum*, *P. hispidum*, *Tabebuia berteri*, *Cestrum bicolor*, *Vernonia saepium*, *Beilschmeidia pendula*, *Prunus myrtifolia* and *Weinmannia pinnata*. The beautiful terrestrial bromeliad *Pitcairnia elizabethae* is occasional in rocky areas. Common ferns include *Thelypteris serra*, *Pteris longifolia*, and *Neurodium lanceolatum*.

PLANT COMMUNITIES IN PARC NATIONAL MORNE LA VISITE, MASSIF DE LA SELLE

The plant communities occurring in the area of Parc La Visite may be placed in two general categories: pine forest and cloud forest on limestone (hardwood areas or "rak bwa"); see Howard (1973). The two do intergrade, and many hardwood species can be found as scattered understory shrubs or small trees in moister localities within the pinelands. The moist hardwood forest occurs along the steep more or less north-facing slopes from Tete Opaque, Belle Fontaine, and Pic Cabaio west to Morne La Visite. This interesting and diverse hardwood community continues westward to Morne

D'Enfer (and also eastward toward Pic La Selle), and shows much local geographic variation. Certain species are limited to Morne Cabaio, Morne D'Enfer, etc., while others are distributed more widely along the ridge (see species list). Endemics limited to the park (or nearly so) include *Ilex blanchiana* (Judd 1986c) and *Rhytidophyllum* sp. nov. (both discovered during field work in connection with this study), *Rondeletia domatiata*, *Salvia foveolata*, *Ditta* sp. nov. (first collected by T. A. Zanoni in 1982 in the park and not yet described; recollected in this study), *Calyptanthus densifolia*, and *Siphocampylus caudatus*. The diversity and number of endemic species is higher in the hardwood forest than in the pinelands, although both contain endemics (see Table 3). Both communities include many patches that have been cleared and burned, and thus many weedy species occur. The number of temperate weeds that occur in the pinelands is especially striking, e.g. *Prunella vulgaris*, *Fragaria vesca*, *Hypericum perforatum*, *Lampsana communis*, *Geranium rotundifolium*, *G. purpureum*, *Leontodon taraxacoides*, *Taraxacum officinale*, *Cynoglossum amabile*, *Euphorbia peplus*, *Tragopogon pratensis*, *Stellaria media*, *Cerastium glomeratum*, *Silene gallica*, *Plantago lanceolata*, *Verbascum thapus*, *Leucanthemum vulgare*, *Medicago lupulina*, *Trifolium repens*, *Arenaria lanuginosa*, *Sonchus asper*, *Daucus carota*, *Lepidium virginicum*, *Barbarea verna*, *Brassica campestris*, *Cardamine hirsuta*, *Coryza canadensis*, *Lolium perenne*, *Oxalis corniculata*, *Erigeron karvinskianus*, *Pteroselinum sativum*, *Pastinaca sativa*, *Galium aparine*, *Linum usitatissimum*, *Anagallis arvensis*, and *Hieracium gronovii*.

The pinelands can be divided into several subtypes that likely develop according to certain edaphic conditions (fire frequency, soil, exposure, etc.) (Figs. 6, 7). These are (1) open rocky pinelands with many individuals of *Agave antillarum* (along with *Myrica picardae*, *Eupatorium illitum*, *E. cabaionum*, *Garrya fadyenii*, and *Baccharis myrsinites*), (2) open pine savannas with *Danthonia domingensis* (along with *Andropogon urbanianus* and *Rubus* spp., and sometimes a few scattered shrubs, such as *Lyonia microcarpa* or *Garrya fadyenii*), (3) open ("typical") pinelands with scattered shrubs (especially *Lyonia microcarpa*, *Myrica picardae*, *Baccharis myrsinites*, *Garrya fadyenii*, *Eupatorium illitum*, *E. cabaionum*) and the grasses and sedges, *Andropogon urbanianus*, *A. glomeratus* var. *pumilis*, *Cyperus picardae*, *Carex ekmanii*, *Isachne rigidifolia*, *Panicum xalapense*, *Bromus unioloides*, *Zeugites americana*, *Melinis minutiflora*, and *Chusquea abetifolia*, and (4) moist pinelands with a nearly continuous understory of shrubs, some of which are also common in the moist hardwood communities.

Characteristic trees and shrubs of this mosaic of pineland vegetation types include the dominant tree *Pinus occidentalis* (endemic to island of Hispaniola although a closely related species occurs in Oriente, Cuba), the shrubs or small trees *Baccharis myrsinites*, *Garrya fadyenii*, *Lyonia microcarpa*, *Myrica picardae*, *Agave antillarum*, *Eupatorium illitum*, *E. cabaionum*, *Persea*



Figure 6. Pinelands: A, typical forest of Pinus occidentalis with scattered shrubs, "the Depression"; B, Danthonia domingensis savanna, "the Depression."



Figure 7. Pinelands: A, open, rocky forest of Pinus occidentalis with Agave antillarum, south of "park headquarters;" B, moist pinelands along the Rivière Blanche.

anomala, *Bocconia frutescens*, and to a lesser extent *Hypericum hypericoides*, *Lyonia truncata*, *L. rubiginosa* var. *costata*, *Ilex macfadyenii*, *Oreopanax capitatus*, *Daphnopsis crassifolia*, *Cestrum mononeurum*, *Solanum crotonoides*, *Bumelia subintegra*, *Salvia selleana*, *Gesneria bullata*, *Fuchsia triphyllum*, *F. pringsheimii*, and *Myrsine coriacea*. A great many grasses and herbaceous dicots occur in these open forests; the blackberries *Rubus argentifrons*, *R. haitiensis*, and probably also *R. selleanus* are common everywhere; some additional characteristic herbs include *Pilea* spp., *Mitracarpus decumbens*, *Galium brevipes* and *Relbunium hypocarpium*, along with the many weedy species listed above. *Pteridium aquilinum*, bracken, is abundant; other common terrestrial ferns include: *Lophosoria quadripinnata* (especially on moist slopes), *Campyloneurum angustifolium* (especially rocky areas), *Blechnum occidentale* (especially rocky areas), and *Woodsia montevidensis* (on rocky slopes). The epiphytic bromeliads *Tillandsia hotteana*, *T. compacta*, *T. usneoides*, and *Vriesea sintenisii* are locally conspicuous.

The very moist pinelands possess a nearly continuous and very well developed understory of broadleaved dicots, including many species that are also characteristic of the cloud forest/hardwood community. In addition to many of the species mentioned in the previous paragraph, the following trees and shrubs are common or occasional in these moister forests: *Buddleja domingensis*, *Brunellia comocladifolia*, *Lobelia robusta*, *L. rotundifolia*, *Trema micrantha*, *Cestrum violaceum*, *Rondeletia comea*, *Palicourea alpina*, *Myrsine acrantha*, *Miconia selleana*, *Turpinia picardae*, *Calyptanthes nummularia*, and *Cordia picardae*. The climbing bamboos *Arthrostyliidium haitiense* and *Chusquea abietifolia* occur locally, and other frequent vines include *Smilax havanensis*, *Mikania tripartita*, *Passiflora orbiculata*, and *Valeriana scandens*.

As mentioned above there is also floristic variability within the cloud forest/moist hardwood community. These areas range from very wet forests with conspicuous large individuals of *Didmyopanax tremulum* (best developed in some areas on Morne D'Enfer, Morne Fè Noir, and the ravine just east of the Berac area) to drier and more open scrub-forests with the showy *Senecio buchii* and *Agave antillarum* (and even some intermixed pines, best developed in the vicinity of Pic Cabaio) (Figs. 8, 9). The greatest species diversity likely occurs in the hardwood forest extending from Morne Nacel northeast toward Pic La Visite, although the vicinity of Pic Cabaio and the region between Belle Fontaine, Roche Cabrit, and Tete Opaque are also very diverse. The latter region is of particular interest because several species (e.g. *Lyonia microcarpa* and *Myrica picardae*) grow to an exceptionally large size in this area, and because two rare conifers, *Podocarpus aristulatus* and *Juniperus ekmanii*, occur here. Additional collecting is needed in this region.

Characteristic trees and shrubs of the moist hardwoods are *Senecio buchii*, *S. picardae*, *Gyrotaenia myriocarpa*, *Eupatorium illitum*, *E. cabaionum*, *Myrsine coriacea*, *M. nubicola*, *Daphnopsis crassifolia*, *Sapium buchii*, *Gesneria*



Figure 8. Cloud forests: A, open, scrub-forest with Senecio buchii, Agave antillarum, Eupatorium illitum, etc. at Pic Cabaio (looking east toward Tete Opaque); B, moister, very diverse cloud forest at Morne D'Enfer (looking east toward Morne Fè Noir and Morne La Visite).

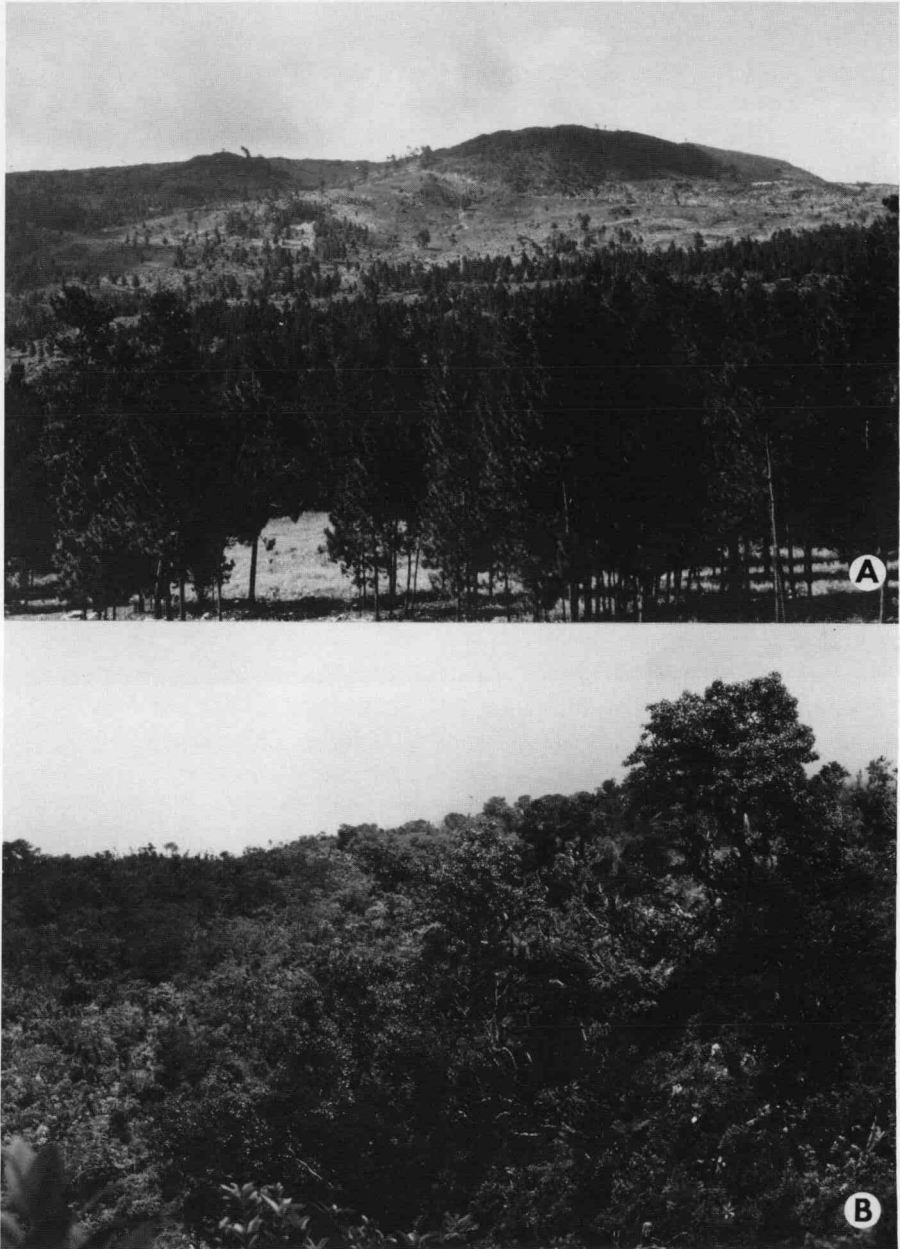


Figure 9. Cloud forest and pine forest: A, bowl shaped plateau of Parc National Morne La Visite, looking north toward Pic Cabaio, note forest of *Pinus occidentalis* on plateau and cloud forest/hardwood thickets on Pic Cabaio and adjacent peaks; B, cloud forest at Morne D'Enfer, note conspicuous individuals of *Didymopanax tremulum*.

ekmanii, *G. viridiflora*, *G. bullata*, *Rhytidophyllum auriculata*, *Persea anomala*, *Ocotea acrantha*, *O. wrightii*, *Lobelia robusta*, *L. assurgens*, *L. rotundifolia*, *Brunellia comocladifolia*, *Cyathea harrisii*, *Alsophila minor*, *Garrya fadyenii*, *Miconia selleana*, *M. favosa*, *M. ferruginea*, *M. tetrastoma*, *Didymopanax tremulum*, *Trema micrantha*, *Coccoloba picardae*, *Ardisia fuertesii*, *A. picardae*, *Weinmannia pinnata*, *Turpinia picardae*, *Picrasma selleana*, *Citharexylum caudatum*, *Lyonia buchii*, *Meliosma impressa*, *Agave antillana*, *Cestrum violaceum*, *C. monoeurum*, *C. inclusum*, *C. coelophlebium*, *C. brevifolium*, *Ilex macfadyenii*, *Dendropanax arboreus*, *Buddleja domingensis*, *Solanum crotonoides*, *S. umbellatum*, *Calyptanthus densifolia*, *C. pitoniana*, *Bunchosa ekmanii*, *Malpighia macracantha*, *Oreopanax capitatus*, *Rondeletia christii*, *R. carnea*, *R. domatiata*, *Psychotria baltenweckii*, *Cordia picardae*, *C. dependens*, *Tournefortia hirsutissima*, *Salvia tuerckheimii*, *S. foveolata*, *Durantia arida*, *Satureja viminea*, *Eugenia picardae*, *Heterotrichum umbellatum*, *Mecranium multiflorum*, *Meriania involucrata*, *Bumelia subintegra*, *Datura suaveolens*, and *Siphocampylus caudatus*. Both *Fuchsia pringsheimii* and *F. triphyllum* are common, along with hybrids. Only one palm, *Prestoea montana*, occurs in this forest. In places *Arthrostylidium haitiense* and *A. multispicatum* are common. Other climbing plants include *Passiflora sexflora*, *P. orbiculata*, *Marsdenia clausa*, *Columnnea domingensis*, *Hypolepis hispaniolica*, *Odontosoria aculeata*, *Valeriana scandens*, *Cissampelos pareira*, *Mikania tripartita*, *Melothria domingensis*, *Cynanchum leptocladum* and *Rajania ovata*. The bromeliads *Vriesea sintenisii* and *Tillandsia hotteana* are common, as are the loranthaceous parasites *Dendrophthora cupressoides* and *D. serpyllifolia*. These forests also contain some herbaceous species, especially in disturbed areas (see species list).

The vegetation of the larger ravines (and sinkholes) in the pinelands is composed of elements of this community. The Rivière Blanche contains the best developed hardwood community, although the smaller ravine to the north of the Park Center/Headquarters, i.e. Grande Ravine, is also fairly well developed on its south slope. The woody dominants of the ravine systems are essentially those of the hardwood forests of the north-facing slopes/cliffs within the park. However, an interesting additional species is *Sambucus canadensis*, an introduced and escaped shrub that is common along the Rivière Blanche (and in other moist ravines) and is also planted along the edges of fields and around homesteads in the pinelands. Some important herbaceous species occurring in the various ravines (especially on steep and often rocky slopes) include *Erigeron dissectus*, *Chaptalia albicans*, *Begonia platyptera*, *Zeugites americana*, *Phyllanthus lindenianus*, *Pilea* spp., *Peperomia* spp., *Thelypteris imitata*, *Polystichum echinatum*, *Diplazium* spp., *Asplenium* spp., *Thelypteris* spp., *Selaginella leonardii*, and *Lycopodium* spp. Several species occur in the moist soil along the edge of (or as emergent aquatics in) the Rivière Blanche (and also along other smaller streams in the region);

Table 3. Hispaniolian endemic seed plants occurring in Parc Macaya and Parc La Visite, Haiti. Abbreviations and symbols: occurring in Parc Macaya--M; occurring in Parc La Visite, LV; plant endemic to either Massif de La Hotte or Massif de La Selle --*.

<i>Agave antillarum</i> M, LV	<i>Dendrophthora brachystacha</i> M
<i>Amyris apiculata</i> M*	<i>Dendrophthora camosa</i> M*
<i>Andropogon urbanianus</i> LV	<i>Dendrophthora versicolor</i> M*
<i>Ardisia fuertesii</i> M, LV	<i>Didymopanax tremulum</i> M, LV
<i>Ardisia picardae</i> LV*	<i>Dittha</i> sp. nov. LV*
<i>Arthrostylidium haitiense</i> M, LV	<i>Ekmaniocharis crassinervis</i> M*
<i>Asketanthera picardae</i> M*	<i>Epilobium coloratum</i> LV
<i>Baccharis myrsinites</i> M, LV	<i>Erigeron dissectus</i> LV
<i>Banara splendens</i> M	<i>Erigeron domingensis</i> M
<i>Begonia domingensis</i> LV	<i>Eugenia christii</i> M*
<i>Begonia platyptera</i> LV*	<i>Eugenia formonica</i> M
<i>Begonia plumieri</i> M	<i>Eugenia lineata</i> LV
<i>Begonia pycnantha</i> M	<i>Eugenia picardae</i> LV*
<i>Brunfelsia picardae</i> M	<i>Eugenia</i> cf. <i>tiburona</i> M*
<i>Buddleja domingensis</i> LV	<i>Eupatorium cabaionum</i> LV*
<i>Bumelia subintegra</i> LV*	<i>Eupatorium flavidulum</i> M*
<i>Bunchosa ekmanii</i> LV*	<i>Eupatorium illitum</i> LV
<i>Calycogonium apiculatum</i> M*	<i>Eupatorium microchaetum</i> M
<i>Calycogonium calyopteris</i> M	<i>Eupatorium porphyrocladium</i> M*
<i>Calycogonium torbecianum</i> M	<i>Eupatorium</i> sp. nov. LV*
<i>Calyptranthes densiflora</i> LV*	<i>Eupatorium stigmaticum</i> M
<i>Calyptranthes hotteana</i> M*	<i>Eupatorium urbanii</i> M*
<i>Calyptranthes nummularia</i> M, LV	<i>Exostemma picardae</i> M
<i>Calyptranthes pitoniana</i> LV	<i>Fuchsia pringsheimii</i> M, LV
<i>Carex ekmanii</i> LV	<i>Fuchsia triphylla</i> LV
<i>Cestrum bicolor</i> M*	<i>Galium brevipes</i> LV
<i>Cestrum brevifolium</i> LV	<i>Garcinia barkeriana</i> M*
<i>Cestrum coelophlebium</i> M, LV	<i>Gesneria aspera</i> M, LV
<i>Cestrum filipes</i> M*	<i>Gesneria bullata</i> LV*
<i>Cestrum mononeurum</i> LV	<i>Gesneria ekmanii</i> M, LV
<i>Cestrum picardae</i> M	<i>Gesneria fruticosa</i> M
<i>Cestrum violaceum</i> LV*	<i>Gesneria hypoclada</i> M, LV
<i>Cleyera ternstroemioides</i> M*	<i>Gesneria viridiflora</i> ssp. <i>acrochordonanthe</i> M, LV
<i>Coccoloba pauciflora</i> M	<i>Gnaphalium eggertii</i> LV
<i>Coccoloba picardae</i> LV*	<i>Gnaphalium selleanum</i> LV*
<i>Coccothrinax montana</i> M	<i>Guzmania ekmanii</i> M
<i>Cyperus picardae</i> LV	<i>Haenianthus oblongatus</i> M*
<i>Danthonia domingensis</i> LV	<i>Henriettea barkeri</i> M
<i>Daphnopsis crassifolia</i> M, LV	<i>Hieronima domingensis</i> M
<i>Dendropanax selleanum</i> M	<i>Hypericum fuertesii</i> LV
<i>Dendropemon bistratus</i> LV	<i>Hypericum millefolium</i> LV*
<i>Dendropemon pycnophyllum</i> LV	

Table 3 continued

<i>Hyptis schusteri</i> M	<i>Mikania dissecta</i> M*
<i>Ilex blanchiana</i> LV*	<i>Mikania tripartita</i> LV*
<i>Ilex fuertesiana</i> LV	<i>Mitracarpus decumbens</i> LV*
<i>Illicium ekmanii</i> M	<i>Myrcia tiburoniana</i> M*
<i>Juniperus ekmanii</i> LV*	<i>Myrica picardae</i> M, LV
<i>Laplacea alpestris</i> LV	<i>Myrsine magnoliifolia</i> M*
<i>Lobelia hotteana</i> M*	<i>Myrsine nubicola</i> LV*
<i>Lunania mauritii</i> M	<i>Narvalina domingensis</i> M
<i>Lyonia buchii</i> LV	<i>Ocotea acarina</i> LV*
<i>Lyonia microcarpa</i> LV*	<i>Ossaea curvipila</i> M*
<i>Lyonia truncata</i> var. <i>truncata</i> LV*	<i>Ossaea setulosa</i> M*
<i>Lyonia rubiginosa</i> var. <i>costata</i> M, LV	<i>Ossaea woodsii</i> M*
<i>Malpighia macracantha</i> LV*	<i>Pachyanthus cubensis</i> ssp. <i>blanchianus</i> M*
<i>Maytenus hotteana</i> M*	<i>Pachyanthus hotteanus</i> M
<i>Mecranium alpestre</i> M*	<i>Peperomia dominicana</i> M
<i>Mecranium birimosum</i> M	<i>Peperomia leonardii</i> LV
<i>Mecranium haitiense</i> M*	<i>Peperomia michelensis</i> M*
<i>Mecranium microdictyum</i> M*	<i>Peratanthe ekmanii</i> M
<i>Mecranium revolutum</i> M*	<i>Phyllanthus lindenianus</i> var. <i>inaequifolius</i> LV*
<i>Mecranium tricostatum</i> M*	<i>Phyllanthus myriophyllus</i> M*
<i>Mecranium tuberculatum</i> M	<i>Picrasma selleana</i> LV*
<i>Meliosma abbreviata</i> M*	<i>Pilea baltenweckii</i> M
<i>Meliosma impressa</i> LV	<i>Pilea cephalantha</i> LV*
<i>Meliosma recurvata</i> M*	<i>Pilea distantifolia</i> M*
<i>Melothria domingensis</i> LV	<i>Pilea domingensis</i> M, LV
<i>Meriania brevipedunculata</i> M*	<i>Pilea formonensis</i> M*
<i>Meriania involucrata</i> LV	<i>Pilea franquervilleana</i> LV*
<i>Meriania parvifolia</i> M*	<i>Pilea hepatica</i> M, LV
<i>Meriania squamulosa</i> M*	<i>Pilea lanceolata</i> LV
<i>Miconia apiculata</i> M*	<i>Pilea lepidincola</i> LV
<i>Miconia barkeri</i> M*	<i>Pilea leptocardia</i> M
<i>Miconia hypiodes</i> M*	<i>Pilea propinqua</i> LV
<i>Miconia favosa</i> LV	<i>Pilea psilogyne</i> LV*
<i>Miconia ferruginea</i> LV*	<i>Pilea serpyllacea</i> M*
<i>Miconia lanceolata</i> LV	<i>Pilea stolonifera</i> M
<i>Miconia macayana</i> M*	<i>Pilea torbeciana</i> M*
<i>Miconia ossaeifolia</i> M*	<i>Pinus occidentalis</i> M, LV
<i>Miconia</i> sp. nov. M*	<i>Piper oviedoii</i> M
<i>Miconia rigidissima</i> LV*	<i>Pitcairnia elizabethae</i> M
<i>Miconia selleana</i> LV	<i>Podocarpus aristulatus</i> LV
<i>Miconia subcompressa</i> M, LV	<i>Psychotria alpestris</i> M*
<i>Miconia xenotricha</i> M*	<i>Psychotria baltenweckii</i> LV*
<i>Micropholis polita</i> ssp. <i>hotteana</i> M*	<i>Psychotria tiogieri</i> M, LV
<i>Mikania cyanosma</i> M*	

Table 3 continued

<i>Renealmia densiflora</i> M*	<i>Senecio stenodon</i> M*
<i>Rhynchospora elongata</i>	<i>Siphocampylus caudatus</i> LV*
var. <i>ekmanii</i> M	<i>Siphocampylus sonchifolius</i> M
<i>Rhytidophyllum bicolor</i> M*	<i>Solanum hotteanum</i> M*
<i>Rhytidophyllum</i> sp. nov. LV*	<i>Solanum formonense</i> M*
<i>Rondeletia carnea</i> LV*	<i>Stevensia hotteana</i> M*
<i>Rondeletia christii</i> LV*	<i>Symplocos hotteana</i> M*
<i>Rondeletia formonica</i> M*	<i>Tabebuia conferta</i> M*
<i>Rubus argentifrons</i> LV	<i>Ternstroemia barkeri</i> M*
<i>Rubus eggersii</i> M	<i>Tillandsia hotteana</i> M, LV
<i>Rubus haitiensis</i> LV	<i>Turpinia picardae</i> M, LV
<i>Rubus selleanus</i> M, LV	<i>Wallenia aquifolia</i> M
<i>Salvia arborescens</i> M	<i>Wallenia ekmanii</i> M*
<i>Salvia bahorucona</i> LV*	<i>Wallenia formonensis</i> M*
<i>Salvia</i> sp. nov. M*	<i>Vernonia buxifolia</i> M
<i>Sapium buchii</i> LV	<i>Vernonia saepium</i> M*
<i>Sapium haitiense</i> M*	<i>Zanthoxylum haitiensis</i> M*
<i>Senecio buchii</i> LV*	<i>Zanthoxylum tetraphyllum</i> LV*
<i>Senecio hotteanus</i> M*	<i>Zeugites americana</i> var. <i>haitiensis</i> M
<i>Senecio picardae</i> LV	

these include *Nasturtium officinale*, *Poa annua*, *Fumaria carpreolata*, *Galium aparine*, *Epilobium coloratum*, *Stachys arvensis*, *Pilea psilogyne*, *Euphorbia peplus*, *Pastinaca sativa*, and *Rumex obtusifolius*.

MANAGEMENT OF VEGETATION

The hardwood/cloud forest areas of Parc National Morne La Visite require protection from cutting, burning and clearing. These continuing activities are extremely destructive to this plant community. Currently there are enough growths of intact forest (with endemic species still surviving) so that the cloud forest areas have the capability of recovering from the effects of human disturbance if repeated clearing and burning are prohibited (or at least greatly reduced) in the region. At the present time these forests exist as a mosaic of reasonably intact to very disturbed (fields, pastures, etc.) communities. The wet forest on limestone at low elevations in Parc National Pic Macaya is also very susceptible to fire. This forest community now is being destroyed fairly rapidly by clearing and burning. In contrast, the pinelands (of both parks) probably require periodic (and controlled) fires to maintain pine (and associated species) regeneration. However, Holdridge (1947) considered the high elevation pine forests to be maintained, at least in part, by cold temperatures. Detailed ecological studies of these pinelands clearly are needed. On Morne Formon/Pic Macaya the high elevations are occupied by a complex mosaic of cloud forest and pine forest communities. This mosaic is probably maintained by a pattern of periodic fires, with the composition of the community probably influenced strongly by the amount of time lapsed since the last fire. The pinelands of both parks are in need of ecological study to determine the appropriate timing, frequency and intensity of controlled fires that are required to maintain the community. At present fires are probably too frequent (and/or too severe). The fires are often set by the local people, although natural (lightning set) fires undoubtedly also occur.

THE CHECKLISTS

The following checklists are arranged by major taxonomic group (i.e. tracheophytes or vascular plants, mosses and liverworts) and geographic area (i.e. Massif de La Hotte, Massif de La Selle). The systematic arrangement of flowering plant families follows R. F. Thorne (1983), Proposed new realignments in the angiosperms; the arrangement of the ferns follows R. M. and A. F. Tryon (1982), Ferns and allied plants, with special reference to tropical America. Families of mosses and liverworts are listed alphabetically; family concepts follow Crosby and Magill (1978) for the mosses, and Farr, Leussink, and Stafleu (1979) for the liverworts. An index to families of each park is provided.

Each entry follows a standardized format. The name of the species is followed by the authority, habit, habitat, frequency, elevational range, and localities at which the taxon was collected or observed. The collectors and collection numbers are given, and the checklists are based only on these collections. Collections were made by R. E. Baird, R. Franz, W. S. Judd, J. D. Skee, Jr., F. G. Thompson, and C. A. Woods. Nearly all collections were made during some 9 weeks of field work between January and June 1984, and voucher specimens are deposited at FLAS (Herbarium of the University of Florida, Gainesville, FL) and EHH (Ekman Herbarium, Département de l'Agriculture, des Ressources Naturelles et du Développement Rural, Service Recherche Agronomique, Damien, Port-au-Prince, Haiti). A few T. A. Zanoni and M. M. Mejía specimens (from JBSD, herbarium of the Jardín Botánico Nacional "Dr. Rafael M. Moscoso", Santo Domingo, República Dominicana) and W.R. Buck specimens (from NY, herbarium of the New York Botanical Garden, Bronx, N.Y.) are also cited. The elevations and geographical localities are based only on our collections or sight records and probably could be expanded significantly by additional field work. Finally, taxa endemic to Hispaniola or either the Massif de La Selle (including the Sierra de Baoruco) or Massif de La Hotte are indicated (see also Table 3); occasionally other nomenclatural or taxonomic information is given.

A brief statistical summary of each flora is presented below. The coverage of woody flowering plants and conifers in the following lists is the most complete, followed by that of herbaceous flowering plants, ferns and "fern allies", mosses, and liverworts. Macrolichens and some fungi were also collected, but the identifications for these groups are still too incomplete to be included in this report (see appendix).

A total of 470 species (267 genera in 109 families) of vascular plants (including 367 flowering plants [excluding orchids], 1 conifer, 102 ferns and fern allies) was collected (or, for a few weedy taxa, observed) in Parc National

Pic Macaya, Massif de La Hotte. The largest families (excluding the Orchidaceae) include Melastomataceae (36 spp.), Asteraceae (30 spp.), Polypodiaceae *s. str.* (22 spp.), Piperaceae (19 spp.), Rubiaceae (19 spp.), Urticaceae *s. lat.* (19 spp.), Dryopteridaceae (17 spp.), Poaceae (15 spp.), Solanaceae (14 spp.), Bromeliaceae (12 spp.), and Myrtaceae (12 spp.). The largest genera include *Pilea* (Urticaceae--14 spp.), *Peperomia* (Piperaceae--13 spp.), *Miconia* (Melastomataceae--11 spp.), *Thelypteris* (Thelypteridaceae--9 spp.), *Grammitis* (Polypodiaceae--8 spp.), *Lycopodium* (Lycopodiaceae--8 spp.), *Eupatorium* (Asteraceae--7 spp.), *Mecranium* (Melastomataceae--7 spp.), *Polypodium* (Polypodiaceae--7 spp.), *Solanum* (Solanaceae--7 spp.), *Psychotria* (Rubiaceae--6 spp.), *Tillandsia* (Bromeliaceae--5 spp.), *Cestrum* (Solanaceae--5 spp.), *Diplazium* (Dryopteridaceae--5 spp.), *Dendrophthora* (Viscaceae--5 spp.), and *Gesneria* (Gesneriaceae--5 spp.).

The total vascular flora of Parc National Pic Macaya includes ca 136 species (or infraspecific taxa, excluding orchids) endemic to Hispaniola (ca 29% of flora), and of these, 72 are endemic to the Massif de La Hotte (ca 15%). The degree of endemism among the flowering plants was slightly greater with 130 endemic species (ca 35%), and of these, 71 (ca 19%) are endemic to the Massif de La Hotte. The percentage of endemic species among the ferns and fern allies was much less, i.e. ca 5%. Families with large numbers of endemic species include: Melastomataceae (29), Urticaceae (12), Asteraceae (15), Solanaceae (7), and Myrtaceae (6). Genera with many endemic species include *Pilea*, *Miconia*, *Eupatorium*, *Mecranium*, and *Cestrum*; other noteworthy genera in this regard are *Dendrophthora*, *Wallenia*, *Senecio*, *Eugenia*, and *Ossaea*.

A total of 99 species of mosses and 63 species of liverworts was collected in Parc National Pic Macaya and adjacent regions. Very few of these species are endemic.

The vascular flora of Parc National Morne La Visite (and adjacent areas of the Massif de La Selle) is documented by collections representing 325 species (including 262 flowering plants [excluding orchids], 3 conifers, and 60 ferns and fern allies). These are distributed among 201 genera and 89 families. The largest families (omitting the Orchidaceae) are Asteraceae (28 spp.), Poaceae (14 spp.), Urticaceae (14 spp.), Rubiaceae (14 spp.), Dryopteridaceae (12 spp.), Melastomataceae (11 spp.), Solanaceae (10 spp.), Polypodiaceae (10 spp.), Araliaceae *s. lat.* (8 spp.), Piperaceae (8 spp.), Gesneriaceae (7 spp.), Aspleniaceae (7 spp.), and Lamiaceae (7 spp.). The largest genera include: *Pilea* (Urticaceae--12 spp.), *Peperomia* (Piperaceae--8 spp.), *Asplenium* (Aspleniaceae--7 spp.), *Miconia* (Melastomataceae--7 spp.), *Polypodium* (Polypodiaceae--6 spp.), *Cestrum* (Solanaceae--5 spp.), *Thelypteris* (Thelypteridaceae--5 spp.), *Hypericum* (Clusiaceae--4 spp.), *Gesneria* (Gesneriaceae--4 spp.), *Eupatorium* (Asteraceae--4 spp.), *Lycopodium* (Lycopodiaceae--4 spp.), *Lyonia* (Ericaceae--4 spp.), *Tillandsia* (Bromeliaceae--4 spp.), and *Elaphoglossum* (Dryopteridaceae--4 spp.).

