Additions to the bryoflora of the Dominican Republic

Jan-Peter Frahm

Summary: Based on collections of the author in February and March 2012, Notothylas breutelii, Syzigiella perfoliata, Campylopus lamellinervis. as well as the genus Riccia are reported as new to the Dominican Republic. Sixteen new provincial records are given. Updated and revised lists of the mosses of the Dominican republic as well as the province of La Plata are given.

The island of Hispaniola in the Carribbean consist of Haiti and the Dominican Republic. Although it is the highest island in the Carribean (the highest elevation is Pico Duarte 3175 m), and should have the richest bryoflora, it was for long time almost the least known island in the Carribbean. Judd (1980) called Hispaniola "an island poorly studied bryologically in spite of its diverse flora". In spite of the fact that large mountainous areas are covered by cloud forests, the knowledge about the bryoflora was poor, in contrast to Jamaica or Cuba, from where bryofloras or checklists existed.

There were only few publications dealing with the mosses of the Greater Antilles (Müller 1898) or Haitian mosses (Williams 1930, Crum & Steere 1958, Crum 1965). In 1976, Judd (1980) made a small collection of mosses in the Dominican Republic and listed 84 species, 23 for the first time. Buck & Steere (1983) gave the first comprehensive list of mosses from Haiti and the Dominican Republic and listed 505 taxa based on recent collections. (The checklist by Crum & Steere from 1958 listed 261 species). A recent compilation of the mosses of Hispaniola (in the appendix) results in 469 species, of which 416 occur in the Dominican Republic and 268 were found in Haiti.

The situation for the hepatics is similar or even worth. Until recently, no comprehensive list of the hepatics of the Dominican Republic existed, only scattered records in monographs and revisions based on herbarium specimens. Schäfer-Verwimp & Pócs (2009) were the first who gave a list of all hepatics, which included 191 species. Of these, 138 species were reported by the authors for the first time, although the collections were made in a limited area along some roads of the Cordillera Central. Only 53 species were known so far. This indicates that the hepatic flora is by far not well explored, large parts of the island are not explored and new records can be expected.

Conspicuously several species of hepatics were recently no more collected. These include for example Bryopteris diffusa or B. filicina, Whether this depends on earlier collections at higher altitudes (Pico Duarte region) or extinctions during the last century due to forest destructions can not be decided.

In February March 2012, the author together with the lichenologist Felix Schumm spent two weeks of holidays in Puerto Plata and made some field trips in the surroundings as well the interior of the island. In the following, remarkable collections are listed, of which some are new records for the Dominican Republic. And although the author focussed on mosses, these new records concern liverworts demonstrating that mosses are much more collected and better known.

List of localities

1 Prov. Puerto Plato, auf dem Pico Isabel de Torros südlich von Puerto Plata, 19.76436° N, 70.70915° W, 800 m, 22.02.2012

2 Prov. Puerto Plata, zwischen Puerto Plata und Santiago, bei den Bernsteingruben nahe La Toca, 19.54335° N, 70.61430° W, 839 m, 23.02,2012.

3 Prov. Santiago, an der Straße zwischen Mata Grande und Las Piedras, 19.21391° N, 70.96229° W, 786 m, 23.02.2012

4.. Prov. Espaillat, östlich von Gaspar Hernández, Küste, Cocos Palmen, 19.64101° N, 70.26275° W, 5 m, 24.02.2012.

5.. Prov. Maria Trinidad Sánchez, zwischen Rio San Juan und Cabrera, Wald am Straßenrand, 19.67587° N, 69.99379° W, 50 m, 24.02.2012.

6 Prov. La Vega, beim Wasserfall Salto de Jimenoa, nahe Jarabacoa, 19.09954° N, 70.59794° W, 576 m, 25.02.2012.

7.. Prov. La Vega, zwischen Jarabacoa und Constanza, an der Straße, 19.07917° N, 70.60319 W, 1052 m, 25.02.2012.

8.. Prov. La Vega, bei Constanza an der Straße nach Valle Nuevo, 18.88006° N, 70.73319° W, 1300 m, 25.02.2012.

9.. Prov. La Vega, zwischen Constanza und Bonado an der Nr. 12, Alto de la Virgen, 19.02843° N, 70.51753° W, 1350 m, 25.02.2012.

10.. Prov. La Vega, zwischen Constanza und Bonado an der Nr. 12, unterhalb von Alto de la Virgen, 19.03656° N, 70.50292° W, 1150 m, 27.02.2012.