The total vascular flora of Parc National Morne La Visite includes 112 species (excluding orchids) endemic to Hispaniola (ca 34% of the flora), and of these, 44 are endemic to the Massif de La Selle or extend also into the Sierra de Baoruco (ca 14%). As in Parc Macaya, endemism is most pronounced among the flowering plants, with 105 endemic species (ca 40%), and of these 44 species (ca 16%) are endemic to the Massif de La Selle. Only about 7% of the species of ferns and fern allies are endemic. Families with many endemic species include: Asteraceae (11), Urticaceae (8), Melastomataceae (7), Rubiaceae (7), Solanaceae (5), Myrtaceae (5), Ericaceae (4), and Lamiaceae (4). Genera with many endemic species in Parc Morne La Visite include: *Pilea*, *Miconia*, *Cestrum*, *Lyonia*, *Eupatorium*, *Rondeletia*, *Gesneria*, and *Salvia*.

A total of 76 species of mosses and 19 species of liverworts was collected in or near La Visite National Park; very few of these are endemic.

The flora of the two national parks, when taken together, comprises 678 different species of tracheophytes (i.e. flowering plants, conifers, ferns, psilopsids, and lycopsids) and 222 species of bryophytes (mosses and liverworts), giving a grand total of 887 species of embryophytes. In addition, 63 species of lichens and 27 species of fungi were collected, bringing to 978 the number of species considered in the following lists and appendices.

The results of this floristic study document the rich and highly endemic nature of the vascular (especially angiosperm) floras of Pic Macaya and Morne La Visite National Parks and confirm Ekman's (1926, 1928) brief reports on these areas. Howard (1973) also has pointed out that genera endemic to Hispaniola are concentrated in the mountains of northern and especially southern Haiti. In fact more endemic genera are restricted to the Massif de La Selle and/or the Massif de La Hotte than any other region of the island. Thus the protection of the few remaining forested localities in this region is critical, and it is hoped that this can be accomplished through the establishment and maintenance of these national parks.

**Vascular Plants Collected in Parc National
Pic Macaya, Massif de la Hotte, Haiti.**

Division Tracheophyta

[Collections identified by W. S. Judd, unless indicated otherwise; notations after family name refer to number of genera/species]

Class Psilopsida

Order Psilotales

Family Psilotaceae (1/2)

Psilotum complanatum Sw. Epiphytic herb; moist pine forest (uncommon), 1650 m; Morne Formon. Judd 3832.

Psilotum nudum (L.) Beauv. Epiphytic or terrestrial herb (on rocks); moist forest on limestone (uncommon), ca 1000 m; Bois Formon. Judd 3493.

Class Lycopsidea

Order Lycopodiales

Family Lycopodiaceae (1/8)

Lycopodium cernuum L. Terrestrial herb; moist forest on limestone, disturbed areas (occasional/very common), 900-1100 m; Bois Formon. Judd 3627, Skean 1261.

Lycopodium clavatum L. Terrestrial herb; moist pine forest, disturbed open areas (common), 1650-2200 m; Morne Formon. Judd 3628, 4090, Skean 1460.

Lycopodium hippurideum Christ. Terrestrial herb; moist pine forest/cloud forest (occasional), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4063, 4159, Skean 1399.

Lycopodium pithodes Schl. & Cham. Epiphytic herb; moist pine forest (uncommon), 1900-2200 m; south slope of Pic Macaya. Judd 4216, Skean 1426a.

Lycopodium reflexum Lam. Terrestrial herb; moist pine forest, disturbed slopes (occasional), 1100-2200 m; Morne Formon, M. Cavalier. Judd 3629, 4054, 4058a.

Lycopodium verticillatum L.f. Epiphytic herb; moist pine forest/cloud forest (rare), 1800-2070 m; Morne Formon. Judd 3889.

Lycopodium skutchii Maxon. Epiphytic herb; moist pine forest/cloud forest (rare), 1800-2070 m; Morne Formon. Judd 3888.

Lycopodium taxifolium Sw. Epiphytic herb; moist pine forest/cloud forest (occasional), 1500-2150 m; Morne Formon, Ravine du Sud. Judd 3715, 4064, Skean 1351.

Order Selaginellales
Family Selaginellaceae (1/2)

Selaginella leonardii Schmidt. Terrestrial herb; moist forest on limestone (occasional), 950-1500 m; Bois Formon, southern slopes of Morne Formon. Judd 3480a, 3851. Endemic to Hispaniola.

Selaginella plumieri Hieron. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-1780 m; Bois Formon, Ravine du Sud. Judd 3477a, Skean 1201, 1372. Endemic to Hispaniola.

Class Filicopsida
Order Ophioglossales
Family Ophioglossiaceae (1/1)

Ophioglossum palmatum L. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3467, 3532, Skean 1177, 1237.

Order Marattiales
Family Marattiaceae (1/1)

Danaea elliptica J. Smith. Terrestrial herb; moist pine forest/cloud forest (rare), ca 1750 m; Morne Formon. Judd 3852.

Order Polypodiales
Family Gleicheniaceae (1/2)

Gleichenia bifida (Willd.) Spreng. Scrambling herb; moist pine forest/cloud forest, disturbed open areas (common), 1800-2200 m; Morne Formon. Judd 3861, Skean 1534.

Gleichenia revoluta HBK. Scrambling herb; moist pine forest, disturbed open areas (abundant), 1700-2200 m; Morne Formon. Judd 3892.

Family Hymenophyllaceae (2/7)

Hymenophyllum hirsutum (L.) Sw. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3481.

Hymenophyllum microcarpum Desv. Epiphytic herb; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3466.

Hymenophyllum trapezoidale Copel. Epiphytic herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3878b. Det. Dana Griffin, III.

Hymenophyllum urbani Brause. Epiphytic herb; cloud forest/ moist pine forest (common), 1800-2200 m; Morne Formon. Judd 3866, Skean 1476.

Trichomanes crispum L. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3522.

Trichomanes holopterum Kunze. Epiphytic herb; moist forest on limestone (occasional), ca 960 m; Bois Formon. Judd 3998.

Trichomanes rigidum Sw. Epiphytic or terrestrial herb; cloud forest/moist pine forest (common), 1650-1800 m; Morne Formon. Judd 3672.

Family Plagiogyriaceae (1/1)

Plagiogyria semicordata (Presl.) Christ. Terrestrial herb; moist pine forest (common), 2300-2340 m; Pic Macaya; reported by Ekman (in field notes) from ca 2200 m on Morne Formon. Judd 4143, 4163, Skean 1408. Det. Rolla Tryon.

Family Dicksoniaceae (1/1)

Culcita conifolia (Hook.) Maxon. Terrestrial herb; moist pine forest (common), 2150-2340 m; Pic Macaya; probably also on Morne Formon. Judd 4151, Skean 1403.

Family Lophosoriaceae (1/1)

Lophosoria quadripinnata (Gmel.) C. Chr. Terrestrial herb; moist pine forest, especially disturbed, recently burned areas (very common), 1670-2340 m; Morne Formon, Pic Macaya. Judd 3634, 4149, Skean 1391.

Family Cyatheaceae (3/6)

Alsophila hotteana (C. Chr. & Ekm.) Tryon. Tree fern; moist forest on limestone (common), moist pine forest (occasional), 950-1770 m; Bois Formon, Morne Formon. Judd 3482, 3647c, Skean 1321, 1362. Endemic to Massif de La Hotte.

Alsophila minor (D.C. Eaton) Tryon. Tree fern; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3738, 4419, Skean 1447, 1495.

Alsophila woodwardioides (Kaulf.) Conant. Tree fern; moist forest on limestone, (occasional), 1200-1250 m; Bois Formon, hills south of

Morne Formon. Judd 3961. This taxon sometimes is treated as *Nephelea woodwardioides* (Kaulf.) Gastony var. *hieronymi* (Brause) Gastony.

- Cnemidaria horrida* (L.) Presl. Tree fern; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3505, Skean 1200.
- Cyathea furfuracea* Baker. Tree fern; moist forest on limestone, cloud forest (common), 950-1560 m; Bois Formon, Morne Cavalier, lower elevations on southern slopes of Morne Formon. Judd 3519, 4053, Skean 1198, 1575.
- Cyathea harrisii* Underw. ex Maxon. Tree fern; moist pine forest/cloud forest (very common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3737, 4155, Skean 1406, 1446.

Family Pteridaceae (4/6)

(The following fern families are sometimes treated as members of one large polymorphic family, the *Polypodiaceae sensu lato*; pteridologists differ as to how this assemblage should be divided, and the classification of R. M. & A. F. Tryon [1982] is followed here.)

- Adiantum pyramidale* (L.) Willd. Terrestrial herb, moist forest on limestone (occasional), 950-1260 m; Bois Formon. Judd 3931, Skean 1259.
- Adiantum raddianum* Presl. Terrestrial herb; moist pine forest/cloud forest (occasional), 1620-1660 m; southern slopes of Morne Formon. Judd 3803.
- Adiantum tenerum* Sw. Terrestrial herb; moist forest on limestone, pine forest (occasional), ca 1000 m; Bois Formon, Ravine du Sud. Judd 4111, Skean 1574.
- Cheilanthes farinosa* (Forsk.) Kaulf. Terrestrial herb; moist pine forest, open rocky ridge (occasional), ca 2200 m; southern slope of Pic Macaya. Judd 4134.
- Pityrogramma tartarea* (Cav.) Maxon. Terrestrial herb; pine forest, disturbed slopes (common), 1670-1770 m; Morne Formon. Judd 3622.
- Pteris longifolia* L. Terrestrial herb; pine forest, especially open rocky areas (very common), 1000-1730 m; Morne Formon, Ravine du Sud. Judd 3793, 4110.

Family Vittariaceae (1/1)

- Vittaria moritiziana* Mett. Epiphytic herb; moist pine forest/cloud forest (uncommon), 1650-1800 m; Morne Formon. Judd 3756.

Family Dennstaedtiaceae (4/5)

- Histiopteris incisa* (Thunb.) J. Smith. Terrestrial herb; moist pine forest/cloud forest (very common), 1650-2300 m; Morne Formon, Pic Macaya. Judd 3767, 4154.
- Hypolepis hispaniolica* Maxon. Vine; moist pine forest/cloud forest (abundant), 1800-2200 m; Morne Formon. Judd 3894. Endemic to Hispaniola.
- Odontosoria aculeata* (L.) J. Smith. Vine; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon. Judd 3766, Skean 1536.
- Odontosoria fumarioides* (Sw.) J. Smith. Vine; moist pine forest (occasional), 2300-2340 m; Pic Macaya. Judd 4156.
- Pteridium aquilinum* (L.) Kuhn. var. *caudatum* (L.) Sadeb. Terrestrial herb; moist pine forest, especially open disturbed slopes (abundant), 1550-2200 m; Morne Formon, M. Cavalier, Pic Macaya. Judd 3620, 4040.

Family Thelypteridaceae (1/9)

- Thelypteris asterothrix* (Fée) Proctor. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3471. Det. Rolla Tryon.
- Thelypteris hispidula* (Decne.) Reed. Terrestrial herb; moist pine forest (occasional), 1650-1770 m; south slope of Morne Formon. Judd 3667a. Det. Rolla Tryon.
- Thelypteris* cf. *imitata* C. Chr. Terrestrial herb; moist pine forest (occasional), 2300-2340 m; Pic Macaya. Judd 4146.
- Thelypteris patens* (Sw.) Small. Terrestrial herb; cloud forest, pine forest (occasional), 1000-1780 m; Ravine du Sud (northern slopes of Morne Formon). Judd 4122, Skean 1371. Det. Rolla Tryon.
- Thelypteris rudis* (Kunze) Proctor. Terrestrial herb; moist pine forest/cloud forest (common), 1560-1770 m; Morne Formon, M. Cavalier. Judd 3646, 4032. Det. Rolla Tryon.
- Thelypteris sagittata* (Sw.) Proctor. Terrestrial herb; moist forest on limestone (uncommon), ca 960 m; Bois Formon. Judd 4002. Det. Rolla Tryon.
- Thelypteris sancta* (L.) Ching. Terrestrial herb; moist forest on limestone (occasional), ca 975 m; Bois Formon. Skean 1193. Det. Alan R. Smith.
- Thelypteris serra* (Sw.) St. John ex Small. Terrestrial herb; pine forest (common), 1000-1700 m; Morne Formon, Ravine du Sud. Franz 8, Judd 3796, 4109.
- Thelypteris torresiana* (Gaud.) Alston. Terrestrial herb; pine forest (occasional), ca 1000 m; Ravine du Sud. Judd 4121.

Family Dryopteridaceae (8/16)

- Ctenitis cheilanthina* C. Chr. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3436.
- Diplazium centripetale* (Baker) Maxon. Terrestrial herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3887.
- Diplazium l'herminieri* Hieron. Terrestrial herb; moist pine forest/cloud forest (occasional), 1650-2200 m; Morne Formon. Judd 3734, 4083.
- Diplazium pectinatum* (Fée) C. Chr. Terrestrial herb; moist pine forest/cloud forest (common), 1650-2000 m; Morne Formon. Judd 3647a, Skean 1543.
- Diplazium plantaginifolium* (L.) Urb. Terrestrial herb; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3534, 3996.
- Diplazium unilobum* (Poir.) Hieron. Epiphytic or terrestrial herb; moist pine forest/cloud forest (common), 1450-1780 m; Morne Formon, Ravine du Sud. Judd 3647b, Skean 1366. (= ? *D. semihastatum* (Kuntze) C. Chr.)
- Dryopteris denticulata* (Sw.) Kuntze. Terrestrial herb; moist pine forest (occasional), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3667b, 4150.
- Dryopteris paleacea* (Sw.) Hand.-Mazz. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1900-2340 m; Morne Formon, Pic Macaya. Judd 4082, 4133, 4153, Skean 1407. Det. Rolla Tryon.
- Elaphoglossum chartaceum* (Baker ex Jenman) C. Chr. Terrestrial and epiphytic herb; moist pine forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3521, 3772, 4142. Det. J. T. Mickel (4142).
- Elaphoglossum crinitum* (L.) Christ. Terrestrial herb; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3536. (= *Hymenodium crinitum* (L.) Fée)
- Elaphoglossum peltatum* (Sw.) Urb. Epiphytic herb; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1650 m; Bois Formon, southern slope of Morne Formon. Judd 3465, 3815.
- Elaphoglossum revolutum* (Liebm.) Moore. Epiphytic herb; cloud forest (occasional), 1450-1780 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1340. Det. J. T. Mickel.
- Lomariopsis amydrophlebia* (Slosson) Holttum. Terrestrial herb; moist forest on limestone (occasional), ca 1000 m; Bois Formon. Skean 1202.
- Polystichum echinatum* (Gmel.) Christ. Terrestrial or epiphytic herb; moist forest on limestone, moist pine forest/cloud forest, often in open

rocky areas (common), 950-2340 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3997, 3999, 4139, Skean 1472. Det. J. T. Mickel.

Polystichum polystichiforme (Fée) Maxon. Terrestrial herb; moist pine forest/cloud forest (occasional), 1620-1660 m; southern slopes of Morne Formon. Judd 3804. Det. J. T. Mickel.

Tectaria hippocrepis (Jacq.) Copel. Terrestrial herb; moist forest on limestone, cloud forest (common), 950-1530 m; Bois Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3446, 3533, Skean 1246, 1353.

Family Aspleniaceae (1/3)

Asplenium myriophyllum (Sw.) Presl. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3430, 3606, Skean 1186. Det. Rolla Tryon.

Asplenium praemorsum Sw. Epiphytic herb; moist pine forest (occasional), 1650-1770 m; Morne Formon. Judd 3643a.

Asplenium serra Langsd. & Fisch. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, Ravine du Sud. Judd 3735, Skean 1332.

Family Davalliaceae (1/3)

Nephrolepis multiflora (Roxb.) Jarrett ex Morton. Terrestrial herb; moist forest on limestone, pine forest, often on rocks (common), 950-1050 m; Bois Formon, Ravine du Sud. Frans 7, Skean 1272.

Nephrolepis pectinata (Willd.) Schot. Terrestrial herb; moist pine forest (occasional), 1430-1675 m; southern slopes of Morne Formon. Skean 1517.

Nephrolepis rivularis (Vahl) Mett. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3535.

Family Blechnaceae (1/5)

Blechnum divergens (Kunze) Mett. Epiphytic herb; cloud forest (common), 1900-2200 m; Morne Formon. Judd 4086.

Blechnum fragile (Liebm.) Morton & Lell. Epiphytic herb; moist pine forest/cloud forest (common), 1600-2200 m; Morne Formon. Skean 1515.

Blechnum occidentale L. Terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, southern slope of Morne Formon. Judd 3540, 3650.

Blechnum tuerckheimii Brause. Terrestrial herb; moist pine forest (common), 2200-2340 m; Pic Macaya. Judd 4144. Endemic to Hispaniola.

Blechnum underwoodianum (Broudh.) C. Chr. Tree fern; moist pine forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3649, 4141, 4166, Skean 1400.

Family Polypodiaceae (7/22)

Campyloneurum angustifolium (Sw.) Fée. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 1000-2340 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3641, 3666, 4152, Skean 1564.

Campyloneurum vexatum Eaton. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, southern slopes of Morne Formon. Judd 3453b, 3445b, 3636a, Skean 1271.

Grammitis apiculata (Klotzsch) Seymour. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3523a, Skean 1187. Endemic to Hispaniola.

Grammitis cretata Maxon. Epiphytic herb; cloud forest (occasional), 1700-1800 m (to as low as 1500 m, Ekman field notes); Morne Formon. Judd 3600, Skean 1375.

Grammitis cultrata (Willd.) Proctor. Epiphytic herb; moist pine forest/cloud forest (occasional), 1800-2200 m; Morne Formon. Judd 3883, Skean 1471.

Grammitis firma (J. Smith) Morton. Epiphytic herb; moist pine forest (uncommon), 2300-2340 m; Pic Macaya. Judd 4162.

Grammitis furcata Hk. & Grev. Epiphytic herb; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3480b.

Grammitis marginella (Sw.) Sw. Epiphytic herb; moist pine forest/cloud forest (rare), 1900-2300 m; Pic Macaya (to "The Saddle" connecting this peak with Morne Formon). Judd 4129.

Grammitis moniliformis (Sw.) Proctor. Epiphytic herb; moist pine forest (occasional), 2250-2340 m; Pic Macaya. Judd 4161, Skean 1405. Det. Rolla Tryon.

Grammitis pendula (Sw.) Proctor. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3523b, Skean 1188. Det. Rolla Tryon.

Microgramma lycopodioides (L.) Copel. Epiphytic herb; moist forest on limestone, moist pine forest (common), 950-1050 m; Bois Formon, Ravine du Sud. Judd 3445a, 3447a, 4119, Skean 1236.

- Microgramma piloselloides* (L.) Copel. Epiphytic or terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3447b, 4009, Skean 1230.
- Neurodium lanceolatum* (L.) Fée. Terrestrial herb; moist pine forest, rocky ledges (common), ca 1000 m; Ravine du Sud. Judd 4112.
- Niphidium crassifolium* (L.) Lell. Epiphytic or terrestrial herb; moist forest on limestone, often in disturbed open areas, open rocky pine forest (common), 950-1730 m; Bois Formon, southern slope of Morne Formon, Ravine du Sud. Judd 3670, 3792, 4118, Skean 1235.
- Pleopeltis macrocarpa* (Cav.) Maxon. Epiphytic herb; moist pine forest (common), 1650-1770 m; Morne Formon. Judd 3636b.
- Polypodium aureum* L. Epiphytic or terrestrial herb; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3940, Skean 1154.
- Polypodium dissimile* L. Terrestrial herb; moist forest on limestone (uncommon), ca 960 m; Bois Formon. Judd 4001.
- Polypodium lasiopus* Klotzsch. Terrestrial or epiphytic herb; moist pine forest (rare), ca 1800 m; Morne Formon. Judd 3714.
- Polypodium loriceum* L. Usually epiphytic herb; moist pine forest, often disturbed areas (occasional/common), 1430-2340 m; Morne Formon, Pic Macaya. Judd 3638, 4164, Skean 1513.
- Polypodium pectinatum* L. Terrestrial herb; moist forest on limestone (occasional), ca 1000 m; Bois Formon. Skean 1280.
- Polypodium polypodioides* (L.) Watt. Epiphytic or terrestrial herb; moist forest on limestone, often in disturbed areas, pine forest (occasional), 950-1260 m; Bois Formon, Ravine du Sud. Judd 4024, 4115, Skean 1299.
- Polypodium squamatum* L. Epiphytic or terrestrial herb; moist forest on limestone, disturbed open areas, pine forest (occasional), 950-1260 m; Bois Formon, Ravine du Sud. Judd 3456b, 3930, 4114.

Class Coniferopsida
Order Coniferales
Family Pinaceae (1/1)

- Pinus occidentalis* Sw. Tree; dominant tree forming pinelands, or scattered overstory tree in cloud forest (abundant), 1000-2340 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3632, 3993, Skean 1458. Endemic to Hispaniola.

Class Angiospermopsida
Superorder Annoniflorae
Order Annonales
Family Illiciaceae (1/1)

Illicium ekmanii A. C. Smith. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1560 m; Bois Formon, Morne Cavalier. Judd 4038, Skean 1194, 1260, 1313, 1662, 2089. Endemic to Hispaniola.

Family Chloranthaceae (1/1)

Hedyosmum nutans Sw. Shrub; moist forest on limestone, disturbed area (occasional), ca 974 m; Bois Formon. Skean 1501.

Family Lauraceae (5/7)

Beilschmiedia pendula (Sw.) Hemsl. Tree; moist forest on limestone, pine forest (common), 930-1250 m; Bois Formon, Ravine du Sud. Judd 3524, 3526, 3936.

Phoebe cf. *montanum* Griseb. Tree; moist forest on limestone (common), 930-1050 m; Bois Formon. Judd 3946, Skean 1283.

Nectandra coriacea (Sw.) Griseb. Tree; moist forest on limestone (occasional), 950-1000 m; Bois Formon. Skean 1294.

Nectandra membranacea (Sw.) Griseb. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1143.

Ocotea foeniculacea Mez. Tree; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3891, 3896.

Persea americana Mill. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Introduced. Judd 3957.

Persea anomala Britt. & Wils. Tree; moist pine forest/cloud forest (common), 1500-2200 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3727, 3867, Skean 1432, 1527, 1537, 2109, (= Persea ekmanii O. C. Schmidt)

Family Piperaceae (3/19)

Lepianthes umbellatum (L.) Raf. Shrub; moist forest on limestone, especially disturbed openings (very common), 930-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3951, Skean 1163. (= Pothomorphe umbellata (L.) Miq.)

- Peperomia acuminata* Ruiz & Pav. Terrestrial or epiphytic herb; moist pine forest/cloud forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3663, 4127, Skean 1401.
- Peperomia alata* Ruiz & Pav. Terrestrial or epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 4000, Skean 1276.
- Peperomia distachya* (L.) Dietr. Epiphytic or terrestrial herb; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3443, 3456a, Skean 1192.
- Peperomia dominicana* DC. Terrestrial herb; pine forest (occasional), ca 1000 m; Ravine du Sud. Thompson s.n. 6 Feb. 1984. Endemic to Hispaniola.
- Peperomia galioides* HBK. Epiphytic herb; moist pine forest/ cloud forest (rare), 1650-1800 m; Morne Formon. Judd 3760.
- Peperomia glabella* (Sw.) Dietr. Epiphytic or terrestrial herb; moist pine forest/cloud forest (common), 1500-1770 m; Morne Formon, Ravine du Sud. Judd 3662, Skean 1377.
- Peperomia hernandifolia* (Vahl) Dietr. Terrestrial or epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3473.
- Peperomia hispidula* (Sw.) Dietr. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3470.
- Peperomia magnoliifolia* (Jacq.) Dietr. var. *microphylla* Dahlst. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3476.
- Peperomia michelensis* Trel. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3444, Skean 1270. Endemic to Massif de La Hotte.
- Peperomia obtusifolia* (L.) Dietr. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest (common), 1200-2070 m; Bois Formon, Morne Formon. Judd 3880, 3967.
- Peperomia tenella* (Sw.) Dietr. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, Morne Formon. Judd 3654, Skean 1162.
- Peperomia tetraphylla* (S. Forst.) Hook. & Arn.. Epiphytic herb; moist pine forest/cloud forest (occasional), 1650-1800 m; Morne Formon. Judd 3656, 3759.
- Piper aduncum* L. Shrub; moist forest on limestone, pine forest (common), 950-1250 m; Bois Formon, Ravine du Sud. Franz 4, Judd 4003.
- Piper confusum* DC. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3438.

Piper hispidum Sw. Shrub; moist forest on limestone (common), moist pine forest (uncommon), 950-1670 m; Bois Formon, southern slope of Morne Formon, M. Cavalier. Judd 3665, 3948, Skean 1155, 1189.

Piper rugosum Lam. Small tree; moist pine forest/cloud forest (common), 1620-1660 m; southern slope of Morne Formon. Judd 3805.

Piper oviedoi Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1204, 1243. Endemic to Massif de La Hotte and Massif de La Selle.

Order Berberidales

Family Menispermaceae (1/1)

Cissampelos pareira L. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 930-1800 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3947, Skean 1333.

Family Ranunculaceae (2/2)

Clematis dioica L. Vine; moist pine forest (occasional), 1650-1700 m; southern slope of Morne Formon. Judd 3835.

Ranunculus recurvatus Poir. var. *tropicus* (Griseb.) Fawc. & Rendle. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1800-2340 m; Morne Formon, Pic Macaya. Skean 1396, 1541.

Family Papaveraceae (1/1)

Bocconia frutescens L. Shrub; moist forest on limestone, moist pine forest/cloud forest, especially disturbed openings (very common), 950-2300 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3537, Skean 1360.

Superorder Chenopodiiflorae

Order Chenopodiales

Family Phytolaccaceae (2/2)

Petiveria alliacea L. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), 800 m; Bois Formon. Not collected.

Phytolacca rivinoides Kunth & Bouché. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest, clearings (occasional/common), 950-1650 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3660, Skean 1150.

Family Caryophyllaceae (3/3)

- Cerastium glomeratum* Thuill. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest, open disturbed areas (common), 950-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 4048.
- Drymaria cordata* (L.) Willd. Terrestrial herb; moist forest on limestone, open disturbed areas (uncommon), ca 950 m; Bois Formon. Not collected.
- Stellaria media* (L.) Vill. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), 950-1300 m; Bois Formon, southern slopes of Morne Formon. Introduced. Judd 3918.

Family Nyctaginaceae (1/1)

- Pisonia aculeata* L. Scrambling shrub; moist forest on limestone, especially open areas (uncommon), 900-1000 m; Bois Formon. Skean 1296.

Family Amaranthaceae (1/1)

- Chamissoa altissima* (Jacq.) HBK. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), 950-1250 m; Bois Formon. Judd 3976.

Family Cactaceae (1/1)

- Rhipsalis baccifera* (Soland. ex J. Mill) Stearn. Epiphytic herb; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3988, Skean 1576a.

Superorder Theiflorae

Order Theales

Family Theaceae (2/2)

- Cleyera ternstroemioides* (O. E. Schmidt) Kobuski. Tree/shrub; moist pine forest/cloud forest (occasional), 1620-2200 m; Morne Formon. Judd 3818. Endemic to Massif de La Hotte (Morne Formon).
- Ternstroemia barkeri* Ekm. & Schmidt. Shrub to small tree; moist pine forest/cloud forest (common), 1900-2200 m; Morne Formon, "The Saddle" between M. Formon and Pic Macaya. Judd 4087, Skean 1477, 1668, 2102. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).

Family Symplocaceae (1/1)

Symplocos hotteana Urb. & Ekm. Small tree; moist pine forest/cloud forest (occasional), 1650-2200 m; Morne Formon. Judd 3854, Skean 1670, 2105. Endemic to Massif de La Hotte (Morne Formon).

Family Aquifoliaceae (1/2)

Ilex macfadyenii (Walp.) Rehder. Shrub to small tree; moist pine forest/cloud forest (common), 1800-2300 m; Morne Formon, Pic Macaya. Judd 3865, 4124, Skean 1390, 1433.

Ilex obcordata Sw. Shrub to small tree; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon, Pic Macaya. Judd 3862, 4080, Skean 1444, 1540, 2107.

Family Marcgraviaceae (1/2)

Marcgravia oligandra Wr. ex Griseb. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3478.

Marcgravia rectiflora Triana & Planch. Vine; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Not collected.

Family Clusiaceae or Guttiferae (2/3)

Clusia clusoides (Griseb.) D'Arcy. Epiphytic or terrestrial shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3497, Skean 1229, 2086.

Clusia major L. Tree; moist forest on limestone (occasional), 930-960 m; Bois Formon. Judd 3958.

Garcinia barkeriana (Urb. & Ekm.) Judd. Shrub; moist forest on limestone (occasional), 950-1050 m (-1500 m, Ekman field notes); Bois Formon, southern slopes of Morne Formon. Judd 3464. Endemic to Massif de La Hotte (Formon region). Robson (1958) has suggested that *Rheedia* be merged into *Garcinia*. The combination is made here; basionym: *Rheedia barkeriana* Urb. & Ekm., Arkiv. Bot. 22A(10): 18. 1929.

Order Ericales

Family Ericaceae (4/4)

Gaultheria domingensis Urb. Shrub; moist pine forest (uncommon), 2100-2200 m; ridge leading to peak on southern slope of Pic Macaya. Judd 4123, Skean 1434.

- Lyonia rubiginosa* (Pers.) G. Don var. *costata* (Urb.) Judd. Tree to shrub; moist pine forest/cloud forest (occasional), 1450-1800 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3754, Skean 1344. Endemic to Hispaniola.
- Sphyrospermum majus* Griseb. Epiphytic shrub; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3455, 3529, 3711, 3770, 3834, 3913, 3984, 4051, 4137, Skean 1305, 1449. Extremely variable: leaves acuminate to rounded at apex, flowers white to pink, ovary glabrous to pubescent.
- Vaccinium racemosum* (Vahl) Wilbur & Luteyn. Scrambling shrub/vine; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3472, 3886, 4131, Skean 1181, 1184, 1435, 1673. [= *Symphysia racemosa* (Vahl) Stearn; the generic placement of this taxon is in doubt.]

Order Ebenales

Family Sapotaceae (3/3)

- Chrysophyllum argenteum* Jacq. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3509, 4016, Skean 1141.
- Dipholis cubensis* (Griseb.) Pierre. Shrub; moist forest on limestone, moist pine forest/cloud forest (common), 1200-1800 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3819, 3979, Skean 1338. Generic delimitations in group are problematical; species sometimes considered in *Bumelia*.
- Micropholis polita* (Griseb.) Pierre subsp. *hotteana* Judd. Tree; moist forest on limestone (common), 950-1250 m; Bois Formon. Judd 3435, 3927. Endemic to Massif de La Hotte (subsp. *polita* in Cuba).

Order Primulales

Family Theophrastaceae (1/1)

- Jacquinia eggersii* Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3501.

Family Myrsinaceae (3/6)

- Ardisia fuertesii* Urb. Shrub; moist forest on limestone, cloud forest (common), 950-1660 m; Bois Formon, Morne Formon. Judd 3498, 3816, Skean 1290, 2083.
- Myrsine coriacea* (Sw.) R. Br. ex Roem. & Schult. Shrub to tree; moist forest on limestone (uncommon), moist pine forest/cloud forest (very

common), 950-2300 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3630, 3885, 4022b, 4037, 4147, Skean 1394, 1654, 2111.

Myrsine magnoliifolia (Urb. & Ekm.) Alain. Small tree; moist pine forest/cloud forest (uncommon), 1800-2200 m; Morne Formon. Skean 1475, 1676, 2110. Endemic to Massif de La Hotte (Morne Formon).

Wallenia aquifolia Urb. & Ekm. Shrub; moist pine forest (occasional), 2100-2300 m; ridge on southern slope of Pic Macaya; Ekman also reports (in field notes) from elevations as low as 1550 m on Morne Formon. Judd 4128, Skean 1388. Endemic to Massif de La Hotte and Massif de La Selle.

Wallenia ekmanii Urb. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1578. Endemic to Massif de La Hotte.

Wallenia formonensis Judd. Tree; moist pine forest/cloud forest (occasional), ca 1520 m; southern slopes of Morne Formon. Skean 1524. Endemic to Massif de La Hotte (Morne Formon).

Order Polygonales
Family Polygonaceae (1/2)

Coccoloba costata Wr. ex Sauv. Shrub to tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3499, Skean 1178.

Coccoloba pauciflora Urb. Shrub to small tree; moist pine forest/cloud forest (occasional), 1530-1650 m; Morne Cavalier. Judd 4027. Endemic to Hispaniola.

Superorder Celastriflorae
Order Celastrales
Family Celastraceae (1/1)

Maytenus cf. *hotteana* Urb. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3465a. Endemic to Massif de La Hotte.

Superorder Santaliflorae
Order Santalales
Family Loranthaceae (1/1)

Dendropemon parvifolius (Sw.) Steud. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 1450-1650 m; southern slopes of Morne Formon, M. Cavalier. Judd 3831, 4057.

Family Viscaceae (2/7)

- Dendrophthora brachystacha* Urb. Epiphytic and parasitic shrub; moist pine forest (common), 1650-1800 m; Morne Formon. Judd 3645. Endemic to Hispaniola.
- Dendrophthora carmosa* Urb. & Ekm. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon, "The Saddle" to Pic Macaya. Judd 3621, 3757, 4092, Skean 1459, 1666b. Endemic to the Massif de La Hotte (Morne Formon, Pic Macaya).
- Dendrophthora cupressoides* (Macf.) Eichl. Epiphytic and parasitic shrub; moist pine forest/cloud forest (occasional), 1530-1560 m; Morne Cavalier. Judd 4056.
- Dendrophthora serpyllifolia* (Griseb.) Krug & Urb. Epiphytic and parasitic shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3468, 3516.
- Dendrophthora versicolor* Urb. & Ekm. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4091, Skean 1397. Endemic to Massif de La Hotte (M. Formon/Pic Macaya region).
- Phoradendron anceps* (Spreng.) Krug & Urb. Epiphytic and parasitic shrub; moist forest on limestone (occasional), 1200-1250 m; Bois Formon. Judd 3989.
- Phoradendron piperoides* (HBK.) Trel. Epiphytic and parasitic shrub; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3938.

Superorder Violiflorae

Order Violales

Family Flacourtiaceae (4/4)

- Banara splendens* Urb. Tree; moist pine forest/cloud forest (common), 1400-1650 m; southern slopes of Morne Formon. Judd 3830, Skean 1508. Endemic to Hispaniola. (= *B. hotteana* Urb. & Ekm.)
- Casearia sylvestris* Sw. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1145a, 1282.
- Lunania mauritii* Urb. Shrub; moist forest on limestone (common), 950-1250 m; Bois Formon. Judd 3461, 3507, 3977. Endemic to Hispaniola.
- Samyda dodecandra* Jacq. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1262.

Family Passifloraceae (1/2)

Passiflora murucuja L. Vine; moist pine forest/cloud forest (uncommon), 1370-1650 m; Morne Formon, M. Cavalier. Skean 1502.

Passiflora sexflora Juss. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 930-1650 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 4030, 4120, Skean 1245.

Family Cucurbitaceae (1/1)

Cayaponia americana (Lam.) Cogn. Vine; moist forest on limestone, disturbed openings (common), 950-1250 m; Bois Formon. Judd 3981.

Family Begoniaceae (1/2)

Begonia plumieri DC. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, Ravine du Sud. Judd 3791. Endemic to Hispaniola.

Begonia pycnantha Urb. & Ekm. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3528, Skean 1252. Endemic to Hispaniola.

Order Capparales**Family Brassicaceae or Cruciferae (2/2)**

Brassica campestris L. Terrestrial herb; disturbed clearings and fields (common), ca 1600-1750 m; Morne Formon. Not collected. Introduced.

Lepidium virginicum L. Terrestrial herb; disturbed clearings and fields (common), ca 1650 m; Morne Formon. Not collected.

Superorder Malviflorae**Order Malvales****Family Tiliaceae (1/1)**

Triumfetta semitriloba Jacq. Terrestrial herb; disturbed openings (common), 950-1050 m; Bois Formon. Not collected.

Family Bombacaceae (1/1)

Bombax emarginatum (A. Rich.) A. Robyns. Tree; moist forest on limestone (uncommon), ca 1000 m; Bois Formon. Skean 1308.

Family Malvaceae (4/5)

Anoda hastata Cav. Terrestrial herb; moist forest on limestone, disturbed openings (uncommon), 950-1050 m; Bois Formon. Skean 1312.

Hibiscus tiliaceus L. Tree; moist forest on limestone (uncommon), 950-1000 m; Bois Formon. Judd 3952, Skean 1277. Probably persisting after cultivation.

Sida acuta Burm. f. Terrestrial herb; moist forest on limestone, disturbed openings and fields (common), 900-1200 m; Bois Formon. Not collected.

Sida rhombifolia L. Terrestrial herb; moist forest on limestone, disturbed openings and fields (occasional), 900-1050 m; Bois Formon. Not collected.

Urena lobata L. Terrestrial herb or subshrub; moist forest on limestone, disturbed openings and fields (common), 950-1250 m; Bois Formon. Not collected.

Order Urticales

Family Ulmaceae (1/2)

Trema lamarckiana (R. & Sch.) Blume. Tree; pine forest (occasional), ca 1000 m; Ravine du Sud. Judd 4105.

Trema micrantha (L.) Blume. Tree; moist pine forest/cloud forest (occasional/common), 1450-1850 m; Morne Formon, M. Cavalier, Ravine du Sud. Judd 3769, 4047, Skean 1334.

Family Urticaceae (including Moraceae, Cecropiaceae) (5/19)

Cecropia peltata L. Tree; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3973, Skean 1565.

Ficus citrifolia Mill. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3490.

Ficus suffocans Griseb. Tree; pine forest (uncommon), ca 1000 m; Ravine du Sud. Judd 4102.

Gyrotaenia myriocarpa Griseb. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (occasional/common), 1200-1800 m; Bois Formon, southern slopes of Morne Formon, Ravine du Sud. Judd 3633, 4104, Skean 1505, 1525.

- Pilea baltenweckii* Urb. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-1700 m; Bois Formon, southern slopes of Morne Formon. Skean 1175, 1514. Endemic to Hispaniola.
- Pilea distantifolia* Urb. Terrestrial herb; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3440, Skean 1176, 1182, 1249. Endemic to Massif de La Hotte.
- Pilea domingensis* Urb. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-2200 m; Bois Formon, Morne Formon. Judd 3504, Skean 1278, 1474. Endemic to Hispaniola.
- Pilea formonensis* Urb. & Ekm. Terrestrial herb; moist pine forest/cloud forest (common), 1700-2200 m; Morne Formon, Ravine du Sud, southern slope of Pic Macaya. Judd 3644, Skean 1448. Endemic to Massif de La Hotte (high elevations).
- Pilea hepatica* Urb. & Ekm. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3494. Endemic to Massif de La Hotte and Massif de La Selle.
- Pilea leptocardia* Urb. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, M. Cavalier, Ravine du Sud. Judd 4050, Skean 1336. Endemic to Massif de La Hotte and Massif de La Selle.
- Pilea microphylla* (L.) Liebm. Terrestrial herb; moist pine forest, especially open rocky areas (very common), 1650-2200 m; Morne Formon, southern slope of Pic Macaya. Judd 3742, 4140.
- Pilea* aff. *P. microphylla* (L.) Liebm. Terrestrial herb; moist pine forest, especially open rocky areas (common), 1500-1770 m; southern slopes of Morne Formon. Judd 3624, Skean 1530.
- Pilea parietaria* (L.) Blume. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1250.
- Pilea serpyllacea* (HBK.) Liebm. Terrestrial herb; moist pine forest/cloud forest (common), 1530-1750 m; Morne Formon, M. Cavalier. Judd 4049. Endemic to Massif de La Hotte.
- Pilea stolonifera* (Sw.) Wedd. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1196, 1251. Endemic to Massif de La Hotte and Massif de La Selle.
- Pilea* cf. *torbeciana* Urb. & Ekm. Terrestrial herb; moist forest on limestone (uncommon), 950-1200 m; Bois Formon. Skean 1248. Endemic to Massif de La Hotte.
- Pilea* sp. nov. aff. *P. formonensis*. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3531, Skean 1348, 1185, 1199.

Pilea sp. Terrestrial herb; moist forest on limestone (uncommon), ca 975 m; Bois Formon. Skean 1500.

Urera baccifera (L.) Wedd. Subshrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3953.

Order Euphorbiales
Family Euphorbiaceae (7/7)

Alchornea latifolia Sw. Tree; moist forest on limestone (common), 930-1370 m; Bois Formon. Judd 4008, 4055, Skean 1264, 1570.

Chamaesyce hypericifolia (L.) Millsp. Terrestrial herb; moist forest on limestone, open, disturbed areas (occasional), ca 1000 m; Bois Formon. Not collected.

Croton glabellus L. Moist forest on limestone, moist pine forest/cloud forest (uncommon), 1000-1780 m; Bois Formon, Morne Formon, Ravine du Sud. Skean 1329, 1569.

Gymnanthes lucida Sw. Shrub to tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3503, Skean 1304.

Hyeronima domingensis Urb. Small tree; moist forest on limestone, disturbed area (uncommon), 910-940 m; Bois Formon. Skean 1322. Endemic to Massif de La Selle and Massif de La Hotte. Det. Grady L. Webster.

Phyllanthus myriophyllus Urb. Shrub; moist forest on limestone (very common), 950-1250 m; Bois Formon. Judd 3459, 3987, Skean 1133, 1653. Endemic to Massif de La Hotte.

Sapium haitiense Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest (uncommon/occasional), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 4043, Skean 1241. Endemic to Massif de La Hotte.

Family Thymeliaceae (1/2)

Daphnopsis americana (Mill.) Johnston subsp. *tinifolia* (Sw.) Nevl. Shrub to tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3956.

Daphnopsis crassifolia (Poir.) Meissn. Shrub; moist pine forest/cloud forest (common), 1500-1660 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3801, 4028, Skean 1355. Endemic to Hispaniola.

Superorder Geraniiflorae
Order Geraniales
Family Oxalidaceae (1/1)

Oxalis corniculata L. Terrestrial herb; moist pine forest, disturbed openings (occasional), 1800-2100 m; Morne Formon. Judd 3881.

Family Malpighiaceae (3/4)

Byrsonima lucida (Mill.) DC. Moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3619. Det. William R. Anderson.

Stigmaphyllon angulosum (L.) A. Juss. Vine; moist forest on limestone (occasional/common), 950-1050 m; Bois Formon. Judd 3462, Skean 1153.

Stigmaphyllon emarginatum (Cav.) Juss. Vine; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3963.

Tetrapterys citrifolia (Sw.) Pers. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1555. Det. William R. Anderson.

Family Polygalaceae (2/2)

Polygala penaea L. Shrub to small tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 4006.

Securidaca virgata Sw. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1171a.

Superorder Rutiflorae
Family Rutaceae (3/4)

Amyris apiculata Urb. & Ekm. Shrub to small tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3434. Endemic to Massif de La Hotte (Formon region).

Citrus aurantium L. Tree; moist forest on limestone, moist pine forest/cloud forest (uncommon), 950-1550 m; Bois Formon, Morne Cavalier. Not collected. Introduced.

Zanthoxylum haitiense (Urb.) Jiménez. Shrub; moist forest on limestone (rare), 1200-1250 m; Bois Formon. Judd 3969. Endemic to the Massif de La Hotte. Det. T. Zanoni.

Zanthoxylum martinicense (Lam.) DC. Small tree; moist forest on limestone (occasional), 950-1100 m; Bois Formon. Judd 4005.

Family Meliaceae (2/2)

Guarea guidonia (L.) Sleumer. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1225.

Trichilia havanensis Jacq. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (common), 1200-1780 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3659, 3985, Skean 1324, 1512.

Family Anacardiaceae (1/1)

Comocladia pinnatifolia L. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1567.

Family Myricaceae (1/1)

Myrica picardae Krug & Urb. Shrub; moist pine forest/cloud forest, especially windswept ridges (occasional), 2100-2250 m; Morne Formon, Pic Macaya. Judd 4089, 4136. Endemic to Hispaniola.

Family Sapindaceae (3/3)

Allophylus rigidus Sw. Shrub; moist forest on limestone, moist pine forest (very common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 4019.

Cupania americana L. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3511, Skean 1571.

Serjania polyphylla (L.) Radlk. Vine; moist forest on limestone (common), 930-1050 m; Bois Formon. Judd 3945.

Family Sabiaceae (1/2)

Meliosma abbreviata Urb. Tree; moist pine forest/cloud forest (uncommon), 1650-1800 m; Morne Formon. Judd 3753b. Endemic to Massif de La Hotte.

Meliosma recurvata Urb. Shrub to small tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3512. Endemic to Massif de La Hotte.

Family Leguminosae or Fabaceae (5/5)

- Desmodium axillare* (Sw.) DC. Terrestrial herb; moist forest on limestone, open disturbed areas (common), 950-1050 m; Bois Formon. Skean 1573.
- Inga vera* Willd. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3959.
- Pithecellobium oppositifolium* Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 1140-1560 m; Morne Cavalier and hills to the south. Judd 4026, Skean 1653b.
- Rhynchosia erythrinoides* Schlecht. & Cham. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1302.
- Senna ligustrina* (L.) Irwin & Barneby. Shrub; moist pine forest (common), ca 1000 m; Ravine du Sud. Judd 4117.

**Superorder Rosales
Order Rosales
Family Rosaceae (2/4)**

- Prunus myrtifolia* (L.) Urb. Tree; moist forest on limestone (very common), 930-1250 m; Bois Formon, Ravine du Sud. Judd 3449, 3929, 3943, 3962, Skean 1263, 1554.
- Prunus occidentalis* Sw. Tree; moist forest on limestone, moist pine forest/cloud forest (common), 930-1660 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3510b, 3652, 3814, 3937, 3982, 4052.
- Rubus eggersii* Rydb. Terrestrial herb; moist pine forest/cloud forest (abundant), 1530-2100 m; Morne Formon, M. Cavalier. Judd 3762b, 4029. Endemic to Hispaniola. The similar *Rubus barkerianus* is probably also present but overlooked.
- Rubus selleanus* Helwig. Terrestrial herb; moist pine forest/cloud forest (abundant), 1650-2300 m; Morne Formon, Pic Macaya. Judd 3762a, Skean 1426b, 1671. Endemic to Massif de La Hotte and Massif de La Selle.

Family Crassulaceae (1/1)

- Kalanchoe pinnata* (Lam.) Pers. Terrestrial herb; disturbed open areas, 950-1200 m, Bois Formon. Not collected.

Family Cunoniaceae (1/1)

Weinmannia pinnata L. Shrub to tree; moist forest on limestone (occasional), moist pine forest/cloud forest (abundant); 1000-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3518, 3639, Skean 1425.

Family Brunelliaceae (1/1)

Brunellia comocladifolia Humb. & Bonpl. subsp. *domingensis* Cuatr. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (abundant), 950-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3623, 4004, 4067, 4132, Skean 1507.

Family Staphyleaceae (1/1)

Turpinia picardae Urb. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 4021, Skean 1273, 1528, 1659. Endemic to Massif de La Hotte and Massif de La Selle.

Superorder Myrtiliflorae

Order Myrtales

Family Melastomataceae (10/34)

Calycogonium apiculatum Urb. & Ekm. Shrub to tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3441. Endemic to Massif de La Hotte.

Calycogonium cf. *calycopteris* (L. C. Rich.) Urb. Shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3442, Skean 1247. Endemic to Hispaniola.

Calycogonium torbecianum Urb. & Ekm. Shrub; moist forest on limestone (uncommon), 1000-1450 m; Bois Formon, southern slopes of Morne Formon. Judd 3934b, Skean 1140, 2094. Endemic to Massif de La Hotte (Formon region).

Clidemia cf. *capillaris* (Sw.) Griseb. Shrub; moist forest on limestone (uncommon), 800-850 m; Bois Formon. Skean 2078.

Conostegia icosandra (Sw.) Urb. Shrub; moist forest on limestone (occasional), ca 900 m; Bois Formon. Skean 1577.

Ekmaniocharis crassinervis Urb. Shrub to small tree; moist forest on limestone (uncommon), 800-1000 m; between Les Platons and

- Soubois. Skean 1660, 1665, 1642, 2079, 2115. Endemic to Massif de La Hotte.
- Henriettea barkeri* Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (occasional), 1800-2200 m; Morne Formon. Judd 3890, Skean 1463, 2097. Endemic to Massif de La Selle and Massif de La Hotte; conspecific with *H. elliptica* Urb. (see Judd, 1986d).
- Heterotrichum angustifolium* DC. Shrub; moist forest on limestone, pine forest (occasional/common), 950-1000 m; Bois Formon, Ravine du Sud. Franz 3, Judd 4103, Skean 1563.
- Heterotrichum umbellatum* (Mill.) Urb. Shrub to small tree; moist forest on limestone (occasional), moist pine forest/cloud forest, especially disturbed openings (common), 1500-1800 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3626, 4036, Skean 1256.
- Mecranium alpestre* Urb. Shrub to small tree; moist pine forest/cloud forest (uncommon), 2000-2100 m; Morne Formon. Skean 2095, 2101. Endemic to Massif de La Hotte (Morne Formon).
- Mecranium birimosum* (Naud.) Triana. Shrub to small tree; moist pine forest/cloud forest (uncommon), 1500-1800 m; Morne Formon, M. Cavalier. Judd 3713, 4035. Endemic to Massif de La Selle and Massif de La Hotte.
- Mecranium microdictyum* Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (occasional/common), 1450-1780 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud (northern slope of M. Formon). Judd 3795, 4033, Skean 1335, 1376, 1523. Endemic to Massif de La Hotte.
- Mecranium haitiense* Urb. Shrub to tree; moist forest on limestone (occasional), 950-1450 m; Bois Formon, lower southern slopes of Morne Formon. Judd 3932, Skean 1258, 1288, 1553, 1557, 1651, 1661, 2092. Endemic to Massif de La Hotte (Formon region); plants of this region have been described as *M. salicifolium* Urb., but these are likely conspecific with *M. haitiense*.
- Mecranium tricostatum* Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (rare), 2100-2150 m; Morne Formon. Skean 1666a, 1667, 2104. Endemic to Massif de La Hotte.
- Mecranium tuberculatum* Urb. Shrub; moist pine forest/cloud forest (uncommon), 1800-2200 m; Morne Formon. Skean 1542. Endemic to Massif de La Hotte and Massif de La Selle.
- Mecranium revolutum* Skean & Judd. Shrub to tree; moist forest on limestone (common), cloud forest (uncommon), 950-1600 m; Bois Formon, southern slope of Morne Formon, Ravine du Sud. Judd 3433, 3934, 3971, Skean 1257, 1315, 1316, 1328, 1350, 1558, 1644, 1649, 2091, 2116. Endemic to Massif de La Hotte (Formon region).

- Mecranium revolutum* Skean & Judd X *M. haitiense* Urb. Shrub; disturbed moist forest on limestone (rare), 1000 m; Bois Formon. Skean 2093. Det. J. D. Skean, Jr.
- Meriania squamulosa* Urb. & Ekm. Shrub; moist pine forest/cloud forest (uncommon), 1800-2200 m; Morne Formon. Skean 1466. Endemic to Massif de La Hotte (Morne Formon).
- Meriania parvifolia* Judd & Skean. Shrub; moist pine forest/cloud forest (uncommon), (1000-)1450-1800 m; Ravine du Sud (northern slopes of Morne Formon), Bois Formon. Judd 3755, Skean 1325, 2085. Endemic to Massif de La Hotte (Morne Formon).
- Meriania brevipedunculata* Judd & Skean. Shrub; moist forest on limestone (uncommon), ca 1000 m; Bois Formon. Skean 1287. Endemic to Massif de La Hotte (Formon region). Note: A fourth species, *M. ekmanii* Urb., also has been collected in the high elevations of the Massif de La Hotte; it is known only from the type gathering, i.e. E. L. Ekman H5331 (S!), near Torbec, above La-Mare-Proux, 1780 m. This species is most closely related to *M. involucrata* (Desr.) Naud.
- Miconia apiculata* Urb. & Ekm. Tree; moist pine forest/cloud forest (occasional/very common), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4062, 4126, Skean 1398, 2100. Endemic to Massif de La Hotte (high elevations).
- Miconia barkeri* Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon. Judd 3758, 3868, Skean 1457, 2098, 2112. Endemic to Massif de La Hotte (Morne Formon).
- Miconia hypiodes* Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (common), 1800-2340 m; Morne Formon, Pic Macaya. Judd 3856, 4065, 4081, 4148, Skean 1386, 1464, 2099, 2103. Endemic to Massif de La Hotte (high elevations).
- Miconia laevigata* (L.) DC. Shrub; moist forest on limestone (occasional/common), 900-1000 m; Bois Formon. Skean 1275, 1556, 1647.
- Miconia macayana* Judd & Skean. Shrub; moist pine forest, rocky ridges (uncommon), ca 2200 m; southern slope of Pic Macaya. Judd 4125, Skean 1428. Endemic to Massif de La Hotte (southern slope of Pic Macaya).
- Miconia mirabilis* (Aubl.) L. O. Williams. Shrub; moist forest on limestone (rare), ca 900 m; Bois Formon. Skean 1561.
- Miconia ossaeifolia* Urb. & Ekm. Shrub; moist pine forest/cloud forest (occasional), 1360-1780 m; Morne Formon, Ravine du Sud. Skean 1327, 1352, 1498. Endemic to Massif de La Hotte.
- Miconia subcompressa* Urb. & Ekm. Shrub; moist forest on limestone (abundant), moist pine forest/cloud forest (occasional/common), 950-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du

- Sud, Pic Macaya. Judd 3460, 3669, 3758b, 3933, 4034, 4044, Skean 1145b, 1652, 2084, 2118. Endemic to Hispaniola.
- Miconia tetrastoma* Naud. Shrub; moist pine forest/cloud forest (occasional/common), 1450-2200 m; Morne Formon, M. Cavalier, Ravine du Sud (northern slopes of M. Formon). Judd 3741, 4025, Skean 1346, 1379, 1470, 1538, 1677, 2114.
- Miconia xenotricha* Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1400-1780 m; Ravine du Sud (northern slopes of M. Formon). Skean 1326. Endemic to Massif de La Hotte.
- Miconia* sp. nov. Shrub; cloud forest (uncommon), 1450-1780 m; Ravine du Sud. Skean 1347. Probably an undescribed species but possibly a hybrid between *M. barkeri* and *M. hypiodes*; endemic to Massif de La Hotte.
- Ossaea curvipila* Urb. & Ekm. Shrub; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3469. Endemic to Massif de La Hotte (Formon region).
- Ossaea setulosa* Urb. Shrub; moist forest on limestone (common), 800-1050 m; Bois Formon. Judd 3527, Skean 1231, 1320, 2077, 2088. Endemic to Massif de La Hotte.
- Ossaea woodsii* Judd & Skean. Shrub; moist pine forest/cloud forest (occasional), 1450-1780 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon). Judd 3802, Skean 1367. Endemic to Massif de La Hotte (Morne Formon).
- Pachyanthus cubensis* A. Rich. subsp. *blancheanus* (Urb.) Borhidi. Shrub; moist pine forest/cloud forest (uncommon), ca 1800 m; Morne Formon. Judd 3758c. Endemic to Massif de La Hotte (subsp. *cubensis* in Cuba).
- Pachyanthus hotteana* (Urb. & Ekm.) Ekm. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3939, Skean 2080. Endemic to Hispaniola
- Tibouchina longifolia* (Vahl) Baill. Shrub; moist forest on limestone, open disturbed areas (abundant), 900-1600 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3949, Skean 1503.

Family Onagraceae (1/1)

- Fuchsia pringsheimii* Urb. Shrub; moist pine forest/cloud forest (common), 1450-2340 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon), Pic Macaya. Judd 3725, 4160, Skean 1363, 1402. Endemic to Hispaniola.

Family Myrtaceae (6/11)

- Calyptranthes hotteana* Urb. & Ekm. Tree; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon. Judd 3855, 3858, 4088, Skean 1462, 1672, 2113. Endemic to Massif de La Hotte (high elevations).
- Calyptranthes nummularia* Berg. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 1000-1670 m; Bois Formon, southern slopes of Morne Formon. Judd 3806, Skean 1297. Endemic to Massif de La Hotte and Massif de La Selle.
- Calyptranthes sintenisii* Kiaersk. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3510.
- Eugenia christii* Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 4017, Skean 1266. Endemic to Massif de La Hotte.
- Eugenia foetida* Pers. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1303.
- Eugenia formonica* Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (common), 1620-2200 m; Morne Formon. Judd 3817, Skean 1478, 1674. Endemic to Massif de La Hotte (Morne Formon).
- Eugenia glabrata* (Sw.) DC. Shrub; moist forest on limestone (occasional/common), 950-1050 m; Bois Formon. Judd 3451, 3452, 3454, Skean 1274, 1301, 1657.
- Eugenia* sp., possibly *E. tiburona* Urb. & Ekm. Shrub; moist forest on limestone (rare), ca 950 m; Bois Formon. Skean 1658. Endemic to Massif de La Hotte.
- Gomidesia lindeniana* Berg. Shrub to small tree; moist pine forest/cloud forest (occasional), 1530-1570 m; southern slopes of Morne Formon, M. Cavalier. Skean 1526.
- Myrcia tiburoniana* Urb. & Ekm. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1307. Endemic to Massif de La Hotte.
- Psidium guajava* L. Shrub to small tree; moist forest on limestone, disturbed areas (common), 900-1000 m; Bois Formon. Skean 1314, 1559. Introduced.
- Syzygium jambos* (L.) Alston. Tree; moist forest on limestone, disturbed areas (common), 950-1050 m; Bois Formon. Judd 4015. Introduced.

Superorder Corniflorae
Order Cornales
Family Vitaceae (1/2)

- Cissus dissecta* Urb. & Ekm. Vine; moist pine forest (occasional), 1650-1770 m; southern slopes of Morne Formon. Judd 3668.
- Cissus verticillata* (L.) Nicols. & Jarvis. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3950.

Family Garryaceae (1/1)

- Garrya fadyenii* Hook. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (common/abundant), 1000-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Franz 1, Judd 3495, 3637, 3820, 3859, Skean 1436.

Family Araliaceae (including Apiaceae) (4/6)

- Centella asiatica* (L.) Urb. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), ca 1000 m; Bois Formon. Not collected.
- Dendropanax arboreus* (L.) Decne & Planch. Tree; moist forest on limestone, cloud forest (very common), 930-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3453, 3829, 3991, Skean 1232.
- Dendropanax selleanus* (Urb. & Ekm.) A. C. Smith. Tree; cloud forest (occasional), 1500-1600 m; southern slopes of Morne Formon. Judd 3807. Endemic to Massif de La Hotte and Massif de La Selle.
- Didymopanax tremulum* Krug & Urb. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (very common/conspicuous), 1000-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3768, Skean 1427. Endemic to Hispaniola.
- Hydrocotyle hirsuta* Sw. Terrestrial herb; moist forest on limestone, disturbed areas (occasional), 930-1050 m; Bois Formon. Judd 3954a.
- Hydrocotyle pusilla* A. Rich. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1450-1850 m; Morne Formon, Ravine du Sud. Judd 3744, Skean 1374.

Superorder Gentianiflorae
Order Oleales
Family Oleaceae (1/1)

- Haenianthus oblongatus* Urb. Tree; moist pine forest/cloud forest (occasional/common), 1600-1800 m; Morne Formon, Ravine du Sud

(northern slopes of Morne Formon). Judd 3753a. Endemic to Massif de La Hotte (higher elevations).

Order Gentianales
Family Rubiaceae (12/19)

- Chione venosa* (Sw.) Urb. Tree; moist forest on limestone (common), 1200-1250 m; Bois Formon, hills south of Morne Formon. Judd 3974.
Det. T. Zanoni.
- Exostema* cf. *picardae* Urb. Shrub; moist forest on limestone (occasional), ca 1000 m; Bois Formon. Skean 1139. Endemic to Massif de La Hotte and Massif de La Selle.
- Guettarda ovalifolia* Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3539, Skean 1227, 1291.
- Hamelia patens* Jacq. Shrub; moist forest on limestone, open disturbed areas (occasional), 950-1050 m; Bois Formon. Judd 4013.
- Hamelia ventricosa* Sw. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1226.
- Hillia parasitica* Jacq. Scrambling epiphytic shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3457, Skean 1146.
- Palicourea alpina* (Sw.) DC. Shrub; moist forest on limestone (occasional), moist pine forest/cloud forest (very common), 950-2100 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3513, 3731, 3850, 4039, Skean 1330, 1461, 2108.
- Peratanthe ekmanii* Urb. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1450-1900 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3739, Skean 1373. Endemic to Hispaniola.
- Psychotria alpestris* Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (occasional/common), 1900-2300 m; Morne Formon, Pic Macaya. Judd 3853, 4084, Skean 1395, 1443. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).
- Psychotria berteriana* DC. Shrub; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3992, Skean 1148, 1203.
- Psychotria guadalupensis* (DC.) Howard. Epiphytic shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3437, Skean 1238.
- Psychotria liogieri* Steyermark. Shrub; moist pine forest/ cloud forest (common), 1500-2300 m; Morne Formon, Pic Macaya. Judd 3726, Skean 1532. Endemic to Hispaniola.
- Psychotria pubescens* Sw. Shrub; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3439, 4010, Skean 1134, 1648.

- Psychotria uliginosa* Sw. Subshrub; moist pine forest/cloud forest (common), 1600-1660 m; southern slopes of Morne Formon. Judd 3810.
- Relbunium hypocarpium* (L.) Hemsl. Terrestrial herb; moist pine forest/cloud forest (occasional), 2000-2340 m; Morne Formon, Pic Macaya. Judd 4157.
- Rondeletia formonia* Urb. & Ekm. Tree; moist pine forest/cloud forest (common), 1900-2200 m; Morne Formon, Pic Macaya. Judd 4066, 4138, Skean 1437, 1440, 2106. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).
- Spermacoce assurgens* Ruiz & Pav. Terrestrial herb; moist forest on limestone, disturbed clearings (common), 950-1050 m; Bois Formon. Judd 4023, Skean 1158. Often treated as *Borreria laevis*.
- Stevensia hotteana* Urb. & Ekm. Tree; moist pine forest/cloud forest (occasional), 1530-1650 m; southern slopes of Morne Formon, M. Cavalier. Judd 3653. Endemic to Massif de La Hotte. Det. T. Zanoni.
- Sterile Rubiaceae. Tree; moist forest on limestone (common), 1200-1250 m; Bois Formon. Judd 3965.

Family Apocynaceae (including Asclepiadaceae) (5/5)

- Asclepias nivea* L. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3788, Skean 1151.
- Asketanthera picardae* (Urb.) Woodson. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1195. Endemic to Massif de La Hotte.
- Cynanchum leptocladum* (Decne.) Jiménez. Vine; moist pine forest (occasional), 1430-1675 m; southern slopes of Morne Formon. Skean 1511.
- Forsteronia corymbosa* (Jacq.) G. F. W. Mey. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1300, 1579.
- Rauwolfia nitida* Jacq. Small tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1568.

Order Bignoniales

Family Bignoniaceae (1/2)

- Tabebuia berterii* (DC.) Britt. Tree; moist forest on limestone, moist pine forest/cloud forest (occasional/common), 1000-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Franz 5, Judd 3828, Skean 2082.

Tabebuia conferta Urb. Tree; moist forest on limestone (occasional), 950-1250 m (to 1400 m, Ekman field notes); Bois Formon. Judd 3491. Endemic to Massif de La Hotte.

Family Scrophulariaceae (2/2)

Castilleja arvensis Schlecht. & Cham. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (occasional/common), 950-1730 m; Bois Formon, southern slopes of Morne Formon. Judd 3530, 3833, 3935, 3975, Skean 1173.

Scrophularia minutiflora Pennell. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (occasional), 1800-1900 m; Morne Formon. Judd 3764.

Family Plantaginaceae (1/1)

Plantago major L. Terrestrial herb; moist pine forest, disturbed clearings, fields (common), ca 1650 m; Morne Formon. Not Collected. Introduced.

Family Gesneriaceae (4/10)

Besleria lutea L. Shrub; moist forest on limestone, moist pine forest/cloud forest (common), 950-1660 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Franz 2, Judd 3514, 4011, Skean 1161, 1646.

Columnnea domingensis Urb. Epiphytic vine; moist forest on limestone, moist pine forest/cloud forest (occasional/ common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3450, 3479, Skean 1190. (= *Trichantha domingensis* (Urb.) Wiehler).

Columnnea tulae Urb. Terrestrial viny herb; moist forest on limestone (rare), 900-1050 m; Bois Formon. Judd 3942.

Gesneria aspera Urb. & Ekm. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3517, Skean 1228. Endemic to Massif de La Hotte and Massif de La Selle. Det. L. E. Skog.

Gesneria fruticosa (L.) Kuntze. Shrub; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3944, Skean 1566. Endemic to Hispaniola.

Gesneria reticulata (Griseb.) Urb. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3432.

Gesneria viridiflora (Decaisne) Kuntz subsp. *acrochordonanthe* L. Skog. Shrub; moist forest on limestone (common), 950-1050 m; Bois

- Formon. Judd 3475. Endemic to Massif de La Hotte and Massif de La Selle. Det. L. E. Skog.
- Gesneria* aff. *hypoclada* Urb. & Ekm. Tree; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3500. Endemic to Massif de La Hotte and Massif de La Selle. Det. L. E. Skog.
- Rhytidophyllum auriculatum* Hook. Shrub; moist pine forest, especially open rocky areas (common), 1000-1780 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3635, Skean 1364.
- Rhytidophyllum bicolor* Urb. Shrub; moist forest on limestone, pine forest (occasional), 950-1250 m; Bois Formon, Ravine du Sud. Franz 6, Judd 3980, Skean 1169. Endemic to Massif de La Hotte. Det. L. E. Skog.

Order Lamiales

Family Verbenaceae (4/5)

- Citharexylum caudatum* L. Tree; moist pine forest/cloud forest (common/occasional), moist forest on limestone (occasional), 1000-1780 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3655, 4031, Skean 1345, 1518, 1663.
- Lantana camara* L. Shrub; moist forest on limestone, disturbed open areas (common), 900-1250 m; Bois Formon. Judd 3438a, Skean 1164.
- Lantana trifolia* L. Shrub; moist forest on limestone, disturbed open areas (common/occasional), 900-1050 m; Bois Formon. Judd 3954b, Skean 1268.
- Stachytarpheta jamaicensis* (L.) Vahl. Herb, moist forest on limestone, disturbed open areas (occasional), ca 900 m; Bois Formon. Not collected.
- Verbena urticifolia* L. Terrestrial herb; moist forest on limestone, open disturbed areas (very common), 900-1250 m; Bois Formon. Not collected.

Family Lamiaceae or Labiatae (2/5)

- Hyptis mutabilis* (L. C. Rich.) Briq. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), ca 1000 m; Bois Formon. Not collected.
- Hyptis schusteri* Urb. Shrub; moist pine forest/cloud forest (common/occasional), 1000-2150 m; Ravine du Sud; "The Saddle" connecting Pic Macaya to Pic Formon. Judd 4077, 4106, Skean 1450. Endemic to Massif de La Hotte and Massif de La Selle.

- Salvia* cf. *arborescens* Urb. & Ekm. Shrub; moist forest on limestone (uncommon), ca 1250 m; Bois Formon. Judd 3914. Endemic to Hispaniola.
- Salvia* sp. nov., aff. *S. tuerckheimii* Urb. Shrub; moist pine forest, rocky ridges (uncommon), ca 1900 m; Ravine du Sud, "The Saddle" between Pic Macaya and Pic Formon. Judd 4078, Skean 1431, 2096. Endemic to Massif de La Hotte (Ravine du Sud).
- Salvia* sp. 2., aff. *S. tuerckheimii* Urb. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3474.

Order Dipsacales

Family Valerianaceae (1/1)

- Valeriana scandens* Leofl. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1166.

Superorder Solaniflorae

Order Solanales

Family Hydrophyllaceae (1/1)

- Wigandia pruritiva* Spreng. Shrub; moist pine forest, open rocky areas (uncommon), 1000-1730 m; southern slopes of Morne Formon, Ravine du Sud. Judd 3839, 4108.

Family Boraginaceae (3/3)

- Cordia lima* (Desv.) R. & Sch. Shrub, often scrambling; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1780 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3651, Skean 1337, 1656.
- Cynoglossum amabile* Stapf & Drummond. Terrestrial herb; moist forest on limestone, moist pine forest, open disturbed areas (very common), ca 950-1800 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3917, Skean 1152.
- Tournefortia bicolor* Sw. Vine; cloud forest (common), 1550-1660 m; southern slopes of Morne Formon. Judd 3794.

Family Solanaceae (4/14)

- Brunfelsia picardae* Krug & Urb. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 4022a. Endemic to Hispaniola. Det. Timothy Plowman.