11.. Prov. Puerto Plata, zwischen La Sabana und Luperón, 19.91305° N, 70.96936° W, 42 m, 28.02.2012.

12.. Prov. Puerto Plata, bei den Ruinas de la Isabela, 19.88839° N, 71.08080° W, 17 m, 28.02.2012.

13.. Prov. Samaná, an der Straße zwischen Samaná und El Valle, 19.23637° N, 69.33026° W, 40 m, 29.02.2012.

14.. Prov. Samaná, in der Nähe der Wasserfälle von El Limon, 19.28179° N, 69.43705° W, 65 m, 29.02.2012.

15.. Prov. Puerto Plata, zwischen Imbert und Altamira, nahe den Wasserfällen Charcos de Damajagua, Trockenwald am Flußufer, 19.73147° N, 70.82473° W, 128 m, 01.03.2012.

16.. Prov. Puerto Plata, am Weg von Imbert nach El Cupey südlich des Pico Isabel de Torres, Uferwald, 19.75245° N, 70.79149° W, 180 m, 01.03.2012.

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17.. Prov. La Vega, SE von Constanza am Weg nach Valle Nuevo, nahe den Saltos de Auguas Blancas, 18.84852° N, 70.68464° W, 1590 m, 02.03.2012.

18.. Prov. La Vega, SE von Constanza am Weg nach Valle Nuevo, 18.85323° N, 70.70049° W, 1650 m, 02.03.2012.

19.. Prov. Santiago, zwischen Palo Quemado und La Cumbre, 19.54562° N, 70.62501° W, 726 m, 04.03.2012.

20.. Prov. Puerto Plata, bei Tubagua, 19.64648° N, 70.60022° W, 244 m, 04.03.2012.

21.. Prov. Santiago, nördlich Santiago an der Straße zum Pico de Ocampo bei Aguacate de Jacagua, 19.55942° N, 70.71673° W, 780 m, 05.03.2012.

22.. Prov. Santiago, nördlich Santiago, Fußweg zum Pico de Ocampo, 19.58467° N, 70.73889° W, 1000 m, 05.03.2012.

List of records

** New to Hispaniola
* New provincial record

A. Hornworts
So far, only Anthoceros punctatus and Dendroceros crispus have been recorded from the Cordillera Central (Schäfer-Verwimp & Pócs 2009). Anthoceros punctatus was collected once near Mata Grande and could be confirmed in this area along a roadside cut. Dendroceros crispus was known so far from one collection near Valle Nuevo (Schäfer-Verwimp & Pócs 2009) and additionally collected in the northern cordillera in elfin-forest of Pico Isabela (1) and Pico Diego (22) at 700 viz. 1200 m altitude.

**Notothylas breutelii (Figs. 1-2)
Prov. Puerto Plata, on soil of a loamy cliff at the sea shore in the Ruinas de la Isabela, 19.88839° N, 71.08080° W, 28.02.2012, together with Phaeoceros sp.
The absence of a columella and the presence of dark spores refer this specimen to N. breutelii, a widespread neotropical species. The spores are lighter in translucent light and might resemble N. orbicularis in colour (which has no columella, too), but have a baculate surface, whereas N. orbicularis is almost smooth (Hässel de Menendez 1976)..

B. Liverworts

**Herbertus divergens
(1) on tree, covering the whole trunk. This is the only species of the genus occurring at lower altitudes (S.R. Gradstein in litt.) and easily recognized by the vitta which separates at the leaf base (hence the names). The species is known from Costa Rica (type) and Colombia.

**Riccia spp. (figs. 3-5)
(12) So far no species of Riccia was known from the Dominican Republic. Three species were found on loamy soil under deciduous trees in the Ruinas de la Isabela, together with Phaeoceros

sp. and Barbula indica. This discovery was only possible because of rain falls during the night before. All specimens were sterile and since the keys by Jovet-Ast (1991) are mainly based on spore size and morphology, a determination was not possible.

**Syzigiella perfoliata det. A. Schäfer-Verwimp
(09), on rocks of road cut.

C. Mosses

Campylopus
Eighteen taxa were reported by Buck & Steere (1985). After a revision of the neotropical species (Frahm 1991), the number is reduced to seven. In addition, C. surinamensis and C. subcuspidatus were reported before by Buck & Steere (1983) as C. gracilicaulis and C. praealtus respectively.
Canpylopus arctocarpus
Campylopus cygneus (cacuminis, saxatilis)
(9, 17)
Campylopus cubensis (harrisii)
Campylopus fragilis
Campylopus pilifer (introflexus)
(17)
Campylopus richardii
(9)
Campylopus shawii (underwoodii)
**Campylopus subcuspidatus
(9). The species is similar to C. shawii and can easily be confused with the latter. It has been reported for Haiti as C. tortuosus, but not yet for the Dominican Republic.
Campylopus surinamensis
(17).