- Cestrum bicolor* Urb. Shrub; moist forest on limestone, moist pine forest (very common), 950-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3463, 3915, 3972, 4042, Skean 1170, 1269. Endemic to Massif de La Hotte.
- Cestrum coelophlebium* O. E. Schulz. Shrub; moist pine forest/cloud forest (common), 1530-2070 m; Morne Formon, M. Cavalier. Judd 3640, 4041. Endemic to Hispaniola.
- Cestrum filipes* Urb. & Ekm. Shrub; moist pine forest/cloud forest (occasional/common), 1850-2340 m; Morne Formon, Pic Macaya. Judd 3860, 4158, Skean 1442. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).
- Cestrum inclusum* Urb. Shrub; moist pine forest (common), 1430-1675 m; southern slopes of Morne Formon. Skean 1509. Endemic to Hispaniola.
- Cestrum picardae* Alain. Shrub; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3520, 3928, Skean 1174. Endemic to Hispaniola.
- Datura suaveolens* Humb. & Bonpl. ex Willd. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1224. Introduced.
- Solanum antillarum* O. E. Schulz. Shrub; moist forest on limestone, cloud forest (common/occasional), 950-1700 m; Bois Formon, southern slopes of Morne Formon, Ravine du Sud. Judd 3912, Skean 1323, 1655.
- Solanum capsicoides* All. Terrestrial herb to subshrub; open disturbed areas, pastures (common), 840- 1050 m; Bois Formon. Not collected.
- Solanum erianthum* D. Don. Shrub; moist forest on limestone, often disturbed openings (occasional/common), 900-1050 m; Bois Formon. Skean 1157, 1242.
- Solanum formonense* O. E. Schulz. Shrub to small tree; moist pine forest/cloud forest, often disturbed openings (occasional/common), 1450-2100 m; Morne Formon, Ravine du Sud. Judd 3863, Skean 1339. Endemic to Massif de La Hotte (Morne Formon).
- Solanum hotteanum* Urb. & Ekm. Shrub; moist forest on limestone, disturbed openings, moist pine forest/cloud forest (occasional), 950-2200 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3716. Endemic to Massif de La Hotte.
- Solanum torvum* Sw. Shrub; moist forest on limestone, disturbed open areas (common), 950-1350 m; Bois Formon. Judd 3916, 3986, Skean 1156.
- Solanum nigrescens* Mart. & Gal. Terrestrial herb; moist pine forest, disturbed open areas (common), 950-1650 m (possibly to 2000 m); Bois Formon, southern slopes of Morne Formon. Judd 3661.

Family Convolvulaceae (1/1)

Dichondra repens J. R. & G. Forst. Terrestrial herb; moist forest on limestone, disturbed open areas (occasional), ca 1000 m; Bois Formon. Not collected.

Order Campanulales
Family Campanulaceae (2/4)

Lobelia robusta Graham var. *robusta*. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (very common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3618, 3857, Skean 1137. Possibly conspecific with *L. assurgens* L.

Lobelia rotundifolia Juss. Scrambling shrub; moist pine forest/cloud forest (common), 1450-2340 m; Morne Formon, Ravine du Sud, Pic Macaya. Judd 3763, Skean 1331, 1389.

Lobelia hotteana Judd & Skean. Subshrub; moist pine forest, open rocky areas (occasional), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3790. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).

Siphocampylus sonchifolius (Sw.) McVaugh. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3431, Skean 1233. Endemic to Massif de La Hotte and Massif de La Selle.

Superorder Asteriflorae
Order Asterales
Family Asteraceae or Compositae (17/30)

Baccharis myrsinites (Lam.) Pers. Shrub; moist pine forest, usually in open and/or rocky areas (common), 1650-2250 m; Morne Formon, Pic Macaya. Judd 3789, 4061, 4130, Skean 1429. Endemic to Hispaniola.

Bidens alba (L.) DC. Terrestrial herb; moist forest on limestone, moist pine forest, open disturbed areas, fields (common), 900-1700 m; Bois Formon, southern slopes of Morne Formon. Skean 1562.

Chaptalia albicans Urb. & Ekm. Terrestrial herb; moist forest on limestone, moist pine forest (occasional), 1250-2150 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3837.

Conyza apurensis HBK. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (common), 1450-1780 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1369.

Conyza canadensis (L.) Cronq. var. *pusilla* (Nutt.) Cronq. Terrestrial herb; moist forest on limestone, disturbed openings, fields (common), ca

- 900-1350 m; Bois Formon, southern slopes of Morne Formon. Not collected.
- Eclipta prostrata* (L.) L. Terrestrial herb; moist forest on limestone, disturbed open areas, fields (occasional), ca 1000 m; Bois Formon. Not collected.
- Emilia fosbergii* Nicolson. Terrestrial herb; moist forest on limestone, disturbed openings, fields (occasional), 950-1250 m; Bois Formon. Judd 4007.
- Emilia sonchifolia* (L.) DC. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (occasional/common), 1450-1800 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3724, Skean 1370.
- Erigeron domingensis* Urb. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (common), 1650-2150 m; Morne Formon, Pic Macaya. Judd 3743, Skean 1445. Endemic to Hispaniola.
- Eupatorium flavidulum* Urb. & Ekm. Shrub; moist pine forest, especially open rocky areas (very common), (1000-)1550-2150 m; Bois Formon (?), Morne Formon, Pic Macaya. Judd 3838, Skean 1438, 1504?. Endemic to Massif de La Hotte.
- Eupatorium microchaetum* Urb. & Ekm. Shrub; moist forest on limestone, open areas (common), 950-1050 m; Bois Formon; to 1500 m on southern slopes of Morne Formon, according to Ekman. Skean 1197. Endemic to Massif de La Hotte and Massif de La Selle.
- Eupatorium cf. nervosum* Sw. Shrub; moist forest on limestone, open areas (common), 950-1050 m; Bois Formon. Skean 1183.
- Eupatorium odoratum* L. Subshrub; moist pine forest/cloud forest (uncommon), ca 1800 m; Morne Formon. Judd 3732.
- Eupatorium porphyrocladum* Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1450-2200 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Skean 1341, 1368. Endemic to Massif de La Hotte (higher elevations).
- Eupatorium stigmaticum* Urb. & Ekm. Shrub; moist forest on limestone, disturbed openings (very common), 950-1050 m; Bois Formon. Judd 4018. Endemic to Hispaniola.
- Eupatorium urbanii* Ekm. Shrub; moist pine forest, especially open areas (occasional), 1500-2150 m; Morne Formon, Pic Macaya. Skean 1451. Endemic to Massif de La Hotte.
- Gnaphalium domingense* Lam. Terrestrial herb; moist pine forest, disturbed openings (occasional), 1650-2000 m; Morne Formon. Judd 3771.
- Gnaphalium purpureum* L. Terrestrial herb; moist pine forest, disturbed openings (common), 1800-1860 m; Morne Formon. Skean 1535.

- Lantanopsis hispidula* C. Wright ex Griseb. Shrub; moist pine forest (uncommon), 1430-1675 m; Morne Formon. Skean 1510. Det. T. Zanoni.
- Mikania cyanosma* Urb. & Ekm. Vine; moist pine forest (occasional), 2150-2340 m; Pic Macaya; Ekman collected this species on Morne Formon. Skean 1393. Endemic to Massif de La Hotte (Morne Formon, Pic Macaya).
- Mikania dissecta* Urb. & Ekm. Vine; moist pine forest (common), 1750-1800 m; Morne Formon, probably also Pic Macaya. Judd 3730. Endemic to Massif de La Hotte (higher elevations).
- Narvalina domingensis* Cass. Shrub; moist pine forest, rocky areas (uncommon), ca 1900 m; south slope of Pic Macaya. Skean 1441. Endemic to Hispaniola.
- Neurolaena lobata* (L.) Cass. Subshrub/herb; moist forest on limestone (uncommon), ca 975 m; Bois Formon. Skean 1135.
- Pluchea symphytifolia* (Mill.) Gillis. Shrub; moist pine forest, especially disturbed openings (occasional), 1520-1880 m; southern slopes of Morne Formon. Judd 3631, Skean 1529.
- Senecio hotteanus* Urb. & Ekm. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 900-1660 m; Bois Formon, southern slopes of Morne Formon. Judd 3809, 3966, Skean 1319. Endemic to Massif de La Hotte.
- Senecio stenodon* Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest, especially in disturbed open areas (very common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Pic Macaya. Judd 3486, 4068, 4116, Skean 1281, 1531, 2081. Plants with leaves densely pubescent abaxially to essentially glabrous; described by Urban as var. *stenodon* and var. *deglabratus*, respectively, but intergrading and probably not separable. Endemic to Massif de La Hotte.
- Senecio trineurus* Griseb. Vine; moist forest on limestone (occasional), 950-2340 m; Bois Formon, Pic Macaya, probably also Morne Formon. Skean 1180, 1329?.
- Vernonia buxifolia* (Cass.) Less. Shrub; moist pine forest (occasional), 1450-1800 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon). Judd 3761, Skean 1378. Endemic to Hispaniola.
- Vernonia saepium* Ekm. Shrub; moist forest on limestone, moist pine forest/cloud forest, disturbed openings (abundant/common), 900-1800 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3729, Skean 1136, 1165, 1244, 1650. Endemic to Massif de La Hotte.
- Youngia japonica* (L.) DC. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (common), 950-1675 m; Bois

Formon, southern slopes of Morne Formon. Skean 1516.
Introduced.

Superorder Liliiflorae

Order Liliales

Family Amaryllidaceae (1/1)

Hippeastrum puniceum (Lam.) Kuntze. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), ca 900 m; Bois Formon. Judd 5059. Introduced. Det. Alan Meerow.

Family Hypoxidaceae (1/1)

Hypoxis cf. *wrightii* (Bak.) Brackett. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), ca 950 m; Bois Formon. Not collected.

Family Agavaceae (1/2)

Agave antillarum Desc. Succulent herb; moist pine forest, open rocky areas (occasional), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3840, 4135. Endemic to Hispaniola.

Agave sisalana Perrine. Succulent herb; moist forest on limestone, open disturbed areas, fence rows (common), 1000-1250 m; Bois Formon. Judd 3968, Skean 1496. Introduced.

Family Alstroemeriaceae (1/1)

Bomarea edulis (Tuss.) Herb. Vine; cloud forest (common), 1500-1530 m; Ravine du Sud. Skean 1354.

Family Smilacaceae (1/1)

Smilax havanensis Jacq. Vine; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1770 m; Bois Formon, southern slopes of Morne Formon. Judd 3658, 3808, Skean 1138.

Family Dioscoreaceae (1/1)

Rajania ovata Sw. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Skean 1147, 1240.

Family Orchidaceae

[Family treatment by D. Dod and W. Judd (1986); they report 133 species in 42 genera for this family; 98 species are endemic to Hispaniola, and of these 38 are endemic to the Massif de La Hotte.]

Superorder Ariflorae

Order Arales

Family Araceae (2/2)

Philodendron consanguineum Schott. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3955, Skean 1168.

Anthurium scandens (Aubl.) Engl. Vine; moist forest on limestone (common), 950-1200 m; Bois Formon. Judd 3538, 3941.

Superorder Areciflorae

Order Arecales

Family Arecaceae or Palmae (2/2)

Coccothrinax cf. *montana* Burret. Tree; moist forest on limestone, cloud forest (uncommon), 1000-1560 m; Bois Formon, Morne Cavalier, Ravine du Sud. Judd 4045, Skean 1295. Endemic to Hispaniola.

Prestoea montana (R. Grah.) Nichols. Tree; moist forest on limestone, moist pine forest/cloud forest (occasional), 975-1675 m; Bois Formon, southern slopes of Morne Formon. Skean 1159, 1506, 1560. (= *Euterpe globosa* Gaertn.)

Superorder Commeliniflorae

Order Bromeliales

Family Bromeliaceae (5/12)

Catopsis floribunda (Brongn.) Smith. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1172. Det. T. Zanoni.

Catopsis nitida (Hook.) Griseb. Epiphytic herb; moist forest on limestone (occasional), ca 1050 m; Bois Formon. Judd 3496.

Guzmania ekmanii (Harms) Harms. Epiphytic herb (or on rocks); moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3052, Skean 1265. Endemic to Hispaniola. Det. T. Zanoni (Judd 3052).

Guzmania lingulata (L.) Mez. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3484.

- Pitcairnia elizabethae* L. B. Smith. Terrestrial herb; moist forest on limestone, pine forest, open rocky areas (occasional), 975-1000 m; Bois Formon, Ravine du Sud. Judd 4107, Skean 1552. Endemic to Massif de La Hotte and Massif de La Selle.
- Tillandsia caribaea* L. B. Smith. Epiphytic herb; moist pine forest/cloud forest (common), 1650-2100 m; Morne Formon. Judd 3884.
- Tillandsia fasciculata* Sw. var. *laxispica* Mez. Epiphytic herb; moist forest on limestone (very common), 900-1250 m; Bois Formon. Judd 3492, 3508, Skean 1309.
- Tillandsia fendleri* Griseb. Epiphytic herb; moist forest on limestone, moist pine forest, often disturbed openings (common), 1200-1550 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3671, 3978.
- Tillandsia hotteana* Urb. Epiphytic herb; cloud forest (common), 1450-1800 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1343. Endemic to Hispaniola.
- Tillandsia jenmanii* Baker. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3488.
- Vriesea macrostachya* (Bello) Mez. Epiphytic herb (or on rocks); moist forest on limestone (occasional), 950-1000 m; Bois Formon. Judd 3489, Skean 1149.
- Vriesea sintenisii* (Bak.) L. B. Smith & Pitt. Epiphytic herb; moist forest on limestone (occasional), moist pine forest/cloud forest (abundant), 975-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3773, 3895, Skean 1160, 1179, 1342.

Order Commelinales
Family Cyperaceae (3/3)

- Eleocharis flaccida* (Rchb.) Urb. Terrestrial herb; moist ground near spring (uncommon), ca 1400 m; southern slopes of Morne Formon. Skean 1548.
- Rhynchospora elongata* Boeck. var. *ekmanii* (Urb.) Kukenthal. Terrestrial herb; moist pine forest/cloud forest (occasional), 1530-2200 m; Morne Formon, M. Cavalier. Judd 3864. Endemic to Hispaniola.
- Uncinia hamata* (Sw.) Urb. Terrestrial herb; moist pine forest/cloud forest (common), 1800-2100 m; Morne Formon. Judd 3733, Skean 1539.

Family Poaceae or Gramineae (13/15)

[collections identified by Dr. David W. Hall, except where otherwise indicated]

- Andropogon bicornis* L. Terrestrial herb; moist forest on limestone, open disturbed areas, old fields (occasional/very common), 1000-1400 m; Bois Formon, southern slopes of Morne Formon. Judd 3990, Skean 1551.
- Andropogon glomeratus* (Walt.) BSP. var. *pumilus* Vasey. Terrestrial herb; moist pine forest, especially disturbed, open and/or rocky areas (occasional/common), 1530-1770 m; southern slopes of Morne Formon, M. Cavalier. Judd 3664, 3836.
- Andropogon leucostachyus* HBK. Terrestrial herb; moist forest on limestone, disturbed open areas, old fields (occasional), 950-1050 m; Bois Formon. Skean 1572.
- Arthrostylidium haitiense* (Pilger) Hitchc. & Chase. Climbing bamboo; moist pine forest/cloud forest (abundant), 1450-2300 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3893, Skean 1468, 1669. Endemic to Hispaniola.
- Bambusa vulgaris* Schrad. ex J. C. Wendl. Bamboo; moist forest on limestone, disturbed open areas (occasional), 900-1050 m; Bois Formon. Skean 1550. Introduced.
- Chusquea abietifolia* Griseb. Climbing bamboo; moist pine forest/cloud forest (occasional), 1900-2000 m; "The Saddle" between Pic Macaya and Pic Formon. Judd 4079, Skean 1469.
- Ichnanthus pallens* (Sw.) Munro. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3448.
- Isachne rigidifolia* (Poir.) Urb. Terrestrial herb; moist pine forest/cloud forest, especially open areas (abundant), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3625, 3765, Skean 1430. Det. W. S. Judd.
- Lasiacis divaricata* (L.) Hitchc. Terrestrial herb; moist forest on limestone, pine forest, open disturbed areas (common), 950-1100 m; Bois Formon, Ravine du Sud. Judd 4012.
- Panicum glutinosum* Sw. Terrestrial herb; moist pine forest, disturbed open areas (occasional), 1650-1800 m; Morne Formon. Judd 3736.
- Paspalum fimbriatum* HBK. Terrestrial herb; moist forest on limestone, disturbed open areas (occasional), 950-1050 m; Bois Formon. Judd 4020.
- Poa annua* L. Terrestrial herb; moist pine forest, disturbed open areas, along trails (common), 1600-1850 m; Morne Formon. Judd 3740. Introduced.
- Setaria corrugata* (Ell.) Schult. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed open areas (common), 950-1050 m; Bois Formon, Ravine du Sud. Judd 4113, Skean 1497.
- Sporobolus indicus* (L.) R. Br. Terrestrial herb; moist forest on limestone, disturbed open areas, old fields (common), 900-1350 m; Bois Formon. Not collected. Det. W. S. Judd.

Zeugites americana Willd. var. *haitiensis* Pilger. Terrestrial herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3728. Endemic to Hispaniola.

Order Zingiberales

Family Heliconiaceae (1/1)

Heliconia bihai L. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3487, Skean 1167.

Family Zingiberaceae (3/4)

Alpinia zerumbet (Pers.) B. L. Burtt & R. M. Smith. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1267. Introduced.

Hedychium coronarium Koenig. Terrestrial herb; moist forest on limestone (occasional), ca 1000 m; Bois Formon. Skean 1664. Introduced.

Renealmia densiflora Urb. Terrestrial herb; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3970, Skean 1132. Endemic to Massif de La Hotte.

Renealmia jamaicensis (Gaertn.) Horaninow var. *puberula* (Gagnepain) Maas. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3506, 3712, 3964, Skean 1467.

Family Cannaceae (1/2)

Canna indica L. Terrestrial herb; moist forest on limestone (occasional), 950-1400 m; Bois Formon, southern slopes of Morne Formon. Skean 1279, 1549. Introduced.

Canna jaegeriana Urb. Terrestrial herb; moist pine forest/cloud forest (occasional), 1530-1560 m; Morne Cavalier. Judd 4046.

**Vascular Plants Collected in Parc National
Morne La Visite, Massif de La Selle, Haiti.**

Division Tracheophyta

[Collections identified by W. S. Judd except for Zanoni & Mejia specimens, unless otherwise indicated; notation after family name refers to number of genera/species.]

Class Lycopsidea

Order Lycopdiales

Family Lycopodiaceae (1/4)

- Lycopodium clavatum* L. Terrestrial herb; moist pine forest, ravine slope (occasional), ca 1800 m; Rivière Blanche. Judd 4285.
- Lycopodium complanatum* L. Terrestrial herb; moist pine forest (occasional), ca 1800 m; "The Depression." Judd 4494.
- Lycopodium reflexum* Lam. Terrestrial herb; cloud forest, moist pine forest (occasional), 2100-2250 m; north facing slope of Morne la Visite. Judd 4514.
- Lycopodium taxifolium* Sw. Epiphytic herb; cloud forest (rare), 1650-2200 m; Rivière Blanche, near Belle Fontaine. Judd 4422.

Order Selaginellales (1/1)

Family Selaginellaceae

- Selaginella leonardii* Schmidt. Terrestrial herb; moist pine forest/cloud forest, rocky cliffs (common), 1700-1800 m; Rivière Blanche. Judd 4266, 4466, 4467. Endemic to Hispaniola.

Class Filicopsida

Order Ophioglossales (1/1)

Family Ophioglossiaceae

- Botrychium virginianum* (L.) Sw. Terrestrial herb; moist pine forest (uncommon), ca 1800 m; "The Depression." Judd 4483, 4885.

Order Polypodiales

Family Gleicheniaceae (1/1)

- Gleichenia bifida* (Willd.) Spreng. Scrambling herb; cloud forest, disturbed open areas (locally common), ca 1800 m; Morne d'Enfer. Judd 4708.

Family Hymenophyllaceae (1/2)

Hymenophyllum fucoides Sw. Epiphytic herb; cloud forest (occasional), ca 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4849.

Hymenophyllum microcarpum Desv. Epiphytic herb; cloud forest, ravine slope (common), 1650-1700 m; Rivière Blanche. Judd 4423.

Family Lophosoriaceae (1/1)

Lophosoria quadripinnata (Gmel.) C. Chr. Terrestrial herb; moist pine forest, cloud forest (common), 1750-2250 m; nearly throughout. Judd 4344.

Family Cyatheaceae (1/2)

Alsophila minor (D.C. Eaton) Tryon. Tree fern; cloud forest (occasional), 1650-1700 m; Rivière Blanche. Judd 4419.

Cyathea harrisii Baker. Tree fern; cloud forest, moist pine forest (occasional/common), 1650-2000 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Rivière Blanche. Judd 4252, 4458, 4718.

Cyathea harrisii Baker X *Alsophila minor* (D.C. Eaton) Tryon. Tree fern; cloud forest (rare), ca 1650 m; Rivière Blanche; growing with its presumed parents. Judd 4457. Hybrid status suggested by Rolla Tryon.

Family Pteridaceae (4/4)

(The following fern families are sometimes treated as members of one large polymorphic family, the *Polypodiaceae sensu lato*; pteridologists differ as to how this assemblage should be divided, and the classification of R. M. & A. F. Tryon [1982] is followed here.)

Adiantum fragile Sw. Terrestrial herb; moist pine forest, rocky cliffs (uncommon), ca 1835 m; ravine east of "Park Center." Judd 4833.

Anopteris hexagonia (L.) C. Chr. Terrestrial herb; moist pine forest, cloud forest, on rocks (occasional), 1620-1900 m; Rivière Blanche, Gros Basin in ravine east of Berac area, Morne Nacel region; Ekman collected species on Morne Cabaio. Judd 4318, 4810, 4812, Zanon & Mejía 24546. Det. Rolla Tryon.

Cheilanthes notholaenoides (Desv.) Maxon. Terrestrial herb; open pine forest, disturbed cloud forest, thin soil over limestone (very common), 2050-

2100 m; Galette Seche, Morne Nacel region. Judd 4862, Zanoni & Mejía 24499, 24509.

Pteris hispaniolica Maxon. Terrestrial herb; moist pine forest, on rocks in sinkhole (rare), ca 2150 m (to ca 1900 m, Ekman field notes); east of Pic Cabaio. Judd 4845. Endemic to Hispaniola.

Family Vittariaceae (2/3)

Antrophyum feei Schaffner ex Fée. Epiphytic herb; cloud forest (occasional), ca 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4850.

Vittaria graminifolia Kaulf. Epiphytic herb; cloud forest (uncommon), ca 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4848.

Vittaria moritziana Mett. Terrestrial or epiphytic herb; cloud forest (rare), ca 1650 m; Rivière Blanche. Judd 4450.

Family Dennstaedtiaceae (3/3)

Dennstaedtia globulifera (Poir.) Hieron. Terrestrial herb; cloud forest, sinkholes in pine forest (uncommon), ca 1800-1900 m; Truing Marassa. Judd 4507, Zanoni & Mejía 24545.

Odontosoria aculeata (L.) J. Smith. Vine; cloud forest (occasional), 1800-1880 m; Morne d'Enfer. Judd 4656.

Pteridium aquilinum (L.) Kuhn. var. *caudatum* (L.) Sadeb. Terrestrial herb; pine forest (abundant), 1750-2250 m; ± throughout. Judd 4372, Zanoni & Mejía 24563.

Family Thelypteridaceae (1/5)

Thelypteris asplenioides (Sw.) Proctor. Terrestrial herb; moist pine forest, rocky slopes (rare), 1700-1800 m; Rivière Blanche. Judd 4472. Det. Rolla Tryon.

Thelypteris decussata (L.) Proctor. Terrestrial herb; cloud forest (common), 1650-1800 m; Rivière Blanche. Judd 4443. Det. Rolla Tryon.

Thelypteris cf. *imitata* C. Chr. Terrestrial herb; moist pine forest, rocky slopes (common), 1700-1800 m; Rivière Blanche. Judd 4253, 4332, 4470, 4471.

Thelypteris rudis (Kunze) Proctor. Terrestrial herb; cloud forest, moist sinkhole vegetation (common), 1700-1800 m; Rivière Blanche, pinelands near Park Center. Judd 4314, 4464. Det. Rolla Tryon.

Thelypteris sagittata (Sw.) Proctor. Terrestrial herb; cloud forest (occasional), ca 1650 m; Rivière Blanche. Judd 4434. Det. Rolla Tryon.

Family Dryopteridaceae (6/12)

- Ctenitis subincisa* (Willd.) Ching. Terrestrial herb; cloud forest, moist sinkhole vegetation (uncommon), ca 2150 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4842. Det. Rolla Tryon.
- Cystopteris fragilis* (L.) Bernh.. Terrestrial herb; moist pine forest, cloud forest (uncommon), 1650-1800 m; Rivière Blanche. Judd 4258, 4435. Det. J. T. Mickel (4435).
- Diplazium fuertesii* Brause. Terrestrial herb; moist pine forest/cloud forest, moist sinkhole vegetation (occasional), ca 1800 m; Rivière Blanche, Truing Marassa. Judd 4303, 4508. Endemic to Hispaniola.
- Diplazium hastile* (Christ) C. Chr. Terrestrial herb; cloud forest (uncommon), 1620-1640 m; Gros Basin in ravine east of Berac area. Judd 4811.
- Diplazium taylorianum* (Jenman) Maxon ex Proctor. Herb; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24565.
- Diplazium unilobum* (Poir.) Hieron. Terrestrial herb; moist pine forest/cloud forest, moist sinkhole vegetation (common), ca 1800-1900 m; Morne Nacel region, Rivière Blanche, Truing Marassa. Judd 4254, 4316, 4505, Zanoni & Mejía 24564, 24575. (=? *D. semihastatum* [Kunze] C. Chr.)
- Elaphoglossum chartaceum* (Baker & Jenman) C. Chr. Epiphytic herb; cloud forest (common), 1850-1950 m; Morne d'Enfer. Judd 4719. Det. J. T. Mickel.
- Elaphoglossum huacsaro* (Ruiz) Christ. Terrestrial herb; moist pine forest/cloud forest (very common), 2100-2250 m; northern slope of Morne la Visite. Judd 4517. Det. J. T. Mickel.
- Elaphoglossum* aff. *latifolium* (Sw.) J. Smith. Terrestrial or epiphytic herb; cloud forest (common), 1650-1935 m; Morne Nacel region, Rivière Blanche, ravine east of Park Center. Judd 4425, Zanoni & Mejía 24572. Det. J. T. Mickel (4425).
- Elaphoglossum pachyphyllum* (Kunze) C. Chr. Epiphytic herb; cloud forest (common), 1850-1950 m; Morne d'Enfer. Judd 4720. Det. J. T. Mickel.
- Polystichum echinatum* (Gmel.) Christ. Terrestrial herb; cloud forest, moist pine forest, rocky slopes (occasional), 1790-2100 m; Roche Plate, Rivière Blanche. Judd 4319, 4334, Thompson 3753-1, Zanoni & Mejía 24529, 24573, 24628. Det. J. T. Mickel.
- Polystichum rhizophyllum* (Sw.) Presl. Terrestrial herb; cloud forest (occasional), 1650-1800 m; Rivière Blanche. Judd 4439.

Family Aspleniaceae (1/7)

- Asplenium auritum* Sw. Epiphytic herb; cloud forest (occasional), 1660-1735 m; between Morne d'Enfer and M. Fè Noir; Ekman collected species on Morne La Visite at ca 1800 m. Judd 4754.
- Asplenium clutei* Gilbert. Terrestrial herb; moist sinkhole vegetation (uncommon), ca 2150 m; between Pic Cabaio and "Pic 2208." Judd 4846.
- Asplenium monanthes* L. Terrestrial herb; moist pine forest, cloud forest, open rocky areas (occasional), 1800-2210 m; Morne Nacel region to Belle Fontaine/Roche Cabrit, Rivière Blanche. Judd 4288, 4843, 4847, Zanoni & Mejía 24570, 24574.
- Asplenium praemorsum* Sw. Terrestrial or epiphytic herb; cloud forest (occasional), 1850-1950 m; Morne d'Enfer, Morne Nacel region. Judd 4659, 4729, Zanoni & Mejía 24543, 24569.
- Asplenium radicans* L. Terrestrial herb; cloud forest, moist sinkhole vegetation (occasional), 1650-1800 m; Rivière Blanche, Truing Marassa. Judd 4433, 4506.
- Asplenium resilens* Kunze. Terrestrial herb, cloud forest, pine forest, rocky areas (uncommon), 1880-2050 m; Morne Nacel region, pinelands south of Park Center. Judd 4358, Zanoni & Mejía 24506.
- Asplenium serra* Langsd. & Fisch. Terrestrial herb; cloud forest, moist sinkhole vegetation (common), 1800-1950 m; Morne d'Enfer, Morne Nacel region, Truing Marassa. Judd 4504, 4726, Zanoni & Mejía 24535.

Family Blechnaceae (1/3)

- Blechnum fragile* (Liebm.) Morton & Lell. Epiphytic herb; cloud forest (common), 1650-1800 m; Rivière Blanche. Judd 4395.
- Blechnum occidentale* L. Terrestrial herb; pine forest (occasional), 1800-2120 m; ± scattered throughout. Judd 4352, 4572.
- Blechnum tuerckheimii* Brause. Terrestrial herb; moist pine forest/cloud forest, especially open steep slopes (common), 2100-2250 m; northern slope of Morne La Visite. Judd 4523. Endemic to Hispaniola.

Family Polypodiaceae (4/10)

- Campyloneurum angustifolium* Sw. Terrestrial herb; cloud forest, moist vegetation in sinkholes, pine forest, especially rocky areas (common), 1750-2050 m; Morne Nacel to Morne La Visite, ± throughout pinelands. Judd 4347, 4359, 4489, Zanoni & Mejía 24576.

- Campyloneurum vexatum* Eaton. Terrestrial herb; moist pine forest, rocky ledges (occasional), 1900-1935 m; ravine east of Park Center. Judd 4835.
- Microgramma piloselloides* (L.) Copel. Epiphytic herb; cloud forest (occasional), ca 1705 m; between Morne d'Enfer and M. Fè Noir. Judd 4785.
- Pleopeltis macrocarpa* (Cav.) Maxon. Epiphytic or terrestrial herb; moist pine forest, cloud forest (common), 1650-2050 m; Rivière Blanche, ravine east of Park Center, scattered in pinelands. Judd 4356, 4440, 4497.
- Polypodium antillense* Maxon. Terrestrial herb; moist sinkhole vegetation (rare), ca 1800 m; Truing Marassa. Judd 4317.
- Polypodium aureum* L. Epiphytic herb; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24576.
- Polypodium lasiopus* Klotzsch. Epiphytic herb; cloud forest (occasional), 1650-1900 m; Morne Nacel region, Rivière Blanche. Judd 4438, Zanoni & Mejía 24501, 24549.
- Polypodium loriceum* L. Epiphytic herb; cloud forest (occasional), 1650-1800 m; Rivière Blanche. Judd 4418.
- Polypodium pectinatum* L. Epiphytic or terrestrial herb; moist pine forest, cloud forest (occasional), 1700-1800 m; between Morne d'Enfer and M. Fè Noir, "The Depression." Judd 4492, 4787.
- Polypodium thysanolepis* A. Br. Epiphytic herb; moist pine forest (common), 1650-2000 m; Rivière Blanche, Morne Nacel, Roche Cabrit, scattered in pinelands. Judd 4296, 4397, Thompson 3754-2, Zanoni & Mejía 24537.

Class Coniferopsida
Order Coniferales
Family Pinaceae (1/1)

- Pinus occidentalis* Sw. Tree; dominant tree forming pinelands (abundant), 1700-2300 m; ± throughout plateau. Judd 4383. Endemic to Hispaniola.

Family Cupressaceae (1/1)

- Juniperus ekmanii* Florin. Tree; moist pine forest, disturbed cloud forest (rare/nearly extinct), 1750-2210 m; "The Depression" (dead stumps and logs), between Pic Cabaio and Tete Opaque (living plants only seen ca SSW of Tete Opaque). Baird LV-32, Judd 4853, Woods s.n. 17 Jan. 1985. Endemic to the Massif de La Selle.

Family Podocarpaceae (1/1)

Podocarpus aristulatus Parl. Tree; cloud forest (occasional), 1900-2210 m; between Pic Cabaio and Belle Fontaine/ Roche Cabrit; Ekman reports from Morne La Visite, in field notes. Judd 4852. Endemic to Hispaniola. (= *P. buchii* Urb.)

Class Angiospermopsida

Superorder Annoniflorae

Order Annonales

Family Lauraceae (2/3)

Ocotea acarina C. K. Allen. Tree; cloud forest (common), 1700-1930 m; Morne d'Enfer to just west of M. La Visite, Rivière Blanche. Judd 4408. Endemic to Massif de La Selle.

Ocotea wrightii (Meissn.) Mez. Tree; cloud forest (occasional/common), 1700-1930 m; Morne d'Enfer to just west of M. La Visite, Rivière Blanche. Judd 4647, 4794.

Persea anomala Britt. & Wils. Tree; cloud forest, moist pine forest (very common), 1650-2200 m; scattered throughout, but especially along ridge from Morne d'Enfer to Tete Opaque, Rivière Blanche, ravine east of Park Center. Baird LV-24, Judd 4301, 4526, 4724.

Family Piperaceae (1/9)

Peperomia acuminata Ruiz & Pav. Terrestrial herb; cloud forest, moist sinkhole vegetation (occasional), 1650-2100 m; Morne d'Enfer, to M. La Visite(?), Rivière Blanche, Truing Marassa. Judd 4431, 4501.

Peperomia galioides HBK. Terrestrial herb; moist pine forest, cloud forest, especially on rocks (occasional), 1750-1920 m; Morne d'Enfer, to M. La Visite, "The Depression." Judd 4486, 4690, Zanoni & Mejía 24550.

Peperomia glabella (Sw.) Dietr. Epiphytic or terrestrial herb; moist pine forest, especially on rocks (occasional), 1800-1860 m; "The Depression." Judd 4502, 4793.

Peperomia hispidula (Sw.) Dietr. Terrestrial herb; moist sinkhole vegetation (uncommon), ca 1800 m; Truing Marassa. Judd 4500.

Peperomia leonardii Trel. Terrestrial herb; moist sinkhole vegetation (uncommon), ca 1800 m; Truing Marassa. Judd 4499. Endemic to Hispaniola.

Peperomia quadrifolia (L.) HBK. Terrestrial herb; cloud forest, disturbed opening, on rocks (uncommon), 1850-1920 m; Morne d'Enfer, Morne Nacel region. Judd 4691, Zanoni & Mejía 24571.

- Peperomia reflexa* (L.f.) A. Dietr. Terrestrial herb; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24548.
- Peperomia tetraphylla* (S. Forst.) Hook. & Arn. Epiphytic herb; cloud forest, moist pine forest (occasional), 1740-1900 m; Morne Nacel region, Morne La Visite, Rivière Blanche, ravine east of Park Center. Judd 4260, 4799, Thompson 3748-7, Zanoni & Mejía 24550.
- Peperomia* sp. 1. Terrestrial herb; cloud forest (uncommon), 1620-1640 m; Gros Basin in ravine east of Berac area. Judd 4813.

Order Berberidales
Family Ranunculaceae (2/2)

- Clematis dioica* L. Vine; cloud forest (uncommon), 1740 m; Rivière Blanche. Judd 4804.
- Ranunculus recurvatus* Poir. var. *tropicus* (Griseb.) Fawc. & Rendle. Terrestrial herb; cloud forest (occasional), 1650-2100 m; Morne La Visite, Rivière Blanche. Judd 4441.

Family Papaveraceae (2/2)

- Bocconia frutescens* L. Shrub; moist pine forest, cloud forest, especially disturbed areas (common), 1750-2200 m; ± throughout park and adjacent areas. Baird LV-29, Judd 4350.
- Fumaria capreolata* L. Terrestrial herb; moist pine forest, along stream (common), 1800-1900 m; Rivière Blanche. Judd 4298. Introduced.

Superorder Chenopodiiflorae
Order Chenopodiales
Family Phytolaccaceae (1/2)

- Phytolacca rivinoides* Kunth & Bouché. Terrestrial herb; cloud forest, open disturbed areas (occasional), 1700-1850 m; Morne d'Enfer to M. Fè Noir. Judd 4670.
- Phytolacca icosandra* L. Terrestrial herb; cloud forest, moist pine forest, especially disturbed areas (occasional), 1800-2220 m; Morne Fè Noir to Belle Fontaine/Roche Cabrit. Judd 4561, 4837.

Family Caryophyllaceae (4/5)

- Arenaria lanuginosa* (Michx.) Rohrb. Terrestrial herb; pine forest, disturbed open areas (occasional), 1790-1900 m; ± throughout plateau. Judd 4881, Zanoni & Mejía 24624.
- Cerastium glomeratum* Thuill. Terrestrial herb; pine forest, disturbed open areas (common), 1750-1900 m; ± throughout plateau. Judd 4485, 4882b. Introduced.
- Silene gallica* L. Terrestrial herb; cloud forest, pine forest, disturbed open areas (common), 1750-1900 m; ± throughout plateau. Judd 4493, Zanoni & Mejía 24553. Introduced.
- Stellaria antillana* Urb. Terrestrial herb; cloud forest, disturbed open areas (locally common), 1600-1650 m; ravine east of Berac area. Judd 4944.
- Stellaria media* (L.) Vill. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1700-1900 m; ± throughout plateau. Judd 4463, 4882a. Introduced.

Family Amaranthaceae (1/1)

- Iresine herbstii* Hook. Terrestrial herb; cloud forest, disturbed open areas (rare), 1700-1800 m; Morne Fè Noir. Judd 4780. Introduced.

Superorder Theiflorae

Order Theales

Family Theaceae (1/1)

- Laplacea alpestris* (Krug & Urb.) Dyer. Tree; cloud forest (uncommon), 1660-2160 m; between Morne d'Enfer and M. Fè Noir, Tete Opaque; Ekman also collected this species at ca 2200 m on Morne La Visite and Pic Cabaio. Baird LV-25, Judd 4756. Endemic to Hispaniola.

Family Aquifoliaceae (1/3)

- Ilex fuertesiana* (Loes.) Loes. Shrub; cloud forest (uncommon), ca 2150 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit; Ekman also collected species from north slope of Morne La Visite at ca 1600 m. Judd 4841. Endemic to Hispaniola.
- Ilex macfadyenii* (Walp.) Rehder. Shrub; pine forest, cloud forest (occasional), 1650-2300 m; nearly throughout. Judd 4351, 4540.
- Ilex blancheana* Judd. Shrub; cloud forest (uncommon), 1700-1800 m; Rivière Blanche. Judd 4403. Endemic to Massif de La Selle (Rivière Blanche).

Family Clusiaceae or Guttiferae (2/5)

- Clusia clusioides* (Griseb.) D'Arcy. Shrub; cloud forest (occasional), ca 1705 m; between Morne d'Enfer and M. Fè Noir. Judd 4784.
- Hypericum fuertesii* Urb. Terrestrial herb; cloud forest/ moist pine forest, steep rocky slopes (common), 2050-2250 m; northern slope of Morne La Visite. Judd 4518. Endemic to Hispaniola.
- Hypericum hypericoides* (L.) Crantz. Subshrub; pine forest (occasional), 1750-1800 m; "The Depression." Judd 4490.
- Hypericum millefolium* Urb. & Ekm. Shrub; cloud forest, open areas (rare), ca 2300 m; Pic Cabaio. Judd 4547. Endemic to the Massif de La Selle.
- Hypericum perforatum* L. Terrestrial herb; pine forest, cloud forest, especially disturbed open areas (abundant), 1700-2300 m; nearly throughout, especially pinelands. Judd 4369, 4665. Introduced.

Order Ericales

Family Ericaceae (2/5)

- Gaultheria domingensis* Urb. Shrub; pine forest (uncommon), cloud forest/moist pine forest (common), 1800-2250 m; northern slope of Morne La Visite, pinelands near Rivière Blanche. Judd 4289, 4515.
- Lyonia buchii* Urb. Shrub to tree; cloud forest/moist pine forest (common), 1500-2250 m; northern slope of Morne La Visite. Judd 4345, 4513. Endemic to Hispaniola.
- Lyonia microcarpa* Urb. & Ekm. Shrub to tree; pine forest, cloud forest (occasional/common), 1750-2200 m; scattered throughout pinelands, locally dominant in hardwoods between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4461, 4481, 4827, 4854. Endemic to Massif de La Selle.
- Lyonia rubiginosa* (Pers.) G. Don var. *costata* (Urb.) Judd. Shrub; pine forest (occasional), ca 1825 m; pinelands near Park Center. Judd 4807, 4808, 4886. Endemic to Hispaniola.
- Lyonia truncata* Urb. var. *truncata*. Shrub to small tree; pine forest (rare), ca 1800 m; "The Depression." Judd 4460. Endemic to Massif de La Selle.

Order Ebenales

Family Sapotaceae (2/2)

- Bumelia subintegra* Urb. & Ekm. Shrub; pine forest, cloud forest (occasional), 1700-2160 m; scattered in pinelands, Rivière Blanche,

Morne d'Enfer to just west of M. La Visite, Tete Opaque; Ekman collected in vicinity of Morne Cabaio, ca 2200 m. Baird LV-23, Judd 4381, 4449. Endemic to Massif de La Selle.

Dipholis cubensis (Griseb.) Pierre. Shrub; cloud forest (uncommon), 1850-1950 m; Morne d'Enfer. Judd 4717. Generic delimitation in group problematical; species sometimes considered in *Bumelia*.

Order Primulales

Family Myrsinaceae (2/4)

Ardisia fuertesii Urb. Shrub to small tree; cloud forest (occasional/common), 1660-2000 m; Morne d'Enfer to M. La Visite, Rivière Blanche. Judd 4411, 4653, 4766. Endemic to Hispaniola.

Ardisia picardae Urb. Shrub to small tree; cloud forest (common), 1650-2050 m; Morne d'Enfer to M. La Visite, Rivière Blanche, ravine east of Park Center. Judd 4442, 4587, Zanoni & Mejía 24552. Endemic to Massif de La Selle.

Myrsine nubicola Liogier. Shrub; cloud forest (occasional/common), 1850-2300 m; Morne d'Enfer to Tete Opaque, Roche Plate, ravine east of Park Center. Baird LV-31, Judd 4546, 4564, 4646, 4692, Thompson 3753-13, Zanoni & Mejía 24547, 24562. Endemic to Hispaniola.

Myrsine coriacea (Sw.) R. Br. ex Roem. & Schult. Shrub to small tree; cloud forest, moist pine forest (very common), 1650-2100 m; Morne d'Enfer to M. La Visite, Rivière Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4315, 4426, 4716.

Family Primulaceae (1/1)

Anagallis arvensis L. Terrestrial herb; moist vegetation along stream, open areas (common), 1800-1900 m; Morne Nacel region, Rivière Blanche. Judd 4324, Zanoni & Mejía 24557. Introduced.

Order Polygonales

Family Polygonaceae (2/2)

Coccoloba picardae Urb. Shrub to small tree; cloud forest (common), 1700-2000 m; Morne d'Enfer to M. La Visite, Rivière Blanche; Ekman collected this species near Pic Cabaio. Judd 4642, 4409, 4667, 4668, Zanoni & Mejía 24519. Endemic to Massif de La Selle.

Rumex obtusifolius L. Terrestrial herb; moist pine forest, disturbed open areas, often along streams (common), 1600-1800 m; Rivière Blanche, ravine east of Berac area, scattered in pinelands. Judd 4468, 4953. Introduced.

Superorder Celastriflorae
Order Celastrales
Family Celastraceae (1/1)

Torrallasia cuneifolia (C. Wr.) Krug. & Urb. Shrub to tree; cloud forest (uncommon), ca 1750 m; Rivière Blanche. Judd 4800.

Superorder Santaliflorae
Order Santalales
Family Eremolepidaceae (1/1)

Eremolepis wrightii Griseb. Epiphytic and parasitic shrub; cloud forest (rare), 1700-1800 m; Rivière Blanche; Ekman collected species from Pic Cabaio at ca 2300 m. Judd 4414. Det. Elizabeth A. Kellogg.

Family Loranthaceae (1/3)

Dendropemon bistratus Urb. Epiphytic and parasitic shrub; cloud forest (occasional), 1650-1900 m; Morne La Visite, Rivière Blanche. Judd 4398, 4429, Thompson 3748-6. Endemic to Hispaniola.

Dendropemon parvifolius (Sw.) Steud. Epiphytic and parasitic shrub; cloud forest (uncommon), ca 2300 m; Pic Cabaio. Judd 4541.

Dendropemon pycnophyllus Krug & Urb. Epiphytic and parasitic shrub (on *Pinus*); pine forest (common), 1750-2200 m; ± throughout pinelands. Baird LV-30, Judd 4378. Endemic to Hispaniola.

Family Viscaceae (1/2)

Dendrophthora cupressoides (Macf.) Eichl. Epiphytic and parasitic shrub; cloud forest (occasional), 1650-2160 m; Morne d'Enfer to M. Nacel, Tete Opaque, Rivière Blanche. Baird LV-34, Judd 4448, 4760.

Dendrophthora serpyllifolia (Griseb.) Krug & Urb. Epiphytic and parasitic shrub; cloud forest (occasional), ca 1900 m; Morne Nacel. Judd 4649.

Superorder Violiflorae
Order Violales
Family Passifloraceae (1/2)

Passiflora orbiculata Cav. Vine; cloud forest, moist pine forest (uncommon), 1750-1950 m; Morne d'Enfer to M. Fè Noir, "The Depression." Judd 4478, 4721.

Passiflora sexflora Juss. Vine; cloud forest (occasional); 1800-2100 m; Morne d'Enfer, Roche Plate. Judd 4660, Thompson 3753-6.

Family Cucurbitaceae (2/2)

Melothria domingensis Cogn. Vine; cloud forest, disturbed open areas (occasional), 1800-1900 m; Morne d'Enfer. Judd 4669. Endemic to Hispaniola.

Sicyos laciniatus L. Vine; disturbed cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24532.

Family Begoniaceae (1/2)

Begonia domingensis DC. Terrestrial herb; cloud forest (common), 1650-1800 m; Rivière Blanche. Judd 4446. Endemic to Hispaniola.

Begonia platyptera Urb. Terrestrial herb; cloud forest, moist pine forest (common), 1600-1800 m; Rivière Blanche, ravine east of Berac area. Judd 4300. Endemic to Massif de La Selle.

Order Capparales

Family Brassicaceae or Cruciferae (6/6)

Barbarea verna (Mill.) Aschers. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1750-2000 m; ± throughout pinelands. Judd 4961. Introduced.

Brassica campestris L. Terrestrial herb; pine forest, disturbed open areas, fields (very common), 1750-2000 m; ± throughout pinelands. Judd 4290. Introduced.

Cardamine hirsuta L. Terrestrial herb; cloud forest, open disturbed areas, fields (occasional), ca 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4856. Introduced.

Lepidium virginicum L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1700-1900 m; ± throughout pinelands. Judd 4638.

Nasturtium officinale R. Br. Terrestrial/aquatic herb; along margins of (or in) streams (common), ca 1800 m; Rivière Blanche. Judd 4287. Introduced.

Raphanus sativus L. Terrestrial herb; cloud forest/moist pine forest, disturbed open areas, fields (uncommon), ca 2180 m; between Morne La Visite and Pic Cabaio. Judd 4512. Introduced.

Superorder Malviflorae
Order Malvales
Family Malvaceae (1/1)

Sphaeralcea abutiloides (L.) G. Don. Shrub; pine forest (uncommon), 1800-2050 m; pinelands south of Park Center. Judd 4376.

Family Ulmaceae (1/1)

Trema micrantha (L.) Blume. Tree; cloud forest, moist pine forest (common), 1600-2150 m; Morne d'Enfer to M. La Visite, Roche Plate, Rivière Blanche, ravine east of Berac area. Judd 4404, 4568, Thompson 3748-3, 3753-1.

Family Urticaceae (including Moraceae, Cecropiaceae) (2/13)

Gyrotaenia myriocarpa Griseb. Shrub; moist pine forest, cloud forest (occasional/common), 1660-2250 m; Morne d'Enfer to north slope of M. La Visite. Judd 4522, 4752.

Pilea cellulosa (Spreng.) Urb. Terrestrial herb; cloud forest (occasional), 1600-1650 m; ravine east of Berac area. Judd 4948.

Pilea cephalantha Wedd. Terrestrial herb; cloud forest (common), 1650-1900 m; Rivière Blanche, Morne d'Enfer, to M. Nacel(?). Judd 4390. Endemic to Massif de La Selle.

Pilea domingensis Urb. Terrestrial herb; moist pine forest (common), ca 1800 m; Rivière Blanche. Judd 4262. Endemic to Hispaniola.

Pilea franquervilleana Wedd. Terrestrial herb; cloud forest, moist pine forest (common), 1800-2220 m; Morne La Visite to Pic Cabaio. Judd 4532, 4562?, 4563. Endemic to Massif de La Selle.

Pilea hepatica Urb. & Ekm. Terrestrial herb; cloud forest (uncommon), 1600-1650 m; ravine east of Berac area. Judd 4947. Endemic to Massif de La Selle and Massif de La Hotte.

Pilea lanceolata (Lam.) Wedd. Terrestrial herb; pine forest, cloud forest (common), 1800-2300 m; Pic Cabaio, scattered in pinelands, Rivière Blanche. Judd 4382. Endemic to Hispaniola.

Pilea cf. *lapidicola* Urb. & Ekm. Terrestrial herb; cloud forest (common), ca 1900 m; Morne Nacel. Judd 4706. Endemic to Massif de La Selle.

Pilea microphylla (L.) Liebm. Terrestrial herb; moist pine forest, rocky slopes (common), 1790-2160 m; Morne Nacel to Tete Opaque, Rivière Blanche. Baird LV-26, Judd 4267, 4282, Zanoni & Mejía 24623.

Pilea parietaria (L.) Blume. Terrestrial herb; cloud forest, open disturbed areas (occasional), 1880-1900 m; Morne d'Enfer. Judd 4680.

- Pilea propinqua* Wedd. Terrestrial herb; moist pine forest, rocky slopes (common), ca 1800 m; Rivière Blanche. Judd 4325. Endemic to Hispaniola.
- Pilea psilogyne* Urb. Terrestrial/aquatic herb; on rocks in stream (common), ca 1800 m; Rivière Blanche; Ekman collected species on Morne Cabaio, ca 2200 m. Judd 4335. Endemic to Massif de La Selle.
- Pilea* sp. 1. Terrestrial herb; cloud forest (common), 1850-1950 m; Morne d'Enfer. Judd 4723.

Order Rhamnales
Family Rhamnaceae (1/1)

- Rhamnus sphaerosperma* Sw. Shrub; pine forest (rare), ca 1900 m; ridge east of Park Center. Judd 4826.

Order Euphorbiales
Family Euphorbiaceae (5/5)

- Ditta* sp. nov. aff. *D. myricoides* Griseb. Shrub; cloud forest (occasional), 1740-1900 m; Morne Nacel region, Rivière Blanche. Judd 4801, Zanoni & Mejía 24561. Endemic to Massif de La Selle. Det. T. Zanoni.
- Euphorbia pepus* L. Terrestrial herb; pine forest, especially disturbed areas (occasional/common), 1800-2050 m; Rivière Blanche, ± scattered in pinelands. Judd 4337, 4374. Introduced.
- Phyllanthus lindenianus* Baill. var. *inaequifolius* (Webster) Webster. Terrestrial herb; pine forest, especially ravine slopes and disturbed areas (very common), 1800-2000 m; Rivière Blanche, ± scattered in pinelands. Judd 4331, 4880. Endemic to Massif de La Selle.
- Ricinus communis* L. Shrub; pine forest, disturbed open areas (common), ca 1900 m; near Park Center, ± throughout plateau in disturbed localities. Judd 4939. Introduced.
- Sapium buchii* Urb. Tree; cloud forest (occasional), 1850-2100 m; Morne d'Enfer to west slope of M. La Visite, Roche Plate. Judd 4652, Thompson 3753-8. Endemic to Hispaniola.

Family Thymelaeaceae (1/1)

- Daphnopsis crassifolia* (Poir.) Meissn. Shrub; pine forest, cloud forest (very common), 1700-2300 m; Morne d'Enfer to Tete Opaque, Roche Plate, Rivière Blanche, ravine east of Park Center, other ravines, ± throughout pinelands. Judd 4312, 4412, 4465, 4480, Thompson 3753-10. Endemic to Hispaniola.

Superorder Geraniiflorae
Order Geraniales
Family Linaceae (1/1)

Linum usitatissimum L. Terrestrial herb; pine forest, especially open disturbed areas (common), 1700-1900 m; ± throughout pinelands. Judd 4323. Introduced.

Family Oxalidaceae (1/2)

Oxalis corniculata L. Terrestrial herb; pine forest (occasional), ca 1800 m; scattered in pinelands. Judd 4415.

Oxalis eggersii Urb. Terrestrial herb; pine forest, rocky areas (occasional), 1750-1800 m; "The Depression." Judd 4498.

Family Geraniaceae (2/3)

Geranium purpureum Vill. Terrestrial herb; pine forest, cleared pasture (occasional), ca 2050-2250 m; Galette Seche to ridge west of Pic Cabaio. Judd 4859. Introduced.

Geranium rotundifolium L. Terrestrial herb; cloud forest, pine forest, disturbed open areas (very common), 1800-2150 m; Morne La Visite, ± throughout pinelands. Judd 4363, Zanoni & Mejía 24555. Introduced.

Pelargonium graveolens L'Her. ex Ait. Terrestrial herb; moist pine forest (rare), ca 2120 m; Morne La Visite. Judd 4573. Introduced.

Family Malpighiaceae (2/2)

Bunchosia ekmanii Urb. & Ekm. Shrub; cloud forest (uncommon), 1700-1900 m; Morne Nacel region, Rivière Blanche. Judd 4402, Zanoni & Mejía 24530. Endemic to Massif de La Selle.

Malpighia macracantha Urb. & Ndz. Shrub; cloud forest (occasional), 1700-1900 m; Morne Nacel, Rivière Blanche; Ekman collected this species near Pic Cabaio, ca 2200-2300 m. Judd 4401. Endemic to Massif de La Selle.

Superorder Rutiflorae
Order Rurales
Family Rutaceae (2/2)

Citrus aurantium L. Tree; cloud forest (occasional), 1850-1920 m; Morne d'Enfer. Judd 4687. Introduced.

Zanthoxylum tetraphyllum (Urb. & Ekm.) Jiménez. Shrub; cloud forest, open rocky area (rare), 2220 m; just west of Pic Cabaio. Judd 4560. Endemic to Massif de La Selle.

Family Simaroubaceae (1/1)

Picrasma selleana Urb. Shrub to small tree; cloud forest (occasional), 1700-1900 m; Morne Nacel region, Rivière Blanche. Judd 4400, Zanoni & Mejía 24528. Endemic to Massif de La Selle.

Family Myricaceae (1/1)

Myrica picardae Krug & Urb. Shrub; pine forest, moist pine forest/cloud forest (very common), 1650-2250 m; Morne La Visite to Belle Fontaine/Roche Cabrit, probably also at Tete Opaque, ± throughout pinelands. Judd 4353, 4520, Thompson 3748-11. Endemic to Hispaniola.

Family Sapindaceae (1/1)

Allophylus crassinervis Radlk. Shrub; cloud forest (occasional), 1660-1740 m; between Morne d'Enfer and M. Fè Noir. Judd 4765.

Family Sabiaceae (1/1)

Meliosma impressa Krug & Urb. Tree; cloud forest, moist pine forest (common), 1600-2150 m; Morne d'Enfer to M. La Visite, Rivière Blanche, ravine east of Berac area, ravine east of Park Center. Judd 4306, 4413, 4531, 4832. Endemic to Hispaniola.

Family Fabaceae or Leguminosae (4/5)

Caesalpinia sepiaria Roxb. Scrambling shrub; cloud forest (uncommon), 1900-2100 m; Morne Nacel, western slope of Morne La Visite, Roche Plate. Judd 4707, Thompson 3753-14.

Medicago lupulina L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1800-1950 m; ± throughout pinelands. Judd 4879, Zanoni & Mejía 24513. Introduced.

Phaseolus lunatus L. Terrestrial herb; cloud forest, disturbed open areas (uncommon), 1650-1700 m; Rivière Blanche. Judd 4445. Introduced.

Trifolium arvense L. Terrestrial herb; pine forest (occasional), ca 1800 m; pinelands near Rivière Blanche. Judd 4284. Introduced.

Trifolium repens L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1800-2300 m; Morne La Visite to Pic Cabaio, ± throughout pinelands. Judd 4877. Introduced.

Superorder Rosiflorae
Order Rosales
Family Rosaceae (2/3)

Fragaria vesca L. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1750-2300 m; ± throughout pinelands, southern slope of Morne La Visite to Pic Cabaio, Rivière Blanche. Judd 4349, Zanoni & Mejía 24622. Introduced.

Rubus argentifrons Bailey. Terrestrial herb; pine forest (abundant), 1750-2200 m; ± throughout pinelands. Judd 4362. Endemic to Hispaniola; the very similar species, *R. selleanus* Helwig., is probably also present.

Rubus haitiensis Bailey. Terrestrial herb; pine forest (abundant), 1750-2200 m; ± throughout pinelands. Judd 4473. Endemic to Hispaniola.

Family Cunoniaceae (1/1)

Weinmannia pinnata L. Shrub to tree; cloud forest, moist pine forest (very common), 1750-2250 m; Morne d'Enfer to M. La Visite, Rivière Blanche, ravine east of Park Center. Judd 4292, 4311, 4525.

Family Brunelliaceae (1/1)

Brunellia comocladifolia Humb. & Bonpl. subsp. *domingensis* Cuatr. Tree; cloud forest, moist pine forest (very common), 1600-2250 m; Morne d'Enfer to Tete Opaque, Rivière Blanche. Judd 4417, 4567.

Family Staphyleaceae (1/1)

Turpinia picardae Urb. Shrub to small tree; cloud forest (occasional/common), 1700-1900 m; Morne d'Enfer to M. Nacel, M. La Visite(?), "The Depression." Judd 4476, 4651, 4681, 4775. Endemic to Massif de La Selle and Massif de La Hotte.

Superorder Myrtiflorae
Order Myrtales
Family Lythraceae (1/1)

Cuphea rotundifolia Koehne. Terrestrial herb; cloud forest, disturbed open areas (occasional), 1850-1900 m; Morne d'Enfer. Judd 4666.

Family Melastomataceae (4/11)

- Heterotrichum angustifolium* DC. Shrub; moist pine forest (occasional), ca 1500 m; northern slope of Morne La Visite. Not collected; this species was collected by Ekman at ca 1600 m.
- Heterotrichum umbellatum* (Mill.) Urb. Shrub to small tree; cloud forest, disturbed openings (common), 1850-1880 m; Morne d'Enfer. Judd 4657.
- Mecranium multiflorum* (L.C. Rich.) Triana. Shrub to small tree; cloud forest (occasional/common), 1700-1880 m; Morne d'Enfer to M. Fè Noir. Judd 4663, 4750, 4753, 4783, Skean 1055, 1056.
- Meriania involucrata* (Desr.) Naud. Shrub to tree; cloud forest (occasional), 1600-1900 m; Morne d'Enfer to ravine east of Berac area (east of M. Nacel). Judd 4664, 4758, 4779, Skean 1058. Endemic to Hispaniola.
- Miconia albovidis* Urb. & Ekm. Shrub; disturbed cloud forest, ca 1900 m; Morne La Visite (Ekman H1400), recollected 15.8 km W of Mare Rouge on road to Seguin by T. Zanoni et al., i.e. Zanoni et al. 18698.
- Miconia favosa* (Desr.) Naud. Shrub; cloud forest (occasional/very common), 1600-1900 m; Morne d'Enfer to ravine east of Berac area, Rivière Blanche. Judd 4250, 4455, 4658, 4725, 4762. Endemic to Massif de La Selle and Massif de La Hotte.
- Miconia ferruginea* (Desr.) DC. Shrub; cloud forest (occasional), 1600-1900 m; Morne Fè Noir to ravine east of Berac area, Rivière Blanche. Judd 4454, 4778, 4940. Endemic to Massif de La Selle.
- Miconia lanceolata* (Desr.) DC. Shrub to tree; cloud forest (uncommon), 1850-2210 m; Morne d'Enfer, Pic Cabaio to Belle Fontaine. Judd 4712, 4851. Endemic to Hispaniola.
- Miconia luteola* Cogn. Shrub; pine forest, Morne La Visite. Collected by E. Ekman; not recollected in park, but collected to the east in vicinity of Pic La Selle, Judd 4932. Endemic to Massif de La Selle.
- Miconia rigidissima* Urb. & Ekm. Shrub; cloud forest, open rocky areas (uncommon), ca 2300 m; Pic Cabaio; Ekman also collected this species on Morne La Visite. Judd 4538. Endemic to Massif de La Selle.
- Miconia selleana* Urb. & Ekm. Shrub to small tree; cloud forest, moist pine forest (occasional), 1900-2250 m; Morne La Visite, Rivière Blanche, ravine east of Park Center. Judd 4519, 4528, 4566. Endemic to Hispaniola; Ekman also collected in Massif de La Hotte.
- Miconia subcompressa* Urb. & Ekm. Shrub; moist pine forest (rare), ca 1800 m; Rivière Blanche. Judd 4251. Endemic to Hispaniola.
- Miconia tetrastoma* Naud. Shrub; cloud forest (occasional), 1660-1880 m; Morne d'Enfer to M. Fè Noir. Judd 4662, 4763.

Family Myrtaceae (2/5)

- Calyptranthes densifolia* Urb. & Ekm. Shrub to tree; cloud forest (occasional), 1900-2250 m; Morne Nacel, between Pic Cabaio and Belle Fontaine/Roche Cabrit; Ekman collected species on Morne La Visite and M. Cabaio. Judd 4645. Endemic to the Massif de La Selle.
- Calyptranthes nummularia* Berg. Shrub; moist pine forest (uncommon), 1850-1900 m; Morne Nacel region, "The Depression." Judd 4791, Zanoni & Mejía 24510. Endemic to Massif de La Selle and Massif de La Hotte.
- Calyptranthes* cf. *pitoniana* Urb. & Ekm. Small tree; cloud forest (common), 1700-2100 m; Morne Nacel, Roche Plate, Rivière Blanche. Judd 4399, 4654, Thompson 3753-4. Endemic to Hispaniola.
- Eugenia lineata* (Sw.) DC. Small tree; cloud forest (occasional), 1850-1880 m; Morne d'Enfer. Judd 4682. Endemic to Hispaniola.
- Eugenia picardae* Krug & Urb. Shrub; cloud forest (occasional), 1875-1930 m; Morne Nacel to M. La Visite. Judd 4650, 4820. Endemic to Massif de La Selle.

Family Onagraceae (2/3)

- Epilobium coloratum* Muhl. ex Willd. Terrestrial herb; along stream (common), ca 1800 m; Rivière Blanche. Judd 4327. Endemic to Hispaniola.
- Fuchsia pringsheimii* Urb. Shrub; cloud forest, moist pine forest (common), 1650-2300 m; Morne d'Enfer to Tete Opaque, Rivière Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4313, 4393, 4552, 4672, 4676, 4677, 4731. Endemic to Hispaniola.
- Fuchsia triphylla* L. Shrub; cloud forest to pine forest (common), 1650-2200 m; Morne d'Enfer to Tete Opaque, Rivière Blanche, ravine east of Park Center, other ravines in pinelands, ± scattered throughout pinelands. Baird LV-28, Judd 4366, 4673, 4732. Endemic to Hispaniola.
- Fuchsia pringsheimii* Urb. X *triphylla* L. Shrub; cloud forest (occasional), 1850-1880 m; Morne d'Enfer. Judd 4674, 4675. Hybrids have been reported from several localities in the Massif de La Selle.

Superorder Corniflorae
Order Cornales
Family Garryaceae (1/1)

Garrya fadyenii Hook. Shrub to tree; pine forest to cloud forest (very common), 1650-2300 m; ± throughout pinelands and hardwood forests. Judd 4264, 4377, 4491, Thompson 3753-3, 3758-1.

Order Araliales
Family Araliaceae (including Apiaceae) (8/8)

- Anethum graveolens* L. Terrestrial herb; pine forest (uncommon), ca 1910 m; pinelands near Park Center. Judd 4641. Introduced.
- Daucus carota* L. Terrestrial herb; pine forest, especially open disturbed areas (very common), 1800-2100 m; Morne La Visite toward Pic Cabaio, ± throughout pinelands. Judd 4936. Introduced.
- Dendropanax arboreus* (L.) Decne & Planch. Tree; cloud forest (common), 1660-1750 m; Rivière Blanche, ravine east of Berac area (east of Morne Nacel). Judd 4430.
- Didmyopanax tremulum* Krug & Urb. Tree; cloud forest (very common), 1600-2250 m; Morne d'Enfer to M. La Visite, ravine east of Berac area, Rivière Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4392, 4727. Endemic to Hispaniola.
- Hydrocotyle pusilla* A. Rich. Terrestrial herb; pine forest (occasional), ca 1800 m; near Rivière Blanche. Judd 4601.
- Oreopanax capitatum* (Jacq.) Decne. & Planch. Tree; pine forest to cloud forest (very common), 1700-2160 m; Morne La Visite to Tete Opaque, Rivière Blanche, ravine east of Park Center, other ravines in pinelands. Baird LV-22, Judd 4310, 4452.
- Pastinaca sativa* L. Terrestrial herb; pine forest, especially disturbed areas (very common), 1750-2300 m; Morne La Visite to Pic Cabaio, ± scattered in pinelands. Judd 4355. Introduced.
- Petroselinum sativum* Hoffm. Terrestrial herb; pine forest, especially disturbed areas (very common), 1750-2150 m; Morne La Visite, ± scattered in pinelands. Judd 4354. Introduced.

Superorder Gentianiflorae
Order Gentianales
Family Buddlejaceae (1/1)

Buddleja domingensis Urb. Shrub; cloud forest, moist pine forest (very common), 1600-2300 m; Morne d'Enfer to Pic Cabaio, ravine east of Berac area, Rivière Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4410, 4570, Zanoni & Mejía 24566. Endemic to Hispaniola.

Family Rubiaceae (7/13)

Galium aparine L. Terrestrial herb; cloud forest, moist pine forest, in open disturbed areas (occasional), 1800-1900 m; Morne Nacel region, Rivière Blanche. Judd 4307, Zanoni & Mejía 24521. Introduced.

Galium brevipes Urb. Terrestrial herb; pine forest (occasional), 1750-1850 m; "The Depression." Judd 4484. Endemic to Hispaniola.

Guettarda pungens Urb. Shrub; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24498.

Guettarda or *Psychotria* sp. Tree; cloud forest (occasional), ca 1650 m; Rivière Blanche. Judd 4420

Mitracarpus decumbens Urb. Terrestrial herb; pine forest (common), 1800-2050 m; ± scattered in pinelands. Judd 4367. Endemic to Massif de La Selle.

Palicourea alpina (Sw.) DC. Shrub; moist pine forest, cloud forest (common), 1600-2250 m; Morne d'Enfer to M. La Visite, ravine east of Berac area, Rivière Blanche; Ekman, in field notes, also reports from Pic Cabaio. Judd 4529, 4588, 4946.

Psychotria berteriana DC. Shrub; cloud forest (uncommon), 1660-1735 m; Morne Fè Noir. Judd 4751.

Psychotria liogieri Steyermark. Shrub; cloud forest (occasional), ca 1700 m; between Morne d'Enfer and M. Fè Noir. Judd 4788, Skean 1057. Endemic to Hispaniola.

Psychotria baltenweckii Urb. Shrub; cloud forest (common), 1750-2050 m; Morne d'Enfer to M. La Visite, Rivière Blanche; Ekman also collected this species on M. Cabaio. Judd 4565, 4728, 4795, Zanoni & Mejía 24512. Endemic to Massif de La Selle.

Relbunium hypocarpium (L.) Hemsl. Terrestrial herb; moist pine forest (common), 1750-2150 m; southern slope of Morne La Visite, "The Depression." Judd 4488, 4530, Thompson 3748-4.

Rondeletia carnea Urb. & Ekm. Shrub to small tree; cloud forest, moist pine forest (uncommon), 1750-2200 m; Morne La Visite; Ekman also

collected species on M. Cabaio. Judd 4554, 4822. Endemic to Massif de La Selle.

Rondeletia christii Urb. Shrub; cloud forest (occasional), ca 1750 m; Rivière Blanche. Judd 4796. Endemic to Hispaniola; *R. selleana* Urb. & Ekm., described from the Morne La Visite region, is probably conspecific.

Rondeletia domatiata Urb. Shrub; cloud forest (occasional/ common), 1800-1950 m; Morne d'Enfer. Judd 4683, 4710, 4714. Endemic to Massif de La Selle (Morne d'Enfer).

Family Apocynaceae (incl. Asclepiadaceae) (3/3)

Asclepias nivea L. Terrestrial herb; cloud forest, pine forest, disturbed open areas (occasional), 1600-1900 m; ravine east of Berac area; ± scattered in pinelands. Judd 4945.

Cynanchum leptocladium (Decne.) Jiménez. Vine; cloud forest moist pine forest (occasional/common), 1650-1930 m; Morne d'Enfer to M. La Visite, "The Depression," Rivière Blanche. Judd 4689, Zanoni & Mejía 24505.

Marsdenia clausa R. Br. Vine; cloud forest (occasional), 1700-1900 m; Morne Fè Noir to M. Nacel, Rivière Blanche. Judd 4407, 4839.

Order Bignoniales

Family Bignoniaceae (1/1)

Tecoma stans (L.) Juss. Shrub; cloud forest (uncommon), ca 1750 m; Rivière Blanche. Judd 4802. Introduced.

Family Scrophulariaceae (2/2)

Scrophularia minutiflora Pennell. Terrestrial herb; cloud forest, moist pine forest (occasional), 1850-2200 m; Morne d'Enfer to M. La Visite, Rivière Blanche. Judd 4533a, 4730.

Verbascum thapsus L. Terrestrial herb; pine forest, especially disturbed open areas (common), 1800-2150 m; southern slope of Morne La Visite, ± scattered in pinelands. Judd 4571. Introduced.

Family Plantaginaceae (1/1)

Plantago lanceolata L. Terrestrial herb; pine forest, especially disturbed open areas (abundant), 1750-2300 m; southern slope of Morne La Visite to Pic Cabaio, ± throughout pinelands. Judd 4876. Introduced.

Family Gesneriaceae (3/7)

- Columnnea domingensis* Urb. Epiphytic vine; cloud forest (occasional), 1650-1900 m; Morne d'Enfer to Morne La Visite, Rivière Blanche. Judd 4436, Zanoni & Mejía 24559. (= *Trichantha domingensis* (Urb.) Wiehler)
- Gesneria bullata* Urb. & Ekm. Shrub; moist pine forest (common), 1700-2200 m; between Morne La Visite and Pic Cabaio, Rivière Blanche. Judd 4256, 4328. Endemic to Massif de La Selle. Det. L. E. Skog (4256).
- Gesneria ekmanii* Urb. (= *Rhytidophyllum* sp.) Shrub; cloud forest (common), 1600-1900 m; Morne d'Enfer to ravine east of Berac area, Rivière Blanche. Judd 4437, 4704, 4767, 4956. Endemic to Massif de La Hotte and Massif de La Selle. Det. L. E. Skog (4767).
- Gesneria hypoclada* Urb. & Ekm. Shrub to small tree; cloud forest (rare), 1750-1900 m; Morne Nacel region, Rivière Blanche. Judd 4798, Zanoni & Mejía 24566. Endemic to Massif de La Selle and Massif de La Hotte. Det. L. E. Skog.
- Gesneria viridiflora* (Decaisne) Kuntz subsp. *acrochordonanthe* L. Skog. Shrub; cloud forest (common), 1650-1800 m; Rivière Blanche. Judd 4427. Endemic to Massif de La Selle and Massif de La Hotte. Det. L. E. Skog.
- Rhytidophyllum auriculatum* Hook. Shrub; cloud forest, often disturbed open areas (common), 1650-1800 m; Morne d'Enfer to north slope of M. Nacel, Rivière Blanche. Judd 4447, 4648, 4761.
- Rhytidophyllum* sp. nov. aff. *R. auriculatum* Hook. Shrub; cloud forest (occasional), 1800-1900 m; Morne Fè Noir. Judd 4781, 4838. Endemic to Morne Fè Noir. Det. L. E. Skog.

Order Lamiales

Family Verbenaceae (4/4)

- Citharexylum caudatum* L. Shrub to tree; cloud forest, moist pine forest (occasional/common), 1650-2250 m; Morne d'Enfer to M. La Visite, Rivière Blanche, "The Depression." Judd 4477, 4757, 4790, 4797.
- Duranta arida* Britt. & Wils. Shrub; cloud forest (occasional/common), 2150-2220 m; vicinity of Pic Cabaio to Belle Fontaine/Roche Cabrit. Judd 4559, 4840.
- Lantana trifolia* L. Shrub; cloud forest, disturbed open areas (uncommon), ca 1900 m; Morne Nacel. Judd 4705.
- Verbena domingensis* Urb. Terrestrial herb; pine forest (uncommon), 1800-1900 m; ± scattered in pinelands near Park Center; Ekman collected species at ca 2200 m in vicinity of Pic Cabaio. Judd 4809. Endemic to Hispaniola.

Family Lamiaceae or Labiatae (5/7)

- Hyptis schusteri* Urb. Shrub; cloud forest (locally common), ca 2300 m; Pic Cabaio. Judd 4551. Endemic to Massif de La Selle and Massif de La Hotte.
- Prunella vulgaris* L. Terrestrial herb; pine forest or cloud forest, especially open disturbed areas (common), 1750-2150 m; Morne Nacel to Morne La Visite, ± throughout pinelands. Judd 4348, Zanoni & Mejía 24558. Introduced.
- Salvia foveolata* Urb. & Ekm. Shrub; cloud forest/moist pine forest (uncommon), 2200-2300 m; between Morne La Visite and Pic Cabaio. Judd 4555. Endemic to Massif de La Selle (Morne La Visite-Pic Cabaio region).
- Salvia selleana* Urb. Shrub; pine forest, on thin soil over limestone (locally common), 2050-2100 m; Galette Seche; Ekman collected this species at ca 2250 m in vicinity of Pic Cabaio. Judd 4861. Endemic to Massif de La Selle.
- Salvia bahorucana* Urb. & Ekm. Shrub; cloud forest (occasional), ca 2200-2300 m; vicinity of Pic Cabaio. Judd 4558. Endemic to Massif de La Selle.
- Satureja viminea* (L.) Urb. Shrub; cloud forest, moist pine forest (common), 1800-2300 m; Morne Nacel to Pic Cabaio. Judd 4321, 4521.
- Stachys arvensis* L. Terrestrial herb; moist pine forest, often along streams (occasional), 1800-1935 m; Rivière Blanche, ravine east of Park Center. Judd 4330, 4834. Introduced.

Order Dipsacales

Family Adoxaceae (1/1)

- Sambucus canadensis* L. Shrub or small tree; pine forest to cloud forest, especially along streams (common), 1650-2050 m; Rivière Blanche, ravine east of Park Center, other ravines in pinelands, ± scattered in pinelands (where planted near inhabited areas?). Judd 4291. Introduced.

Family Valerianaceae (1/1)

- Valeriana scandens* Loefl. Vine; cloud forest, moist pine forest (common), 1600-2150 m; ravine east of Berac area, Rivière Blanche, Morne La Visite. Judd 4533b, 4943.

Superorder Solaniflorae
Order Solanales
Family Boraginaceae (3/7)

- Cordia dependens* Urb. & Ekm. Shrub; cloud forest, moist pine forest (occasional/common), 1800-2200 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Rivière Blanche, other ravines in pinelands, probably also at Tete Opaque. Judd 4655, 4844, Thompson 3748-10, Zanoni & Mejía. Endemic to Hispaniola.
- Cordia lima* (Desv.) R. & Sch. Shrub; cloud forest, disturbed open area (uncommon), ca 1850 m; Morne d'Enfer. Judd 4709.
- Cordia picardae* Urb. Shrub; cloud forest, moist pine forest (common), Morne d'Enfer to Belle Fontaine/Roche Cabrit, Rivière Blanche, ravine east of Park Center, probably also at Tete Opaque. Judd 4509. Endemic to Massif de La Selle.
- Cynoglossum amabile* Stapf & Drummond. Terrestrial herb; pine forest, cloud forest, especially open disturbed areas (abundant), 1700-2300 m; ± throughout park. Various color forms present: blue, violet/pink, and white flowered. Baird LV-33, Judd 4371. Introduced.
- Tournefortia glabra* L. Shrub; cloud forest (uncommon), 1600-1650 m; ravine east of Berac area. Judd 4950.
- Tournefortia hirsutissima* L. Scrambling shrub; cloud forest (occasional), 1660-2200 m; Morne d'Enfer to ridge between M. La Visite and Pic Cabaio, Roche Plate, ravine east of Park Center. Judd 4510, 4768, Thompson 3753-11.
- Tournefortia selleana* Urb. & Ekm. Shrub; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24518. Endemic to Massif de La Selle.

Family Solanaceae (4/10)

- Cestrum brevifolium* Urb. Shrub; cloud forest/moist pine forest (uncommon), ca 1900 m; Rivière Blanche. Judd 4586. Endemic to Hispaniola.
- Cestrum coelophlebium* O. E. Schulz. Shrub; cloud forest, moist pine forest (common), 1650-2100 m; Morne d'Enfer to M. Nacel, Roche Plate, Rivière Blanche, ravine east of Park Center. Judd 4428, 4678, Thompson 3753-12. Endemic to Hispaniola.
- Cestrum inclusum* Urb. Shrub; cloud forest, moist pine forest (uncommon), 1850-1935 m; Morne d'Enfer, ravine east of Park Center. Judd 4671. Endemic to Hispaniola.
- Cestrum mononeurum* Urb. & Ekm. Shrub; cloud forest to pine forest (common), 1700-2300 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Roche Plate, Rivière Blanche, ravine east of Park Center,

- other ravines, ± scattered in pinelands, probably also at Tete Opaque. Judd 4527, Thompson 3753-7, Zanoni & Mejía 24531. Endemic to Hispaniola.
- Cestrum violaceum* Urb. Shrub; cloud forest, moist pine forest (common), 1800-2300 m; Morne d'Enfer to Pic Cabaio, Roche Plate, Rivière Blanche. Judd 4261, 4545, Thompson 3753-9, Zanoni & Mejía 24541. Endemic to Massif de La Selle.
- Datura suaveolens* Humb. & Bonpl. ex Willd. Shrub or small tree; cloud forest, moist pine forest (occasional), 1700-1800 m; Rivière Blanche. Judd 4304. Introduced.
- Physalis peruviana* L. Terrestrial herb; moist pine forest (common), ca 1700-1900 m; Rivière Blanche, ± scattered in pinelands. Judd 4326. Introduced.
- Solanum antillarum* O. E. Schulz. Shrub; cloud forest, open disturbed areas (common), 1800-1950 m; Morne d'Enfer to M. Fè Noir(?). Judd 4661.
- Solanum crotonoides* Lam. Shrub; cloud forest, pine forest, especially disturbed open areas (very common), 1650-2300 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Rivière Blanche, ravine east of Park Center, other ravines, ± scattered in pinelands, probably also at Tete Opaque. Judd 4421, 4831.
- Solanum umbellatum* Mill. Shrub; cloud forest, especially disturbed open areas (occasional/common), 1700-1900 m; Morne Nacel, Rivière Blanche. Judd 4396, 4805.

Order Campanulales
Family Campanulaceae (2/3)

- Lobelia assurgens* L. var. *santa-clarae* McVaugh. Shrub; cloud forest (very common), 1600-2300 m; Morne d'Enfer to Pic Cabaio, ravine east of Berac area, Rivière Blanche, ravine east of Park Center, other ravines. Judd 4389. *Lobelia robusta* Graham, a very closely related taxon, probably also present.
- Lobelia rotundifolia* Juss. Scrambling shrub; cloud forest (occasional), 1800-2300 m; Morne d'Enfer to M. Fè Noir, north slope of M. La Visite. Judd 4516, 4539, 4711.
- Siphocampylus caudatus* McVaugh. Shrub; cloud forest (occasional), 1900-1950 m; Morne Nacel to M. La Visite; Ekman collected near Pic Cabaio at ca 2300 m. Endemic to Massif de La Selle. Judd 4644, 4821. (= *Lobelia ekmanii* Urb.)

Superorder Asteriflorae
Order Asterales
Family Asteraceae or Compositae (19/28)

- Baccharis myrsinites* (Lam.) Pers. Shrub; pine forest (abundant), cloud forest (occasional), 1650-2300 m; Morne d'Enfer to Pic Cabaio, Rivière Blanche, other ravines, ± throughout pinelands. Judd 4286, 4333, Thompson 3748-2, Zanoni & Mejía 24523, 24621. Endemic to Hispaniola.
- Bidens alba* (L.) DC. Terrestrial herb; pine forest, open disturbed areas (occasional), 1800-2120 m; southern slope of Morne La Visite, ± scattered in pinelands. Judd 4357. Introduced.
- Chaptalia albicans* Urb. & Ekm. Terrestrial herb; moist pine forest, open rocky areas (occasional/common), 1750-1900 m; Rivière Blanche, ± scattered in pinelands. Judd 4257, 4329, 4496.
- Conyza canadensis* (L.) Cronq. var. *pusilla* (Nutt.) Cronq. Terrestrial herb; pine forest, open disturbed areas, fields (common), 1800-1900 m; ± scattered in pinelands. Judd 4937.
- Erigeron dissectus* Urb. Terrestrial herb; moist pine forest, moist rocky cliffs (common), 1700-1900 m; Rivière Blanche. Judd 4469. Endemic to Hispaniola.
- Erigeron karvinskianus* DC. Terrestrial herb; pine forest (abundant), cloud forest, disturbed open areas (occasional), 1700-2300 m; Morne d'Enfer, M. La Visite to Pic Cabaio, ± throughout pinelands. Judd 4360. Introduced.
- Eupatorium cabaionum* Urb. & Ekm. Shrub; pine forest, especially rocky areas, cloud forest (common), 1660-2300 m; Morne d'Enfer to Pic Cabaio, "The Depression," ± scattered in pinelands. Judd 4487, 4643, 4759. Endemic to Massif de La Selle.
- Eupatorium illitum* Urb. Shrub; pine forest (very common), cloud forest, disturbed open areas (occasional), 1700-2300 m; Morne d'Enfer to Pic Cabaio, Rivière Blanche, other ravines, ± throughout pinelands. Judd 4299, 4553, 4713, 4722, Zanoni & Mejía 24524, 24617. Endemic to Hispaniola.
- Eupatorium puberulum* DC. Shrub; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24526.
- Eupatorium* sp. nov.? Shrub; cloud forest, disturbed open areas (occasional), 1700-1900 m; Morne Fè Noir. Judd 4777. Endemic to Massif de La Selle.
- Gnaphalium domingense* Lam. Terrestrial herb; pine forest (occasional), 1800-2000 m; ± scattered in pinelands. Judd 4836.

- Gnaphalium eggersii* Urb. Terrestrial herb; pine forest (occasional), 1800-1900 m; Rivière Blanche, ± scattered in pinelands. Judd 4320. Endemic to Hispaniola.
- Gnaphalium selleanum* Urb. & Ekm. Terrestrial herb; cloud forest, disturbed open areas (common), ca 2300 m; Pic Cabaio; Ekman collected species on Morne La Visite, ca 1800-1900 m. Judd 4550. Endemic to Massif de La Selle.
- Hieracium gronovii* L. Terrestrial herb; pine forest (common), 1800-2050 m; ± throughout pinelands. Judd 4364.
- Lactuca sativa* L. Terrestrial herb; disturbed open areas, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24522. Introduced.
- Lampsana communis* L. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1600-2050 m; Morne Nacel to Morne La Visite, ± throughout pinelands. Judd 4361, 4951, Zanoni & Mejía 24539. Introduced.
- Leontodon taraxacoides* (Vill.) Merat. Terrestrial herb; pine forest (very common), 1800-2050 m; ± throughout pinelands. Judd 4370, 4878. Introduced.
- Leucanthemum vulgare* Lam. Terrestrial herb; pine forest, open disturbed areas, pasture (locally common), 2100-2200 m; Pic Cabaio to Belle Fontaine/Roche Cabrit, and adjacent pinelands. Judd 4855. Introduced.
- Mikania tripartita* Urb. Vine; cloud forest, moist pine forest (common), 1750-2120 m; Morne d'Enfer to M. La Visite, "The Depression." Judd 4479, Zanoni & Mejía 24551. Endemic to Massif de La Selle.
- Piqueria trinerva* Cav. Terrestrial herb; cloud forest/moist pine forest (occasional), 1790-2300 m; Rivière Blanche, vicinity of Pic Cabaio. Judd 4543, Zanoni & Mejía 24627.
- Senecio buchii* Urb. Shrub; cloud forest, moist pine forest (occasional/very common), 1700-2300 m; Morne d'Enfer, M. La Visite to Belle Fontaine/Roche Cabrit, Rivière Blanche, ravine east of Park Center, probably also at Tete Opaque. Judd 4263, 4305, 4548, 4715, Thompson 3748-8. Endemic to Massif de La Selle.
- Senecio picardae* Krug & Urb. Shrub; pine forest, cloud forest, open areas (common), 1800-2300 m; vicinity of Pic Cabaio to Morne Nacel, Rivière Blanche, ravine east of Park Center. Judd 4322, 4542, Zanoni & Mejía 24504. Endemic to Hispaniola.
- Siegesbeckia orientalis* L. Terrestrial herb; disturbed cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24514.
- Sonchus asper* (L.) Hill. Terrestrial herb; cloud forest, disturbed open areas (common), 1600-1650 m; ravine east of Berac area. Judd 4952. Introduced.

Taraxacum officinale Weber. Terrestrial herb; pine forest, open disturbed areas, fields (common), 1800-2050 m; ± scattered in pinelands. Judd 4960. Introduced.

Tragopogon pratensis L. Terrestrial herb; moist pine forest/cloud forest, disturbed open areas, fields (occasional), 1750-1800 m; near Rivière Blanche. Judd 4416. Introduced.

Vernonia? sp. 1. Scrambling shrub; moist pine forest (common), ca 2180 m; ridge between Morne La Visite and Pic Cabaio. Judd 4511.

Wedelia serrata L. C. Rich. Terrestrial herb; cloud forest, disturbed open areas (uncommon), 1850-1880 m; Morne d'Enfer. Judd 4679.

Superorder Liliiflorae
Order Liliales
Family Agavaceae (1/1)

Agave antillarum Desc. Succulent herb; pine forest, cloud forest, open rocky areas (very common), 1750-2300 m; Morne La Visite to Pic Cabaio, Rivière Blanche, other ravines, ± throughout pinelands, especially rocky areas. Judd 4384. Endemic to Hispaniola.

Family Smilacaceae (1/1)

Smilax havanensis Jacq. Vine; moist pine forest (occasional), 1750-1800 m; "The Depression." Judd 4475.

Family Dioscoreaceae (1/1)

Rajania ovata Sw. Vine; cloud forest (occasional), 1700-1900 m; Morne Fè Noir, Rivière Blanche. Judd 4782, 4803.

Family Orchidaceae

[Family treatment by D. Dod and W. Judd (1986); they collected 11 species in the park, and reported that some 40 species are known from the region; additional study of the orchid flora of the park clearly is needed.]

Superorder Areciflorae
Order Arecales
Family Arecaceae or Palmae (1/1)

Prestoea montana (R. Grah.) Nichols. Tree; cloud forest (rare), 1600-1650 m; ravine east of Beraç area; Ekman collected species on Morne Cabaio. Judd 4954. (= *Euterpe globosa* Gaertn.)

Superorder Commeliniflorae
Order Bromeliales
Family Bromeliaceae (2/7)

- Tillandsia caribaea* L. B. Smith. Epiphytic herb; cloud forest (occasional/common), 1600-2250 m; Morne d'Enfer to Morne La Visite (northern slope), Rivière Blanche. Judd 4309, 4688, Zanoni & Mejía 24579.
- Tillandsia hotteana* Urb. Epiphytic herb; moist pine forest, cloud forest (occasional), 1650-2050 m; Morne Nacel to Morne La Visite, Rivière Blanche, "The Depression." Judd 4456, 4495, Zanoni & Mejía 24497. Endemic to Hispaniola.
- Tillandsia lescaillei* C. Wr. Epiphytic herb; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24581.
- Tillandsia selleana* Harms. Epiphytic herb; cloud forest, ca 1900 m; Morne Nacel region. Zanoni & Mejía 24578.
- Tillandsia usneoides* L. Epiphytic herb; moist pine forest (uncommon), ca 1900 m; Rivière Blanche. Judd 4829.
- Vriesea incurva* (Griseb.) Read. Epiphytic herb; moist pine forest (uncommon), 1750-1800 m; "The Depression." Judd 4462. Det. T. Zanoni.
- Vriesea sintenisii* (Bak.) L. B. Smith. Epiphytic herb; cloud forest, moist pine forest (occasional/abundant), 1600-2250 m; Morne d'Enfer to slightly east of Morne La Visite, Rivière Blanche. Judd 4308, 4424, 4524.

Order Commelinales
Family Cyperaceae (3/3)

- Carex ekmanii* Kuk. Terrestrial herb; pine forest (very common), 1800-2150 m; Morne La Visite, ± throughout pinelands. Judd 4379. Endemic to Hispaniola.
- Cyperus picardae* Boeckl. Terrestrial herb; pine forest (abundant), 1750-2200 m; Morne La Visite, Rivière Blanche, ± throughout pinelands. Judd 4405. Endemic to Hispaniola.
- Uncinia hamata* (Sw.) Urb. Terrestrial herb; moist pine forest (common), 1800-2150 m; Morne La Visite. Judd 4534.

Family Poaceae or Gramineae (11/14)

[Collections identified by Dr. David W. Hall, except where otherwise indicated]

- Andropogon glomeratus* (Walt.) BSP. var. *pumilis* Vasey. Terrestrial herb; pine forest (common), 1750-2150 m; Morne La Visite, ± throughout pinelands. Judd 4343.
- Andropogon urbanianus* Hitchc. Terrestrial herb; pine forest, open cloud forest (very common/abundant), 1750-2300 m; Morne La Visite to Pic Cabaio, ± throughout pinelands. Judd 4375, 4544. Endemic to Hispaniola.
- Arthrostyidium haitiense* (Pilger) Hitchc. & Chase. Climbing bamboo; cloud forest, moist pine forest (common/abundant), 1600-2150 m; between Morne d'Enfer and M. Fè Noir, to M. La Visite, ravine east of Park Center. Judd 4755. Endemic to Hispaniola.
- Arthrostyidium multispicatum* Pilger. Climbing bamboo; cloud forest (abundant), 1650-1750 m; Rivière Blanche. Judd 4394.
- Bromus unioloides* (Willd.) HBK. Terrestrial herb; pine forest (common), 1800-2050 m; ± throughout pinelands. Judd 4380. Introduced.
- Chusquea abietifolia* Griseb. Climbing bamboo; pine forest to cloud forest (occasional/abundant), 1650-2100 m; between Morne d'Enfer and M. Fè Noir, to M. La Visite, Rivière Blanche, other ravines, ± scattered in pinelands. Judd 4346, 4391, 4769, 4789, 4863. One collection identified by Dr. T. Soderstrom; species shows great variation in leaf width.
- Danthonia domingensis* Hack. & Pilger. Terrestrial herb; pine forest (locally abundant), 1700-2150 m; "The Depression," pinelands between Galette Seche and Pic Cabaio; Ekman collected this species on Morne La Visite. Judd 4474. Endemic to Hispaniola.
- Isachne rigidifolia* (Poir.) Urb. Terrestrial herb; pine forest, open areas in cloud forest (common/abundant), 1750-2300 m; Morne La Visite to Pic Cabaio, Rivière Blanche, other ravines, ± throughout pinelands. Judd 4368. Det. W. S. Judd.
- Lolium perenne* L. Terrestrial herb; pine forest, cloud forest, open disturbed areas, fields (common), 1800-2250 m; ± throughout plateau. Judd 4549, 4962. Introduced.
- Melinis minutiflora* Beauv. terrestrial herb; pine forest, cloud forest, especially disturbed open areas (common), 1750-1950 m; Rivière Blanche, ± scattered in pinelands. Judd 4406, 4963. Introduced.
- Panicum xalapense* HBK. Terrestrial herb; pine forest (common/abundant), 1750-2150 m; Morne La Visite, ± throughout pinelands. Judd 4365, 4883.
- Poa annua* L. Terrestrial herb; moist pine forest, especially rocky areas along streams (common), 1800-2000 m; Rivière Blanche, other ravines. Judd 4297. Introduced.

Poa compressa L. Terrestrial herb; pine forest, especially open disturbed areas (common), 1800-1900 m; ± scattered in pinelands. Judd 4884. Introduced.

Zeugites americana Willd. Terrestrial herb; moist pine forest (occasional), 1790-2150 m; northern slope of Morne La Visite, Rivière Blanche. Judd 4302, Zanoni & Mejia 24618.

**Mosses and Liverworts Collected in Parc National
Pic Macaya, Massif de La Hotte, Haiti.**

Division Bryophyta

[All collections identified by Dana Griffin, III, unless otherwise indicated]

Family Amblystegiaceae

Campylium chrysophyllum (Brid.) J. Lange. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3692, 3813, 3844a.

Family Bartramiaceae

Leiomela bartramioides (Hook.) Par. Moist pine forest/cloud forest; Morne Formon. Skean 1485.

Philonotis uncinata (Schwaegr.) Brid. Moist pine forest/ cloud forest; Morne Formon. Judd 3747.

Family Brachytheciaceae

Brachythecium stereopoma (Spruce ex Mitt.) Jaeg. Moist forest on limestone; Bois Formon. Skean 1285a.

Homalothecium leskeoides (Hedw.) Robins. Moist pine forest/ cloud forest; Morne Formon. Judd 3825, Skean 1546.

Lepyrodontopsis trichophylla (Hedw.) Broth. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon (?), Pic Macaya. Judd 3611c, Skean 1481.

Family Bryaceae

Anomobryum filiforme (Dicks.) Husn. Moist pine forest/cloud forest; Morne Formon. Judd 3777, 3783.

- Bryum argenteum* Hedw. Moist pine forest/cloud forest; Morne Formon. Judd 3844b.
- Bryum cruegeri* Hampe ex C. Müll. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, southern slopes of Morne Formon, Morne Cavalier. Judd 3994, 4058b.
- Bryum* cf. *pseudotriquetrum* (Hedw.) Gaertn. Meyer & Scherb. Moist forest on limestone; lower southern slopes of Morne Formon. Judd 3689. Det. William C. Steere.

Family Calymperaceae

- Syrhobodon incompletus* Schwaegr. Moist forest on limestone; Bois Formon. Skean 1219 p. p.

Family Daltoniaceae

- Callicosta affinis* (Hook.) C. Müll. Moist forest on limestone; Bois Formon. Judd 3569c, 3575, 3611b.
- Callicosta cristatum* (Mitt.) Crosby. Moist forest on limestone; Bois Formon. Judd 3601.
- Callicosta fendleri* (C. Müll.) Crosby. Moist forest on limestone; Bois Formon. Judd 3611a.
- Lepidopilum amplirete* (Sull.) M.H. Moist forest on limestone; Bois Formon. Skean 1218. Det. William C. Steere.
- Lepidopilum antillarum* Mitt. Moist forest on limestone; Bois Formon. Skean 1215. Det. William C. Steere.
- Lepidopilum muelleri* (Hampe) Spruce. Moist forest on limestone; Bois Formon. Judd 3595.
- Lepidopilum tortifolium* Mitt. Moist forest on limestone; Bois Formon. Judd 3562, 3582.

Family Dicranaceae (including Leucobryaceae)

- Atractylocarpus longisetus* (Hook.) Bartr. Moist pine forest/cloud forest; Pic Macaya. Judd 4191.
- Bryohumbertia filifolia* (Hornsch.) J.-P. Frahm. Moist pine forest/ cloud forest; Morne Formon. Judd 3872a, 3874a.
- Campylopus capitulatus* Bartr. Moist pine forest/cloud forest; Morne Formon. Judd 3874b.
- Campylopus* cf. *cubensis* Sull. Moist pine forest/cloud forest; Morne Formon. Pic Macaya. Judd 3778, 4196. Det. William C. Steere.
- Campylopus fragilis* (Brid.) B.S.G. Moist pine forest/cloud forest; Morne Formon. Judd 3872b. Det. William C. Steere.

- Campylopus underwoodii* R. S. Williams. Moist pine forest/ cloud forest; Morne Formon, Pic Macaya. Judd 4101, 4201. Det. William C. Steere.
- Campylopus* (sterile) sp. Moist pine forest/cloud forest; Morne Formon. Judd 4099. Det. William C. Steere.
- Dicranella perrottetii* (Mont.) Mitt. Moist pine forest/ cloud forest; Morne Formon. Judd 3882.
- Holomitrium calycinum* (Hedw.) Mitt. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3827a, 4072, 4183.
- Leucobryum albicans* (Schwaegr.) Mitt. Moist pine forest; Morne Formon. Skean 1519.
- Leucobryum albidum* (Brid.) Lindb. Moist pine forest; Pic Macaya. Judd 4170.
- Leucobryum antillarum* Schimp. ex Besch. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3554, 3596, 3609, 3752.
- Leucoloma serrulatum* Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3605, 3871b.

Family Ditrichaceae

- Ditrichum rufescens* (Hampe) Broth. Moist pine forest/cloud forest; Morne Formon. Judd 3875.

Family Entodontaceae

- Entodon macropodus* (Hedw.) C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 3823a, Skean 1380d.

Family Fissidentaceae

- Fissidens asplenioides* Hedw. Moist forest on limestone; Bois Formon. Skean 1219 p.p.
- Fissidens cristatus* Wils. ex Mitt. Moist pine forest/cloud forest; Pic Macaya. Judd 4171, 4210, Skean 1410a, 1411, 1419.
- Fissidens polypodioides* Hedw. Moist pine forest/cloud forest; Morne Formon. Judd 3704, 3719, 3779, 3907.
- Fissidens semiliretis* Sull. Moist forest on limestone; Bois Formon. Judd 3573b, 3615.

Family Funariaceae

Funaria hygrometrica Hedw. var. *calvescens* (Schwaegr.) Mont. Moist pine forest/cloud forest; Morne Formon. Judd 3745b, 3900.

Family Hookeriaceae

Adelothecium bogotense (Hampe) Mitt. Moist pine forest/ cloud forest; Morne Formon. Judd 3826.

Cyclodictyon varians (Sull.) Broth. Moist pine forest/ cloud forest; Morne Formon. Judd 3910.

Hemiragis aurea (Brid.) Kindb. Moist forest on limestone; Bois Formon. Judd 3557, Skean 1217, 1255.

Hookeria acutifolia Hook. Moist pine forest/cloud forest; Morne Formon. Judd 3897.

Hookeriopsis luteo-rufescens Besch. Moist forest on limestone; Bois Formon. Judd 3608b.

Hookeriopsis sp. Moist pine forest/cloud forest; Morne Formon. Skean 1492b.

Family Hypnaceae

Ctenidium malacodes Mitt. Moist pine forest/cloud forest; Morne Formon. Skean 1380e, 1491.

Ectropothecium leptochaeton (Schwaegr.) Buck. Moist forest on limestone; Bois Formon. Judd 3920.

Hypnum polypterum (Mitt.) Broth. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3800, 3842, 4071, Skean 1380c.

Mittenothamnium reptans (Hedw.) Card. Moist pine forest/ cloud forest; Morne Formon, Pic Macaya. Judd 3749, 3822, 4223.

Family Hypopterygiaceae

Hypopterygium tamariscinum (Hedw.) Brid. Moist pine forest/ cloud forest; Morne Formon, Pic Macaya. Judd 3909, 4173, 4211.

Family Lembophyllaceae

Porotrichodendron superbum (Tayl.) Broth. Moist pine forest/cloud forest; Morne Formon. Judd 3823b.

Family Meteoriaceae

- Aerobryopsis mexicana* Card. Moist forest on limestone; Bois Formon. Judd 3578. Det. William C. Steere.
- Barbella cubensis* (Mitt.) Broth. Moist forest on limestone; Bois Formon. Skean 1317, 1318.
- Meteoridium remotifolium* (C. Müll.) Manuel. Moist forest on limestone; Bois Formon. Judd 3551, 3698.
- Meteorium illecebrum* (C. Müll.) Mitt. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3678, 4074.
- Papillaria imponderosa* (Tayl.) Broth. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3843a, 3924, Skean 1480.
- Papillaria penicillata* (Dozy & Molkenb.) Broth. Moist pine forest/cloud forest; Morne Formon. Judd 3745c.
- Pilotrichella flexilis* (Hedw.) Jaeg. Moist pine forest; cloud forest; Morne Formon, Pic Macaya. Judd 3775, 3782, 3898, 4070, 4169, Skean 1454.
- Pilotrichella hexasticha* (Schwaegr.) Jaeg. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3564, 3812.
- Pilotrichella pentasticha* (Brid.) Wijk. & Marg. Moist forest on limestone; Bois Formon. Judd 3680a, Skean 1285b.
- Squamidium nigricans* (Hook.) Broth. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3799, 3923.

Family Mniaceae

- Plagiomnium rhynchophorum* (Hook.) T. Kop. Moist pine forest/cloud forest; Morne Formon. Judd 3912a, 4098, D. Cordier s.n.

Family Neckeraceae

- Porotrichum fasciculatum* (Hedw.) Mitt. Moist pine forest/ cloud forest; Morne Formon. Judd 3911, Skean 1482.
- Porotrichum insularum* Mitt. Moist pine forest/cloud forest; Morne Formon. Skean 1488.

Family Orthotrichaceae

- Groutiella mucronifolia* (Hook. & Grev.) Crum & Steere. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3679, 3798.

- Macrocoma tenue* (Hook. & Grev.) Vitt subsp. *sullivantii* (C. Müll.) Vitt. Moist forest on limestone, Bois Formon. Judd 3690.
- Macromitrium cirrosum* (Hedw.) Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3565, 3576, 3588, 3589, 3590, 3722, 3780.
- Macromitrium homalacron* C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 4100.
- Macromitrium longifolium* (Hook.) Brid. Moist pine forest/ cloud forest; Pic Macaya. Judd 4208, Skean 1418.
- Macromitrium scoparium* Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3874c.
- Macromitrium stratosum* Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3821, 3876 4073.
- Schlotheimia jamesonii* (Arn.) Brid. Moist forest on limestone; Bois Formon. Judd 3571.
- Schlotheimia tecta* Hook.f. & Wils. Moist pine forest/cloud forest; Morne Formon. Judd 3827b, 3904, Skean 1420.

Family Phyllogoniaceae

- Phyllogonium fulgens* (Hedw.) Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3569, 3604, 3685, 3902, 4069, Skean 1383, 1545.

Family Polytrichaceae

- Pogonatum robustum* Mitt. Moist pine forest/cloud forest; Pic Macaya; described by Thériot (1944) as *P. ekmanii*, from Pic Formon. Judd 4192, 4203, Skean 1465.
- Pogonatum tortile* P.-Beauv. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3774, 3925.
- Polytrichum juniperinum* Hedw. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3695, 3708, 3787, 3843b, Skean 1547.

Family Pottiaceae

- Anoetangium aestivum* (Hedw.) Mitt. Moist forest on limestone; Bois Formon. Judd 3921.
- Barbula arcuata* Griff. Moist pine forest; Morne Formon. Judd 3841b.
- Barbula hispaniolensis* Buck & Steere. Moist pine forest; Morne Formon. Judd 3841a.
- Barbula* sp. Moist pine forest; Morne Formon. Judd 3745a.

- Hymenostylium recurvirostrum* (Hedw.) Dix. Moist pine forest/cloud forest; Morne Formon. Judd 3811.
- Leptodontium viticulosoides* (P.-Beauv.) Wijk. & Marg. Moist pine forest/cloud forest. Judd 4094, 4175.
- Pseudosymblypharis schimperianus* (Par.) Crum. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Pic Macaya. Judd 3573a, Skean 1456. Det. William C. Steere (3573).
- Trichostomum sublamprothecium* Par. Moist pine forest/cloud forest; Pic Macaya. Skean 1455.
- Weissia jamaicensis* (Mitt.) Grout. Moist forest on limestone, pine forest; Bois Formon, Morne Formon. Judd 3797, 3848, 3922.

Family Prionodontaceae

- Prionodon densus* (Hedw.) C. Müll. Moist forest on limestone; Bois Formon. Judd 3686.

Family Pterobryaceae

- Pirella filicina* (Hedw.) Card. Moist forest on limestone; Bois Formon. Judd 3572, 3584, 3598, 3603.
- Pterobryon densum* (Schwaegr.) Hornsch. Moist forest on limestone; Bois Formon. Judd 3696.

Family Racopilaceae

- Racopilum tomentosum* (Hedw.) Brid. Moist forest on limestone; Bois Formon. Judd 3555a.

Family Rhizogoniaceae

- Hymenodon aeruginosus* (Hook.f. & Wils.) C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 3871a.
- Pyrrobryum spiniforme* (Hedw.) Mitt. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3561a, 3583, 3700, 3751, Skean 1520.

Family Sematophyllaceae

- Acroporium caespitosum* (Hedw.) Buck. Moist forest on limestone; Bois Formon. Judd 3608a, 3691.
- Sematophyllum insularum* (Sull.) Mitt. Moist pine forest/ cloud forest; Morne Formon. Judd 3707.

Sematophyllum lindigii (Hampe) Mitt. Moist pine forest/ cloud forest; Pic Macaya. Judd 4182.

Family Sphagnaceae

Sphagnum magellanicum Brid. Moist pine forest/cloud forest; Morne Formon. Judd 4096.

Sphagnum meridense (Hampe) C. Müll. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3720, 3869, 4095, 4184, 4199, s.n.

Sphagnum subsecundum Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4195.

Sphagnum sp. Moist pine forest; Pic Macaya. Skean 1409.

Family Thuidiaceae

Thuidium urceolatum Lor. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon, Pic Macaya. Judd 3566, 3594, 3597, 3614b, 3677, 3749b, 3786, 3905, Skean 1380a.

Division Hepatophyta

Family Cephaloziaceae

Nowellia evansii Grolle. Moist pine forest/cloud forest; Morne Formon. Judd 4094b. Det. Jirí Vána.

Family Dilaenaceae

Pallavicinia lyellii (Hook.) S. Gray. Moist pine forest/cloud forest; Morne Formon. Judd 3903.

Symphyogyna brogniartii Mont. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3870, Skean 1421.

Family Frullaniaceae

Frullania atosanguinea Taylor ex Spruce. Moist pine forest/cloud forest; Morne Formon. Skean 1380b.

Frullania ericoides Nees. Moist forest on limestone; Bois Formon. Judd 3960.

Frullania sp. Moist pine forest; Pic Macaya. Judd 4206.

Family Jungermanniaceae

Jamesoniella rubricaulis Nees. Moist forest on limestone; Bois Formon. Judd 3684.

Family Lejeuneaceae

Bryopteris fruticolosa Taylor. Moist forest on limestone; Bois Formon. Judd 3569a, 3593, 3613, 3614a, Skean 1254.

Ceratolejeunea brevinervis (Spruce) Evans. Moist forest on limestone; Bois Formon. Judd 3602.

Cheilolejeunea inflexa (Hampe ex Lehm.) Grolle. Moist forest on limestone; Bois Formon. Judd 3612b. Det. R. Grolle.

Drepanolejeunea anoplantha (Spruce) Steph. Moist forest on limestone; Bois Formon. Judd 3612a. Det. R. Grolle.

Hygrolejeunea reflexistipula (Lehm. & Lindenb.) Schiffn. Moist pine forest/cloud forest; Morne Formon. Judd 3825b. Det. R. Grolle.

Macrolejeunea sessiliflora Steph. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3825a, Skean 1220.

Marchesinia brachiata Schiffn. Moist forest on limestone; Bois Formon. Judd 3675, 3695b. Det. R. Grolle.

Neurolejeunea breutelii (Gott.) Evans. Moist forest on limestone; Bois Formon. Judd 3567.

Odontolejeunea sieberiana (Gott.) Schiffn. Moist forest on limestone; Bois Formon. Judd 4591b. Det. R. Grolle.

Lejeuneaceae indet. Moist forest on limestone; Bois Formon. Judd 3555b.

Family Lepidoziaceae

Bazzania cf. longa (Nees) Trev. Moist pine forest/cloud forest; Pic Macaya. Judd 4174.

Bazzania jamaicensis (Lehm. & Lindb.) Trev. Moist pine forest/cloud forest; Pic Macaya. Judd 4176, 4198, Skean 1413. Det. W. S. Judd.

Lepidozia cupressina (Sw.) Lindenb. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3825, 4181.

Lepidozia munchiana Steph. Moist pine forest/cloud forest; Pic Macaya. Judd 4179.

Lepidozia patens Lindenb. Moist pine forest/cloud forest; Morne Formon. Judd 3723, 3837c, 3879.

Micropterygium trachyphyllum Nees. Moist forest on limestone; Bois Formon. Judd 3560.

Family Lophocoleaceae

- Heteroscyphus combinatus* (Nees) Schiffn. Moist pine forest/cloud forest; Morne Formon. Judd 3824.
- Leptoscyphus amphibolius* (Nees) Grolle. Moist pine forest/cloud forest; Pic Macaya. Judd 4205. Det. Jirí Vána.
- Lophocolea coadunata* (Sw.) Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4186.
- Lophocolea muricata* (Lehm.) Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4185.
- Lophocolea trapezoidea* Mont. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 4094a, 4177. Det. Jirí Vána.

Family Marchantiaceae

- Dumortiera hirsuta* (Sw.) Nees. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3908, Skean 1214, 1385, 1483. Det. David A. Breil (3908).
- Marchantia paleacea* Bert. Moist pine forest/cloud forest; Morne Formon. Skean 1384. Det. David A. Breil.
- Marchantia polymorpha* L. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, lower southern slopes of Morne Formon, M. Cavalier. Judd 3697, 4059.

Family Metzgeriaceae

- Metzgeria* sp. Moist pine forest/cloud forest; Morne Formon. Judd 3901.

Family Monocleaceae

- Monoclea gottschei* Lindb. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3558, 3908b. Det. David A. Breil (3558).

Family Plagiochilaceae

- Plagiochila acanthoda* Lindb. & Gott. Cloud forest/moist pine forest; Morne Formon, Pic Macaya. Skean 1490. Det. H. Inoue.
- Plagiochila adiantoides* (Sw.) Dum. Cloud forest/moist pine forest; Morne Formon, "saddle" between M. Formon and Pic Macaya. Skean 1415, 1480, 1484. Det. H. Inoue.
- Plagiochila angusticedens* Steph. Cloud forest/moist pine forest; Morne Formon, Pic Macaya. Judd 3721, 4193. Det. H. Inoue.

- Plagiochila angustispina* Steph. Cloud forest/moist pine forest; Pic Macaya. Judd 4188, 4189. Det. H. Inoue.
- Plagiochila barbadensis* Steph. Moist pine forest/cloud forest; Morne Formon. Judd 3776. Det. H. Inoue.
- Plagiochila bidens* Gott. Moist forest on limestone, cloud forest/moist pine forest; Bois Formon, Morne Formon, Pic Macaya. Judd 3585, Skean 1417, 1429a. Det. H. Inoue.
- Plagiochila bifaria* (Sw.) Dum. Moist forest on limestone, disturbed cloud forest. Bois Formon, southern slope of Morne Formon. Judd 3687, 3699, 3701b. Det. H. Inoue.
- Plagiochila bursata* (Desv.) Lindenb. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon (?), Pic Macaya. Skean 1223, 1416, 1423, 1424.
- Plagiochila crispata* Gott. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3688, Skean 1521. Det. H. Inoue.
- Plagiochila cristata* (Sw.) Dum. Moist pine forest/cloud forest; Morne Formon. Judd 3878a.
- Plagiochila jamesonii* Tayl. Moist pine forest/cloud forest; Morne Formon. Judd 3899.
- Plagiochila kroneana* Steph. Moist forest on limestone; Bois Formon, southern slope of Morne Formon. Judd 3705 p.p. Det. H. Inoue.
- Plagiochila macvicarii* Steph. Moist pine forest/cloud forest; Morne Formon. Judd 3906. Det. H. Inoue.
- Plagiochila perrottetiana* Mont. & Gott. Moist forest on limestone, cloud forest/moist pine forest; Bois Formon, Morne Formon. Judd 3617, Skean 1480a. Det. H. Inoue.
- Plagiochila solitaria* Steph. Moist pine forest/cloud forest; Pic Macaya. Judd 4189. Det. H. Inoue.
- Plagiochila superba* (Nees) Dum. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon, Pic Macaya. Judd 3581, 3705 p.p., 4207 p.p., Skean 1222. Det. H. Inoue.
- Plagiochila tenuis* Lindb. Moist pine forest/cloud forest; Pic Macaya. Judd 4207 p.p. Det. H. Inoue.
- Tylimanthus approximatus* (Lindenb.) Spruce. Moist pine forest/cloud forest; Pic Macaya. Judd 4197, Skean 1422. Det. R. Grolle (4197).

Family Porellaceae

- Porella swartziana* (Web.) Trev. Moist pine forest/cloud forest; Morne Formon. Judd 3824b.

Family Ptilidiaceae

- Hebertus divergens* (Steph.) Herz. Moist forest on limestone; Bois Formon. Judd 3568.
- Herbertus juniperoideus* (Sw.) Grolle. Moist pine forest/ cloud forest; Pic Macaya. Judd 4180, Skean 1414.
- Hebertus pensilis* (Tayl.) Spruce. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3877, Skean 1412.
- Trichocolea* sp. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon, Pic Macaya. Judd 3702, 3785, 4209, Skean 1487.

Family Radulaceae

- Radula cubensis* Yamada. Moist forest on limestone; Bois Formon. Judd 3703. Det. Kohsaku Yamada.
- Radula floridana* Castle. Moist forest on limestone; Bois Formon. Judd 3610. Det. Kohsaku Yamada.
- Radula inflexa* Gott. ex Steph. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Pic Macaya. Judd 3610b, 4200. Det. Kohsaku Yamada.
- Radula* sp. nov. (to be described by K. Yamada). Moist forest on limestone; Bois Formon. Judd 3577, 3578, 3592, Skean 1221. Det. Kohsaku Yamada.
- Radula microlobula* Castle. Moist forest on limestone; Bois Formon. Skean 1216. Det. Kohsaku Yamada.

Family Riccardiaceae

- Riccardia* sp. Moist pine forest/cloud forest; Pic Macaya. Judd 4178.

Family Scapaniaceae

- Scapania portoricensis* H. & G. Moist pine forest/cloud forest; Pic Macaya. Skean 1410b.

**Mosses and Liverworts Collected in Parc National
Morne La Visite, Massif de la Selle, Haiti.**

Division Bryophyta

[All collections identified by Dana Griffin, III, except for Buck specimens,
unless otherwise indicated]

Family Amblystegiaceae

- Amblystegium serpens* (Hedw.) BSG. Cloud forest; Morne Nacel region. Buck 9383.
- Campylium chrysophyllum* (Brid.) J. Lange. Moist pine forest, moist sinkhole vegetation; Rivière Blanche, Truing Marassa. Judd 4606a, 4633.
- Campylium praegracile* (Mitt.) Broth. Cloud forest; Morne Nacel region. Buck 9437, 9450.
- Leptodictyum riparium* (Hedw.) Warnst. Moist pine forest, cloud forest; Rivière Blanche. Judd 4594, 4609.
- Platyhypnidium riparioides* (Hedw.) Dix. Moist pine forest, cloud forest; Morne d'Enfer to M. Fè Noir, Rivière Blanche. Judd 4590, 4772.

Family Bartramiaceae

- Breutelia brittoniae* Ren. & Card. Cloud forest; Pic Cabaio. Judd 4556.
- Breutelia tomentosa* (Brid.) Jaeg. Moist pine forest/cloud forest; Morne La Visite. Judd 4536.
- Philonotis hastata* (Duby.) Wijk. & Marg. Moist pine forest; Rivière Blanche. Judd 4608.
- Philonotis longiseta* (Michx.) Britt. Moist pine forest; Rivière Blanche. Judd 4276, 4282, 4606c.

Family Brachytheciaceae

- Brachythecium zanonii* Buck. Cloud forest; Morne Nacel region. Buck 9440.
- Homalothecium leskeoides* (Hedw.) Robins. Pine forest, cloud forest, moist sinkhole vegetation; between Morne d'Enfer and M. Fè Noir, Truing Marassa, ± scattered in pinelands. Buck 9364. Judd 4387a, 4617, 4774.
- Rhynchostegium scariosum* (Tayl.) Jaeg. Moist vegetation of sinkhole; Truing Marassa. Judd 4615.

Family Bryaceae

- Bryum argenteum* Hedw. Pine forest, open areas in cloud forest; Pic Cabaio, Galette Seche. Judd 4557, 4864, 4866.
- Bryum limbatum* C. Müll. Moist pine forest; Rivière Blanche. Judd 4604.
Det. William C. Steere.
- Bryum* (sterile) sp. Pine forest; Galette Seche. Judd 4868b.
- Rhodobryum domingense* (Brid.) Besch. Moist pine forest; "The Depression."
Judd 4635.

Family Calymperaceae

- Syrrhopodon gaudichaudii* Mont. Cloud forest; Morne d'Enfer. Judd 4737b.

Family Cryphaeaceae

- Cryphaea reticulata* Besch. Cloud forest; Morne Nacel region. Buck 9338, 9343, 9350.

Family Daltoniaceae

- Daltonia longifolia* Tayl. Cloud forest; Morne Nacel region. Buck 9454.
- Lepidopilum robustum* Mitt. Cloud forest; Morne Nacel region. Buck 9368.

Family Dicranaceae (including Leucobryaceae)

- Campylopus fragilis* (Brid.) B.S.G. Cloud forest; Morne d'Enfer. Buck 9359, Judd 4737a. Det. William C. Steere.
- Dicranum frigidum* C. Müll. Cloud forest/moist pine forest; vicinity of Pic Cabaio. Judd 4828.
- Dicranum sumichrasti* Duby. Moist pine forest; "The Depression." Judd 4634.
- Leucobryum antillarum* Schimp. ex Besch. Cloud forest; Morne d'Enfer. Judd 4733.

Family Entodontaceae

- Entodon hampeanus* C. Müll. Cloud forest; Morne d'Enfer. Judd 4696.
- Entodon macropodus* (Hedw.) C. Müll. Cloud forest; Morne d'Enfer to M. Fè Noir. Judd 4773. Det. William C. Steere.

Family Fissidentaceae

- Fissidens adianthoides* Hedw. Moist sinkhole vegetation; Truing Marassa. Judd 4619.

- Fissidens asplenioides* Hedw. Moist pine forest; Morne La Visite. Judd 4581.
Fissidens bryoides Hedw. Cloud forest; Morne Nacel region. Buck 9403.
Fissidens repanda Wils. Cloud forest; Morne Nacel region. Buck 9408.

Family Funariaceae

- Funaria hygrometrica* Hedw. var. *calvescens* (Schwaegr.) Mont. Cloud forest; Morne d'Enfer. Judd 4694.

Family Hookeriaceae

- Adelothecium bogotense* (Hampe) Mitt. Cloud forest; Morne Nacel region. Buck 9356, 9456a.
Cyclodictyon albicans (Hedw.) Broth. Moist sinkhole vegetation; Truing Marassa. Judd 4621. Det. William C. Steere.

Family Hypnaceae

- Chryso-hypnum diminutivum* (Hampe) Buck. Moist pine forest; Rivière Blanche. Judd 4602.
Herzogiella cylindricarpa (Card.) Iwats. Moist pine forest; Morne La Visite. Judd 4579, 4580.
Hypnum polypterum (Mitt.) Broth. Cloud forest; moist pine forest; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Rivière Blanche. Judd 4589, 4700, 4806, 4870.
Mittenothamnium reptans (Hedw.) Card. Cloud forest; Morne Nacel region. Buck 9344, 9390 9396.

Family Hypopterygiaceae

- Hypopterygium tamariscinum* (Hedw.) Brid. Cloud forest; ravine east of Berac area. Buck 9407, Judd 4814.

Family Lembophyllaceae

- Porotrichodendron bertrandii* (Ren. & Card.) Broth. Cloud forest; Morne Nacel region. Buck 9404.
Porotrichodendron superbum (Tayl.) Broth. Cloud forest; Morne d'Enfer, Rivière Blanche. Buck 9376, 9409, Judd 4592, 4697.

Family Meteoriaceae

- Meteoriopsis patula* (Hedw.) Broth. Cloud forest; Rivière Blanche. Judd 4593.
- Meteorium illecebrum* (C. Müll.) Mitt. Moist pine forest; Rivière Blanche, "The Depression." Judd 4269, 4271, 4632.
- Papillaria deppei* (Hornsch.) Jaeg. Cloud forest; Morne Nacel region. Buck 9353, 9385.
- Papillaria imponderosa* (Tayl.) Broth. Moist pine forest; Morne La Visite, Rivière Blanche. Judd 4272, 4582.
- Papillaria penicillata* (Dozy & Molkenb.) Broth. Cloud forest, moist pine forest; Morne Fè Noir, M. La Visite, Rivière Blanche, "The Depression." Buck 9397, 9425, Judd 4339, 4575, 4623, 4959.
- Pilotrichella cuspidans* Ren. & Card. Cloud forest, moist pine forest; Morne d'Enfer, Pic Cabaio to Roche Cabrit/Belle Fontaine, "The Depression." Buck 9453, Judd 4639, 4698b, 4874, 4875b.
- Pilotrichella hexasticha* (Schwaegr.) Jaeg. Cloud forest; Morne Nacel region. Buck 9395.
- Pilotrichella pentasticha* (Brid.) Wijk. & Marg. Moist pine forest; Rivière Blanche. Judd 4597, 4598b.
- Squamidium leucotrichum* (Tayl.) Broth. Cloud forest; Morne d'Enfer. Judd 4739.
- Squamidium nigricans* (Hook.) Broth. Cloud forest; Morne d'Enfer to M. Fè Noir, Rivière Blanche. Judd 4600, 4738, 4770.

Family Mniaceae

- Plagiomnium rhynchophorum* (Hook.) T. Kop. Cloud forest; Morne Nacel region. Buck 9394.

Family Neckeraceae

- Neckera urnigera* C. Müll. Moist pine forest; Morne La Visite. Buck 9455, Judd 4584b.
- Porotrichum cobanense* C. Müll. Moist sinkhole vegetation; Truing Marassa. Judd 4617b, 4620.
- Porotrichum fasciculatum* (Hedw.) Mitt. Cloud forest; ravine east of Berac area. Judd 4815.

Family Orthotrichaceae

- Macromitrium cirrosum* (Hedw.) Brid. Cloud forest; Morne Nacel region. Buck 9382.

Macromitrium guatemalense C. Müll. Cloud forest; Pic Cabaio to Roche Cabrit/Belle Fontaine. Judd 4871.

Macromitrium pentastichum C. Müll. Cloud forest; Morne Nacel region. Buck 9449.

Macromitrium podocarp C. Müll. Moist pine forest/cloud forest; Morne La Visite. Judd 4537.

Family Polytrichaceae

Polytrichum juniperinum Hedw. Moist pine forest/cloud forest; Morne La Visite, ± scattered in pinelands. Judd 4577.

Family Pottiaceae

Anoetangium aestivum (Hedw.) Mitt. Cloud forest, moist sinkhole vegetation; Rivière Blanche, Truing Marassa. Judd 4599, 4613.

Barbula bescherellei Sauerb. ex Jaeg. Pine forest, cloud forest; Galette Seche, Rivière Blanche. Judd 4611, 4865. Det. William C. Steere.

Barbula subteretiusscula Card. Moist pine forest/cloud forest; Morne La Visite. Judd 4578a.

Hymenostylium recurvirostrum (Hedw.) Dix. Moist pine forest; Rivière Blanche. Judd 4341. Det. William C. Steere.

Hyophila involuta (Hook.) Jaeg. & Sauerb. Pine forest; Galette Seche. Judd 4868a. Det. William C. Steere.

Molendoo sendtneriana (B.S.G.) Limpr. Moist pine forest; Rivière Blanche. Judd 4277.

Pleurochaete luteola (Besch.) Thér. Pine forest; Galette Seche. Judd 4867.

Trichostomum tenuirostre (Hook. & Tayl.) Lindb. Cloud forest; Morne Nacel region. Buck 9380.

Weissia jamaicensis (Mitt.) Grout. Moist pine forest; Rivière Blanche. Judd 4606b, 4612.

Family Prionodontaceae

Prionodon densus (Hedw.) C. Müll. Cloud forest, moist pine forest; Morne d'Enfer, M. La Visite, Pic Cabaio to Roche Cabrit/Belle Fontaine. Buck 9451, Judd 4583, 4595, 4695, 4875a.

Family Racopilaceae

Racopilum tomentosum (Hedw.) Brid. Cloud forest; Morne Nacel region. Buck 9386.

Family Sematophyllaceae

Wijkia flagellifera (Broth.) Crum. Cloud forest; Morne Nacel region. Buck 9357.

Family Thuidiaceae

Anomodon attenuatus (Hedw.) Hueben. Pine forest; ± scattered in pinelands. Judd 4387b.

Anomodon rostratus (Hedw.) Schimp. Pine forest, cloud forest; Morne d'Enfer to M. Fè Noir, Rivière Blanche, ± scattered in pinelands. Buck 9347, Judd 4340, 4388, 4771.

Haplocladium microphyllum (Hedw.) Broth. Cloud forest; Morne d'Enfer. Buck 9412, 9444, Judd 4736.

Thuidium minutulum (Hedw.) B.S.G. Cloud forest; Morne d'Enfer. Judd 4735.

Thuidium urceolatum Lor. Moist pine forest, moist sinkhole vegetation; Belle Fontaine, Rivière Blanche, Truing Marassa. Judd 4281, 4616.

Division Hepatophyta**Family Dilaenaceae**

Pallavicinia byellii (Hook.) S. Gray. Moist pine forest/cloud forest; Rivière Blanche. Judd 4603.

Family Grimaldiaceae

Asterella rugosa Evans. Cloud forest/moist pine forest; ravine east of Berac area, Rivière Blanche. Judd 4610, 4295. Det. David A. Breil.

Family Lejeuneaceae

Drepanolejeunea orthophylla (Nees & Mont.) Bischl. Cloud forest; Rivière Blanche. Judd 4591a. Det. R. Grolle.

Lejeunea (sterile) sp. Moist pine forest; Rivière Blanche. Judd 4342. Det. R. Grolle.

Odontolejeunea sieberiana (Gott.) Schiffln. Moist pine forest; Rivière Blanche. Judd 4591b. Det. R. Grolle.

Family Marchantiaceae

Dumortiera hirsuta (Sw.) Nees. Moist pine forest; Rivière Blanche. Judd 4607.

Marchantia breviloba Evans. Moist pine forest, cloud forest; Rivière Blanche, ravine east of Berac area, Morne d'Enfer. Judd 4280, 4742, 4955.
Det. David A. Breil.

Family Plagiochilaceae

Plagiochila boissieri Steph. Moist pine forest, cloud forest; Morne La Visite, Rivière Blanche. Judd 4275, 4584a. Det. H. Inoue.

Plagiochila hypnoides Lindb. Cloud forest; Rivière Blanche. Judd 4598a.
Det. H. Inoue.

Plagiochila crispata Gott. Cloud forest; Rivière Blanche. Judd 4596. Det. H. Inoue.

Family Porellaceae

Porella brasiliensis (Raddi) Schiffn. Cloud forest; Morne d'Enfer. Judd 4701.

Porella crispata (Hook.) Trev. Pine forest; "The Depression." Judd 4629.

Porella swartziana (Web.) Trev. Cloud forest, pine forest; Morne d'Enfer, "The Depression." Judd 4637, 4699.

Porella sp. Cloud forest; Pic Cabaio to Roche Cabrit. Judd 4872.

Family Radulaceae

Radula korthalsii Steph. Moist sinkhole vegetation; Truing Marassa. Judd 4618. Det. Kohsaku Yamada.

Radula mollis Lindenb. & Bott. Cloud forest; Morne Nacel region. Buck 9446.

Radula voluta Tayl. Moist pine forest; Rivière Blanche, "The Depression." Judd 4270, 4636. Det. Kohsaku Yamada.

Family Rebouliaceae

Reboulia hemisphaerica (L.) Raddi. Cloud forest; Morne d'Enfer. Judd 4734.

Family Targioniaceae

Targionia hypophylla L. Moist pine forest; Rivière Blanche. Judd 4336.

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APPENDIX

Macrolichens Collected in Parc National Morne La Visite
and Parc National Pic Macaya, Haiti.

All collections were identified by Dr. Richard C. Harris unless otherwise indicated. Lichens collected in Parc Morne La Visite are indicated by "LV"; those collected in Parc Pic Macaya are indicated by "M".

- Bulbothrix ventricosa* (Hale & Kurokawa) Hale; LV; Judd 4591c.
Caloplaca crocea (Krempelh.) Hafellner & Poelt; LV; Baird LV-15.
Cladina confusa (R. Sant.) Follm. & Ahti; LV; Judd 4622.
Cladina rangiferina (L.) Nyl. subsp. *abbayesii* (Ahti) Culb.; LV; Judd 4957.
Cladina subtenuis (des Abb.) Hale & Culb.; LV; Judd 4958.
Cladonia ceratophylla (Sw.) Sprengel; LV; Buck 9373, 9436a, Judd 4869.
Cladonia didyma (Fée) Vainio var. *didyma*; LV; Judd 4624.
Cladonia didyma (Fée) Vainio var. *vulcanica* (Zoll.) Vainio; LV, M; Baird LV-7, Judd 3681, 3710, 3745b, Skean 1452.
Cladonia furcata (Hudson) Schrader; LV, M; Judd 4187, 4278, Skean 1453.
Cladonia merochlorophaea Asah.; LV, M; Judd 3682b, 4168, 4745a.
Cladonia multipartita (Mull. Arg.) Ahti; M; Judd 3682a.
Cladonia pocillum (Ach.) O.J. Richard; LV; Baird LV-14, Buck 9345, 9406, Judd 4626.
Cladonia ramulosa (With.) Laundon; LV; Judd 4745b.
Cladonia spiculata (Ach.) Ahti; M; Judd 4172.
Cladonia squamosa Hoffm. var. *subsquamosa* (Nyl. ex Leight) Vainio; M; Judd 4060.
Cladonia subradiata (Vainio) Sandst. LV. Buck 9436.
Cetrariastrum vexans Culb. & Culb.; LV, M; Judd 3746, 4702.
Coccocarpia palmicola (Spreng.) Gallow & Arridss. LV. Buck 9430.
Coccocarpia pellita (Ach.) Mull. Arg.; M; Judd 3574.
Dictyonema sp.; M; Judd 3784. Det. Jack Gibson.
Fistulariella inflata (Hook.f. & Tayl.) Hook.f. & Tayl.; LV; Buck 9435.
Heterodermia circinalis (Zahlbr.) ined.; LV; Judd 4628.
Heterodermia comosa (Eschw.) Follm. & Redón.; LV; Buck 9346.
Heterodermia leucomelos (L.) Poelt subsp. *boryi* (Fée) Swinsc. & Krog; M, LV; Buck 9388, Judd 3846b.
Heterodermia leucomelos (L.) Poelt subsp. *leucomelos*; LV; Buck 9421, 9427.
Heterodermia lutescens (Kurok.) Follm.; LV; Buck 9434.
Hypotrachyna costaricensis (Nyl.) Hale; LV; Judd 4703.
Hypotrachyna croceopustulata (Kurokawa) Hale; LV; Judd 4294a.
Hypotrachyna degelii (Hale) Hale; M; Judd 3919.

- Hypotrachyna revoluta* (Slörke) Hale; LV; Buck 9365.
Hypotrachyna sp.; LV, Judd 4294b.
Leptogium azureum (Sw.) Mont. s. lat.; LV; Buck 9370, Judd 4818.
Leptogium sp.; LV, M; Judd 3552, 4685.
Lobaria ravenelii (Tuck.) Yoshim; LV; Buck 9366.
Pannaria sp.; M; Judd 3675b.
Parmelina minarum (Vainio) Skorepa; LV; Baird LV-6, LV-10, LV-20.
Parmotrema conferendum (Hale) Hale; LV; Baird LV-3.
Parmotrema crinitum (Ach.) Choisy; M; Buck 9367, Judd 3683.
Parmotrema haitense (Hale) Hale; LV; Baird LV-18.
Parmotrema mellissii (Dodge) Hale; LV; Judd 4293a.
Parmotrema reticulatum (Taylor) Choisy; LV; Baird LV-2, Buck 9355.
Parmotrema robustum (Degel.) Hale; LV; Judd 4293b, 4638.
Parmotrema tinctorum (Nyl.) Hale; LV; Baird LV-5, LV-8.
Parmotrema sp.; LV; Judd 4279.
Pertusaria texana Mull. Arg.; LV; Baird LV-9.
Peltigera austroamericana Zahlbr.; LV; Judd 4273.
Peltigera dolichorrhiza (Nyl.) Nyl.; LV, M; Buck 9352, Judd 4212.
Peltigera sp.; M; Judd 3750 (det. W. S. Judd), s. n., Skean 1381.
Phaeophyscia hispidula (Ach.) Essl.; LV; Buck 9375.
Physcia alba (Fée) Müll. Arg.; LV; Buck 9413.
Pseudocyphellaria aurata (Ach.) Vainio; LV, M; Judd 4817b, Skean 1544.
Pseudoparmelia texana (Tuck.) Hale; LV; Baird LV-17.
Punctelia rudecta (Ach.) Krog; LV; Buck 9387, 9409a.
Ramalina peruviana Ach.; LV; Buck 9378b, 9414.
Ramalina sp.; LV; Judd 4385b.
Sticta damaecornis (Sw.) Ach.; LV, M; Judd 3570, 3586 (det. W. S. Judd),
4686, Skean 1286.
Sticta fuliginosa (Dicks.) Ach.; LV;
Sticta laciniata Ach.; M; Judd 3694b.
Sticta tomentosa (Sw.) Ach.; M; Judd 3704b.
Sticta weigeliai (Ach.) Vainio; LV; Buck 9377, 9433, 9445.
Sticta sp.; LV; Judd 4627, 4817a.
Teloschistes flavicans (Sw.) Norm.; LV, M; Buck 9392, Judd 3552b, 3846a,
4386.
Usnea rubicunda Stirton; LV, M; Baird LV-4, LV-11, Judd 3748, 4576b.
Usnea spp.; LV, M; Baird LV-13, LV-14, Judd 3747, 3847b, 4167, 4274,
4385a, 4574, 4576a, 4746.

**Fungi Collected in Parc National Morne La Visite
and Parc National Pic Macaya, Haiti.**

All collections are identified by Dr. Jack Gibson or Beth North. Fungi collected in Parc Morne La Visite are indicated by "LV"; those collected in Parc Pic Macaya are indicated by "M".

- Boletus* sp.; LV, also coll. M, specimen rotted, Judd 4819, Thompson s.n. 14 Feb 1984.
- Collybia* cf. *laccata* Dennis; M, Judd 4202.
- Conocybe* sp.; LV, Thompson s.n. 14 Feb 1984.
- Cortinarius* sp.; M; Judd 3849, 3927b; LV, Thompson s.n. 10 Feb 1984.
- Cyathus striatus* Willd.; M, Judd 3995.
- Daldinia* cf. *concentrica* (Bolt. ex Fries) Cesati & DeNotaris; M, Judd 3827a.
- Favolus cucullatus* Mont.; M, Judd 3740.
- Filoboletus* sp.; LV, Thompson s.n. 14 Feb 1984.
- Fomes grenadensis* (Murr.) Sacc. & Trott.; M, Judd 3718, 3781, 3845.
- Fomes subroseus* (Weir) Overh.; M, Judd 4075, 4204.
- Fomes* sp.; LV, Judd 4631.
- Galerina* sp.; LV, Thompson s.n. 15 Feb 1984.
- Hebeloma weberi* Murr.; LV, Thompson s.n. 15 Feb 1984.
- Lenzites salpiara* (Wulf ex Fries) Fries; LV, Thompson s.n. 15 Feb 1984.
- Lepiota* sp.; M, Judd 3926.
- Marasmius* sp.; M, Judd 3717; LV, Thompson s.n. 15 Feb 1984.
- Morchella deliciosa* Fries; LV, Judd s.n.
- Nidularia emodensis* (Berk.) Lloyd; M, Judd 4203.
- Paneolus campanulatus* (L. ex Fr.) Quil.; LV, Judd s.n.
- Pholiota* cf. *trinitensis* Dennis; M, Judd s.n.
- Pholiota* sp.; LV, Thompson s.n. 14 Feb 1984.
- Polyporus arcularius* Batsch ex Fries; LV, Thompson s.n. 15 Feb 1984, Franz s.n. 16 Feb 1984.
- Polyporus cubensis* Mont.; LV, Thompson s.n. 15 Feb 1984.
- Polyporus versicolor* L. ex Fries; LV, Thompson s.n. 15 Feb 1984.
- Polyporus vinosus* Berk.; LV, Judd 4630.
- Polyporus* sp.; LV, Judd s. n.
- Stereum lobatum* (Kunze) Fries; M, Judd 3556.
- Suillus* sp.; LV, Thompson s.n. 13 Feb 1984.

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**THREE NEW ANGIOSPERMS FROM PARC NATIONAL
PIC MACAYA, MASSIF DE LA HOTTE, HAITI¹**

Walter S. Judd and James D. Skean, Jr.²

ABSTRACT

Three new angiosperm species, Lobelia hotteana (Campanulaceae), Ossaea woodsii (Melastomataceae), and Miconia macayana (Melastomataceae), are described and illustrated. All three species are known only from Parc National Pic Macaya, in the Massif de la Hotte, Haiti. Their relationships are discussed.

RESUMEN

Se describen e ilustran tres nuevas especies de angiosperma, Lobelia hotteana (Campanulaceae), Ossaea woodsii (Melastomataceae), y Miconia macayana (Melastomataceae). Las tres especies se conocen solamente del Parc National Pic Macaya, en el Massif de La Hotte, Haití. Se discuten sus afinidades.

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²Department of Botany, University of Florida, Gainesville FL 32611.

INTRODUCTION

In the course of field work in Parc National Pic Macaya, Massif de la Hotte, Haiti (Judd 1987), the following three undescribed species were collected, and are described below. Other new angiosperm taxa resulting from field work in connection with a recent biogeophysical inventory of Morne la Visite and Pic Macaya National Parks have been (or are being) described elsewhere; these include: *Wallenia formonensis* Judd (Judd 1986a), *Micropholis polita* (Griseb.) Pierre subsp. *hotteana* Judd (Judd 1986b), *Ilex blanchiana* Judd (Judd 1986c), *Mecranium revolutum* Skean & Judd (Skean & Judd 1986), *Duranta arida* Britton & Wilson subsp. *serpentina* Sanders & Judd (Judd & Sanders 1986), *Meriania brevipedunculata* Judd & Skean and *M. parvifolia* Judd & Skean (Judd & Skean 1987), and *Salvia* sp. nov. (Skean & Judd, manuscript). In addition undescribed species of *Pilea*, *Rhytidophyllum*, and *Ditita* were collected.

The highly endemic flora of the high elevations of the Massif de la Hotte is poorly known, and our knowledge of the region's flora is based mainly on the extensive collections of E. L. Ekman (see Ekman 1928, and Ekman's unpublished field notes). Continued botanical exploration will likely reveal additional undescribed taxa.

ACKNOWLEDGEMENTS

Special thanks are due Charles A. Woods, who organized the field trips on which these plants were collected; it is a pleasure to name one of the new species, *Ossaea woodsii*, in recognition of his significant contributions to the knowledge and preservation of the flora and fauna of Haiti. We thank Rogers McVaugh for his helpful comments concerning the specimens of *Lobelia hotteana*. Thanks are also due the curators of the herbaria (DUKE, JBSD, NCU, NY, US) from which comparative material of *Lobelia*, *Ossaea*, and/or *Miconia* was borrowed. We are grateful to Kent D. Perkins, registrar of the University of Florida Herbarium, for his help in processing specimen loans, and to Norris W. Williams, keeper of the University of Florida Herbarium, for making available the computer facilities of the herbarium. We also thank Richard A. Howard, Carroll E. Wood, Jr., Michael Canoso, and Walter Kittredge for their assistance during the visit of the first author to the Harvard University Herbaria (A, GH). Finally, we thank Wendy Zomlefer for her fine illustrations and David W. Hall for his helpful comments on the manuscript.

Lobelia hotteana Judd & Skean, *sp. nov.*
(Campanulaceae, Lobelioideae)

Figure 1

Species haec ab *Lobelia stricta* Sw. differt foliis leviter parvioribus, i.e. 5-11 vs. 7-18 cm longis, inflorescentiis brevioribus, 3-8 cm longis, ferentibus 3-7 flores, vs. inflorescentiis 10-35 cm longis, ferentibus 20-100 flores, et antheris tantum breviter pubescentibus ad apicem.

Suffrutescent, sparsely branched herb to 75 cm tall; stems erect to decumbent, glabrous, covered with conspicuous oval raised scars left by leaf-bases of previous year, the woody base of the stem to 1 cm in diameter. Leaves ca 10-15, somewhat rosulate, spreading to ascending, usually occupying from 5-11 cm of the axis, and clustered ca 20-50 cm below the inflorescence, with 2-5 obovate to linear leafy bracts scattered along axis between leafy portion of stem and base of the inflorescence; blades coriaceous, 5-11 cm long, 0.9-2.5 cm wide, obovate to narrowly obovate, widest at a point between 1/3 and 1/2 the distance from the tip, glabrous, the margin evenly serrate with reddish callose teeth 0.2-0.6 mm long, distal portion with 3-5 teeth per cm, the proximal 1-4 cm very sparsely toothed to entire, the apex acuminate, the base attenuate; petiole 0.3-1.2 cm long. Inflorescence erect, racemose, 3-8 cm long, 5- to 7-flowered, the axis glabrous to moderately pubescent (covered with small unicellular hairs); pedicels ascending, 1.8-2.5 mm long, glabrous to moderately pubescent, each pedicel with a pair of bracteoles; bracteoles linear, 5-10 mm long and 0.6-1 mm wide, nearly glabrous to sparsely pubescent, with margin entire to clearly serrate, borne 2-8 mm below the flower or fruit; flower bracts linear to narrowly elliptic, (0.7-)1.5-3.8 cm long, 1-3 mm wide, glabrous to sparsely pubescent, especially toward base, the margin serrate, the apex acute. Flower zygomorphic, inverted, 18-30 mm long, including the hypanthium. The hypanthium cup-shaped, glabrous to slightly pubescent, portion free from ovary ca 4 mm long; calyx lobes 5, narrowly triangular, 6-11 mm long, 1.5-2.5 mm wide, glabrous to very sparsely pubescent, the margin clearly serrate to nearly entire. Corolla yellowish-green with a dull red tinge, the tube 14-16 mm long, slightly recurved, with a dorsal fissure, fenestrate at base, glabrous to very slightly pubescent, the lobes only slightly recurved, linear, the 2 next to dorsal fissure ca 4-8 mm long, ca 2.7 mm wide, the 3 middle segments ca 2-3 mm long, ca 2.5 mm wide. Filament tube 12-17 mm long, somewhat deflexed, slightly exserted, the 5 filaments connate slightly more than 1/2 their lengths, pubescent; anther tube 7-8 mm long, the 2 smaller anthers minutely white-tufted at tips (with hairs to ca 0.2 mm long). Ovary 2-carpellate, half-inferior,

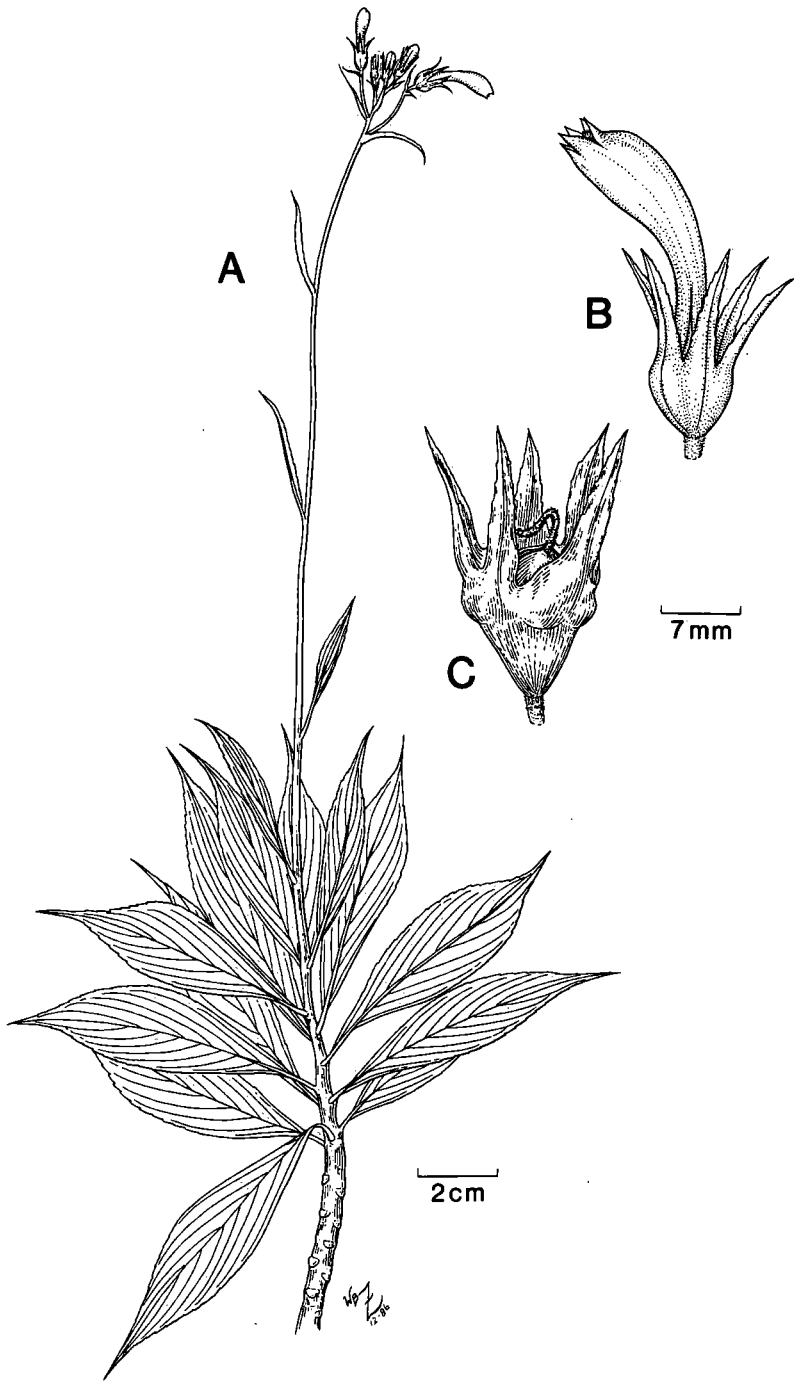


Figure 1. *Lobelia hotteana* Judd & Slean: A, habit; B, flower; C, fruit. Drawn from Judd 3790.

glabrous. Fruit a capsule, 7-9 mm long, 7-8 mm wide; seeds ellipsoid to ovoid, ca 0.7 mm long, the testa finely reticulate, brown.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, moist forest of *Pinus occidentalis* Sw., open rocky areas, ravine on south slope of Morne Formon, at 1650-1730 m alt., just east of "1650 camp," locally common, 28 January 1984 (flowers) *Walter S. Judd 3790* (Holotype, FLAS; isotypes, NCU, NY). The species was also seen (but not collected) at ca 2200 m alt. on open rocky ridge just south of Pic Macaya.

Lobelia hotteana probably is related to *Lobelia stricta* Sw., a species restricted to the Lesser Antilles. It differs from this species in its often smaller and less crowded leaves, shorter and fewer-flowered inflorescence, and flowers with smaller corolla lobes and the two smaller anthers with much shorter hair-tufts at the apex (see diagnosis, and McVaugh 1943). This species is also similar to *L. christii* Urb. (also of the Massif de la Hotte) in that its two smaller anthers are only minutely pubescent at the apex (compared with "very minutely beaded" in *L. christii*, see McVaugh 1943). Affinity may also exist with *L. robusta* Graham and *L. assurgens* L. (R. McVaugh pers. comm.).

This new species has been seen only in open rocky areas of moist high-elevation forests of *Pinus occidentalis* Sw. Associated species include: *Agave antillarum* Desc., *Andropogon glomeratus* (Walt.) BSP. subsp. *pumilus* Vasey, *Baccharis myrsinites* (Lam.) Pers., *Castilleja arvensis* Schlecht. & Cham., *Chaptalia albicans* Urb. & Ekm., *Eupatorium flavidulum* Urb. & Ekm., *Garya fadyenii* Hook., *Gyrotaenia myriocarpa* Griseb., *Isachne rigidifolia* (Poir.) Urb., *Pteris longifolia* L., *Rhytidophyllum auriculatum* Hook., *Rubus* spp., *Senecio stenodon* Urb., and *Weinmannia pinnata* L. At higher elevations near Pic Macaya the species occurs with some of the above species along with *Gaultheria domingensis* Urb., *Miconia* spp., *Myrica picardae* Krug & Urb., *Temstroemia barkeri* Ekm. & Schmidt, and *Wallenia aquifolia* Urb. & Ekm. Three other members of the Lobeloideae were also collected in the park; these are: *Lobelia robusta* Graham, *L. rotundifolia* Juss., and *Siphocampylus sonchifolius* (Sw.) McVaugh.

Ossaea woodsii Judd & Skean, *sp. nov.*
(Melastomataceae, Miconieae)

Figure 2

Species haec ab *Ossaea curvipila* Urb. et Ekm. differt foliis leviter angustioribus, i. e., 0.5-1.7 cm vs. 1.2-2.7 cm latis, ramunculis et paginis abaxialibus foliorum carentibus pilis multicellulosis crasse conicis.

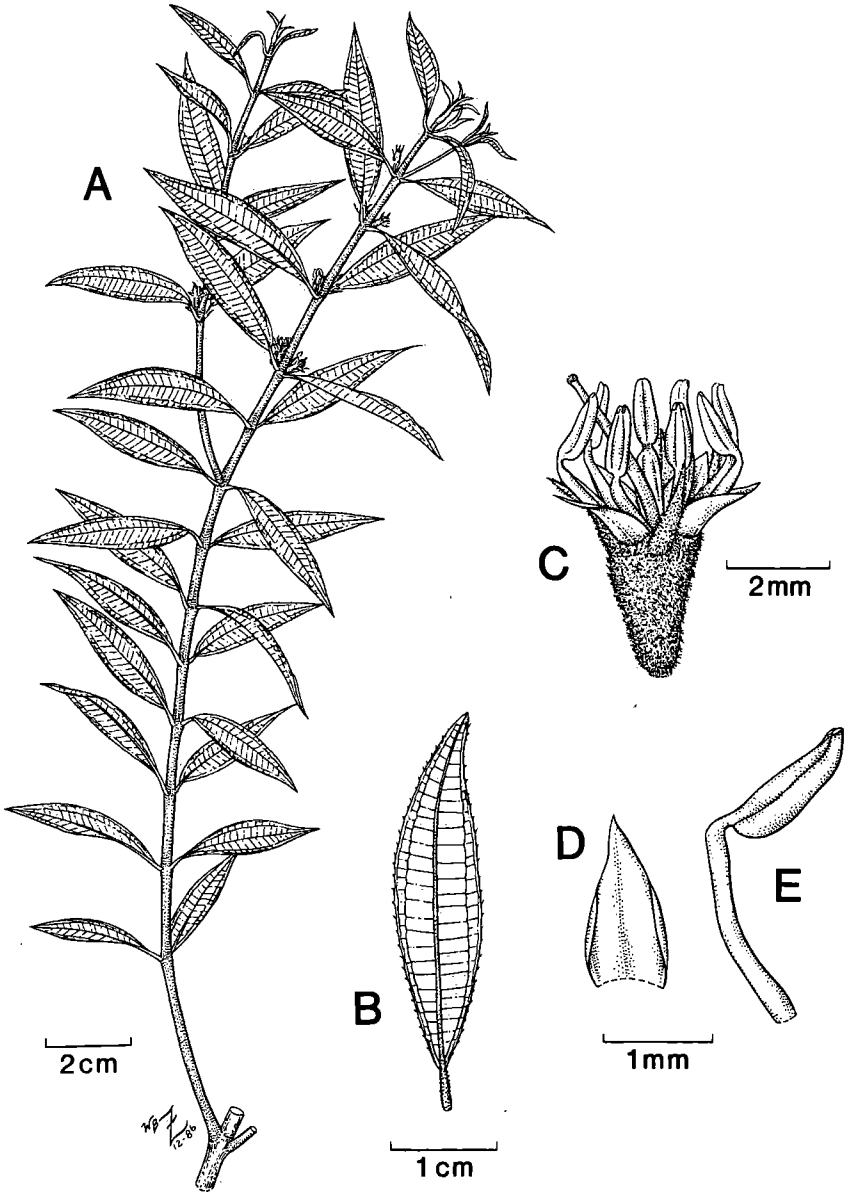


Figure 2. *Ossaea woodsii* Judd & Skean: A, habit; B, leaf; C, flower; D, petal; E, stamen.
 Drawn from Skean 1367.

Shrub or small tree to 4 m tall. Young twigs terete to slightly quadrangular, 1-2.5 mm wide, densely covered with ferrugineous, sessile to short-stalked, globular to irregularly stellate, multicellular hairs; internodes 0.5-3.5(-5.5) cm long. Leaves opposite; petiole 2-7 mm long, with dense indumentum similar to that of twigs; blade narrowly ovate to elliptic, 2-6.1 cm long, 0.5-1.7 cm wide, flat, the apex acuminate to acute (with tip more or less rounded to acute), the base rounded to nearly cuneate, the margin obscurely strigose-serrate, with each tooth associated with a stiff, arcuate, multicellular hair ca 0.25-0.5 mm long, plane to revolute, especially near base; venation acrodromous, basal, with a prominent midvein, two secondary veins, and numerous percurrent tertiary veins (more or less perpendicular to midvein), the midvein, two secondary veins, and tertiary veins abaxially raised and adaxially flat to impressed, quaternary and higher order veins reticulate, not raised on abaxial surface; adaxial surface dark green, sparsely scabrous due to stout, conical, multicellular hairs 0.15-0.3 mm long, with (0)1 to 5(6) hairs per rectangular portion of lamina delimited by midvein, secondary vein, and adjacent tertiary veins, the midvein, secondary and tertiary veins with ferrugineous, nearly sessile, irregularly branched or stellate, to elongate and unbranched or terminally branched, multicellular hairs; abaxial surface pale, with minute, ferrugineous, sessile to short-stalked, globular to irregularly branched or stellate, multicellular hairs on all veins. Inflorescences axillary fasciculate cymes, ca 0.4-0.8 cm long, bearing (1)3 to 7 flowers, the axes densely covered with ferrugineous, sessile to short-stalked, globular to irregularly branched or stellate, multicellular hairs. Flowers 4-merous, sessile or nearly so, each associated with 2 linear to narrowly triangular and sparsely pubescent bracteoles, ca 0.7-1.5 mm long, 0.1-0.2 mm wide, with acute apices, and subtended by a narrowly triangular and densely pubescent bract to ca 2 mm long. Hypanthium cylindrical, green, ca 3 mm long, ca 1.5 mm wide, portion free from ovary ca 1 mm long, externally densely covered with ferrugineous, globular to irregularly branched/ stellate, multicellular hairs to 0.05 mm long, and very sparsely scattered stout, conical, multicellular hairs to ca 0.3 mm long, internally glabrous. External calyx lobes 4, conspicuous, ca 1.6 mm long, ca 0.3 mm wide, with indumentum similar to hypanthium; internal calyx lobes 4, broadly triangular, ca 0.25-0.3 mm long, 0.8-1 mm wide, the apex acute to acuminate, the calyx tube ca 0.2 mm long. Petals 4, narrowly triangular, ca 2 mm long, 0.8 mm wide, pink to red, glabrous, the apex acute, the margin entire. Stamens 8, geniculate, the filament 1.5-2 mm long, swollen just below junction with anther, glabrous, the anther ca 1.2 mm long, straight, opening by terminal pores, the anther sacs well developed, occupying nearly entire length of anther, their bases rounded. Ovary 4-carpellate, mainly inferior, more or less globose, ca 1.7 mm long and wide, glabrous, with irregular glandular fringe around base of style, with axile

placentation; style ca 7 mm long, cylindrical, glabrous; stigma minutely papillose. Berries not seen.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, cloud forest on north slope of Morne Formon, in Grande Ravine du Sud, 1450-1780 m alt., occasional, 6 June 1984 (flowers) *James D. Skeeon, Jr.* 1367 (Holotype: FLAS; isotypes: A, JBSD, NY).

Additional Specimens Examined. Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, cloud forest/ moist pine forest on southern slope of Morne Formon, 1620-1660 m alt., uncommon, 28 January 1984 (old flowers) *Walter S. Judd* 3802 (A, EHH, FLAS, S, US).

Ossaea woodsii probably is related to several morphologically similar species of *Ossaea* with axillary cymes and small 4-merous flowers, such as *O. scalpta* (Vent.) DC., *O. barahonensis* Urb. & Ekm., *O. curvipila* Urb. & Ekm., and *O. setulosa* Urb. It differs from these species in indumentum characters (see diagnosis). *Ossaea woodsii* can be separated easily from *O. barahonensis*, *O. setulosa*, and *O. curvipila* by its lack of stout conical multicellular hairs (i.e. strigose indumentum) on the twigs and abaxial leaf surfaces and shorter hypanthial hairs, and is differentiated from *O. scalpta* by its more or less sessile, irregularly stellate hairs on the twigs (vs long-stalked, terminally branching hairs), glabrous petals, and longer external calyx lobes. All of the above mentioned species are endemic to Hispaniola (Moscoso 1943). *Ossaea curvipila* and *O. setulosa* also have been collected in the park, and both are restricted to the high elevations of the Massif de la Hotte. The only other *Ossaea* known from the Morne Formon region is *O. alloetricha* Urb., which was collected by Ekman near the summit of Morne Formon (see *E. L. Ekman* H7473, NY!, S!). This distinctive terminal-flowered species is known only from the type gathering.

Ossaea woodsii is known only from cloud forests and moist forest with *Pinus occidentalis* Sw. from ca 1450 to 1780 m on Morne Formon. Associated species include: *Ardisia fuertesii* Urb., *Banara splendens* Urb., *Besleria lutea* L., *Brunellia comocladifolia* Humb. & Bonpl., *Calyptanthus nummularia* Berg., *Cestrum coelophlebium* O. E. Schulz, *Citharexylum caudatum* L., *Cleyera ternstroemioides* (O. E. Schmidt) Kobuski, *Cordia lima* (Desv.) Roem. & Schult., *Daphnopsis crassifolia* (Poir.) Meissn., *Dendropanax arboreus* (L.) Decne. & Planch., *D. selleanus* (Urb. & Ekm.) A. C. Smith, *Didymopanax tremulum* Krug & Urb., *Dipholis cubensis* (Griseb.) Pierre, *Eugenia formonica* Urb. & Ekm., *Eupatorium* spp., *Garrya fadyenii* Hook., *Lobelia rotundifolia* Juss., *L. robusta* Graham, *Miconia subcompressa* Urb., *M. xenotricha* Urb. & Ekm., *M. ossaeifolia* Urb. & Ekm., *M. tetrastoma* Naud., *Myrsine coriacea* (Sw.) R. Br. ex Roem. & Schult., *Palicourea alpina* (Sw.) DC., *Persea anomala*

Britt. & Wils., *Piper rugosum* Lam., *Prunus occidentalis* Sw., *Tabebuia berterii* (DC.) Britt., *Trema micrantha* (L.) Blume, *Trichilia havanensis* Jacq., *Vaccinium racemosum* (Vahl) Wilbur & Luteyn, and *Weinmannia pinnata* L.

Miconia macayana Judd & Skean, *sp. nov.*
(Melastomataceae, Miconieae)

Figure 3

Frutex ad 2 m altus. Ramuli hornotini leviter tetragoni, ferruginei, lanosi, internodiis 1.1-2.5(-4) cm longis. Lamina folii, maxime coriacea, ovata, (2.5-)3.9-7.3 cm longa, (1.5-)2.1-3.8 cm lata, plana vel leviter curvata ad paginam abaxialem, saepe leviter undulata, ad apicem acuta, leviter obtusa vel acuminata, ad basin rotunda vel cordata; margo conspicue crenata; pagina adaxialis viridis, fere glabra; pagina abaxialis ferruginea, lanosa; nervatura acrodroma, basalis, nervo primario et nervis secundariis 4, prominentibus, adaxialiter impressis, abaxialiter elevatis, nervis tertiariis abaxialiter prominentibus, elevatis. Petiolus 3-5(-8) cm longus, ferrugineus, lanosus. Inflorescentia terminalis, ferruginea, lanosa, 4-9 capitulis paniculatum dispositis, quoque capitulum cymosum, 6-18 floribus. Flores 5-merous, sessiles. Hypanthium anguste obconicum, leviter pentagonum, ca 3 mm longum, 2.9 mm latum, lanosum, ferrugineum. Sepala 5, lobis externis triangulatis, ca 0.8 mm longis, 1.2 mm latis, maxime lanosis, ferrugineis, lobis internis lingulatis, ca 1 mm longis, 1.2 mm latis, glabris. Petala 5, leviter obovata, ca 2.6 mm longa, 1.8 mm lata, alba, glabra, ad apicem emarginata. Stamina 10, geniculata; anthera ca 1.8 mm longa, ad basin truncata, thecis ca 1.2 mm longis. Stylus ca 3.5 mm longus. Baccae non visi.

Shrub to ca 2 m tall. Young twigs slightly 4-angled, 3-4 mm wide, densely covered with a tangled mat of ferrugineous, fasciculate, multicellular hairs; internodes 1.1-2.5(-4) cm long. Leaves opposite; petiole 3-5(-8) mm long, with dense indumentum similar to that of twigs; blade ovate, (2.5-)3.9-7.3 cm long, (1.5-)2.1-3.8 cm wide, flat or slightly abaxially inrolled, often slightly undulate, extremely coriaceous, the apex acute to slightly obtuse or acuminate, the base rounded to cordate, the margin conspicuously crenate, plane to revolute; venation acrodromous, basal, with a prominent midvein and 4 secondary veins (2 secondary veins inconspicuous in smaller leaves), and numerous percurrent tertiary veins; adaxial surface dark green, midvein and secondary veins prominently impressed, tertiary veins less conspicuously impressed, for the most part glabrous, but with some matted, ferrugineous, fasciculate, multicellular hairs persisting in vein impressions and near apex and base; abaxial surface brown, densely covered with a tangled mat of

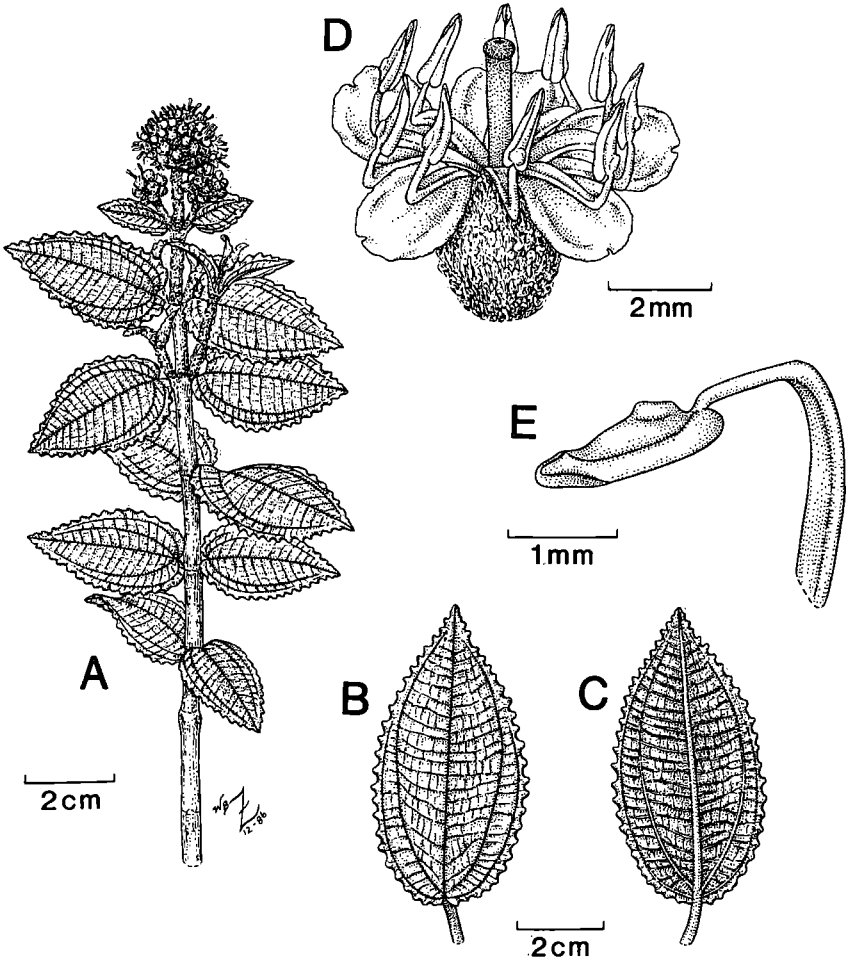


Figure 3. *Miconia macayana* Judd & Skean: A, habit; B, adaxial view of leaf; C, abaxial view of leaf; D, flower; E, stamen. Drawn from Skean 1428.

ferrugineous, fasciculate, multicellular hairs, midvein and 2 largest secondary veins prominently raised, 2 smaller secondary veins less conspicuously raised, tertiary veins slightly raised, higher order veins reticulate, slightly raised. Inflorescence terminal, a paniculate arrangement of 4-9 heads, the heads sessile or with stalks to ca 7 mm long, each containing 6-18 flowers, representing a reduced aggregation of 3-flowered cymules, subtended by a lingulate, cartilaginous bract, ca 4.7 mm long, 5.2 mm wide, with an obtuse apex and a tangled mat of ferrugineous, fasciculate, multicellular hairs on the abaxial surface; each cymule associated with ca 8 ovate to narrowly elliptic bracts, 3.7-3.8 mm long, 1.7-3.7 mm wide, the apices obtuse, the texture and indumentum similar to that of the bract subtending head; peduncle 1.4-2.1 cm long; indumentum of peduncle and inflorescence axis similar to that of twigs. Flowers 5-merous, sessile. Hypanthium slightly obconical, weakly 5-angled, ca 3 mm long, ca 2.9 mm wide, portion free from ovary ca 1.3 mm long, externally densely covered with ferrugineous, fasciculate, multicellular hairs, internally glabrous. External calyx lobes 5, ca 0.8 mm long, ca 1.2 mm wide, triangular, the apex acute, densely covered and fringed with indumentum similar to that of hypanthium; internal calyx lobes 5, ca 1 mm long, 1.2 mm wide, lingulate, the apex rounded, the margin minutely erose, glabrous. Petals 5, imbricate and twisted in bud, slightly obovate, ca 2.6 mm long, 1.8 mm wide, white, glabrous, the apex rounded, emarginate with an asymmetrically located notch, margin minutely erose. Stamens 10, geniculate, the proximal segment ca 2.2 mm long, glabrous, the distal segment ca 2.3 mm long, glabrous; anther ca 1.8 mm long, base truncate, anther sacs ca 1.2 mm long, opening by 2 longitudinal slits extending over apex down adaxial surface. Ovary 5-carpellate, inferior, broadly conical, ca 1.1 mm long, ca 1.8 mm wide, glabrous, with an apical fringe, ca 0.7 mm long, encircling base of style, the placentation axile; style ca 3.5 mm long, cylindrical; stigma concave. Berries not seen.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, open moist pine forest/cloud forest on southern slope of Pic Macaya, ca 2150-2200 m alt., locally common, 7 June 1984 (flowers) *James D. Skean, Jr. 1428* (Holotype: FLAS; isotypes A, JBSD, NY).

Additional Specimens Examined: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, *ibid.*, locally common, 6 February 1984 (flower buds) *Walter S. Judd 4125* (EHH, FLAS, S, US).

Miconia macayana is clearly a member of *Miconia* sect. *Chaenopleura* Benth. & Hook., as indicated by its anthers with elongate slits. This section is extremely diverse in the Greater Antilles, and contains many narrow endemics. Close relatives of *M. macayana* are not known; however, it is

similar to *Miconia rigidissima* Urb. & Ekm. in indumentum characters and inflorescence structure. *Miconia macyana* is easily distinguished from the other species of *Miconia* occurring in the Massif de la Hotte by its combination of fairly small, ovate, extremely coriaceous, and conspicuously crenate leaves, with a characteristic dense covering of ferruginous, fasciculate-sinuous multicellular hairs, and inflorescences composed of condensed cymose heads.

The discovery of this species brings to ten the number of species of *Miconia* known from the Morne Formon-Pic Macaya region, Massif de la Hotte. These species are: *M. apiculata* Urb. & Ekm. (incl. *M. niedenzuana* Urb. & Ekm.), *M. barkeri* Urb. & Ekm., *M. hypioides* Urb. & Ekm., *M. laevigata* (L.) DC., *M. mirabilis* (Aubl.) L. O. Williams, *M. ossaeifolia* Urb. & Ekm., *M. subcompressa* Urb. (incl. *M. plumieri* Urb. & Ekm.), *M. tetrastoma* Naud., *M. xenotricha* Urb. & Ekm., and *M. macayana* Judd & Slean. All have been collected recently by the authors. Seven of these species are endemic to Hispaniola, and six are endemic to the Massif de la Hotte.

Miconia macayana is endemic to the Massif de la Hotte of Haiti where it is known only from exposed ridges in moist forests of *Pinus occidentalis* Sw. and adjacent cloud forests on the southern slope of Pic Macaya at ca 2150-2200 m alt. Associated species in this area include: *Agave antillarum* Desc., *Baccharis myrsinites* (Lam.) Pers., *Brunellia comocladifolia* Humb. & Bonpl., *Cestrum filipes* Urb. & Ekm., *Chaptalia albicans* Urb. & Ekm., *Didymopanax tremulum* Krug & Urb., *Eupatorium flavidulum* Urb. & Ekm., *Garrya fadyenii* Hook., *Gautheria domingensis* Urb., *Hyptis schusteri* Urb., *Isachne rigidifolia* (Poir.) Urb., *Lobelia hotteana* Judd & Slean, *Lycopodium pithodes* Schl. & Cham., *Miconia hypioides* Urb. & Ekm., *Myrica picardae* Krug & Urb., *Pilea formonensis* Urb. & Ekm., *Pinus occidentalis* Sw., *Rubus selleanus* Helwig, *Salvia* sp. nov., *Temstroemia barkeri* Ekm. & Schmidt, *Vaccinium racemosum* (Vahl) Wilbur & Luteyn, *Wallenia aquifolia* Urb. & Ekm., and *Weinmannia pinnata* L.

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