The following species (with indication of their ranges) were reported by Buck & Steere (1983), however, no specimens from Hispaniola have been seen by the author during the work on the neotropical species (Frahm 1991).
Campylopus angustiretis Jamaica and Cuba
Campylopus filifolius var. filifolius (porphyreodictyon) not known from the Carribbean
Campylopus filifolius var. humilis (C. haitiensis) only Haiti
Campylopus lamellinervis (tortuosus) Puerto Rico, tropical South America
Campylopus oerstedianus In the Carribbean only known from Jamaica. The species can easily be confused with C. pilifer.
Campylopus tallulensis is a species from northern and Central America as well the Appalachians. I have seen no specimens of this species from the Carribbean.

Key to the species of Campylopus reported from the Dominican Republic:

1 Leaves ending in a hyaline tip
  2 Basal cells hyaline, thin-walled. ……..……...C. pilifer
  2* Basal cells incrassate, pitted……..……. C. richardii
1* Leaf tips concolorous
  3 Basal laminal cells thin walled, hyaline……..C. fragilis
  3* Basal laminal cells incrassate
    4 Basal laminal cells short rectangular or subquadrate. Alar cells protruding into the costa.

5. …Upper laminal cells subquadrate to shortly rectangular.....… …… ……..C. cygneus
5* Upper laminal cells oval to oblique…….…..C. shawii
4* Basal laminal cells longer. Costa not protruding into the costa.
6 Stems appressed foliate, comose at tips. Basal laminal cells smooth..C. surinamensis
6* Stems equally foliate. Basal laminal cells pitted.
7 Costa with ventral stereids. Upper laminal cells rectangular.
8 Costa shortly excurrent, serrate. ……..……...…C.arctocarpus
8* Costa longly excurrent, sharply dentate. ……..……..C. cubensis
7* Costa with ventral hyalocysts. Upper laminal cells oval……...…C. subcuspidatus

*Entodon macropus
(06) New to Prov. La Vega.

*Erpodium domingense
(15) New to Prov. Puerto Plata.

*Erpodium pringlei
(15) New to Prov. Puerto Plata.

*Neckeropsis undulate
(01) New to Prov. Puerto Plata.

*Neocladiella pendula
(13, 20. 22) New to Prov. Puerto Plata and Samana.

*Phyllogonium viride
(22) New to Prov. Santiago.

*Pilopogon guadeloupensis
(09, 15, 17) New to Prov. Puerto Plata.

*Pinatella minuta
(14) New to Prov. Samaná.

*Pireella cymbifolia
(14) New to Prov. Samaná.

*Porotrichodendron superbum
(22) New to Prov. Santiago.

Rigodium toxarion
(01, 16) New to Prov. La Plata.

*Sematophyllum subsimplex
(03) New to Prov. Santiago.

*Splachnobryum obtusum
(1,9 c.spor.). New to Prov. Puerto Plata and La Vega.

*Stereophyllum radiculosum
(16) New to Prov. La Plata.

*Taxithelium portoricense
(14) New to Prov. Samaná.

*Toloxis imponderosa
(01, 22) New to Prov. La Plata and Santiago.

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Appendix 1: Updated list of the mosses of Hispaniola (RD: Dominican Republic, H: Haiti) The list id based upon Buck & Steere (1983). The acrocarps are taxonomically revised using the TROPICOS database, the pleurocarps using Buck (1998).

	RD	H
Acroporium estrellae	1	1
Acroporium longirostre	1	
Acroporium pungens	1	1
Adelothecium bogotense	1	1
Aerolindigia capillacea	1	1
Amblystegium serpens	1	
Amblystegium varium	1	
Amphidium cyathicarpum	1	
Anacolia laevisphaera	1	
Andreaea rupestris	1	
Anoectangium aestivum	1	
Anoectangium apiculatum	1	
Anoectangium euchloron	1	1
Anoectangium incrassatum	1	1
Anomobryum filiforme	1	
Anomodon attenuatus	1	
Anomodon rostratus	1	
Aongstroemia filiformis	1	
Aptychella proligera	1	
Atrichum angustatum	1	1
Atrichum bogotense	1	
Atrichum undulatum	1	
Aulacomnium palustre	1	
Barbellopsis trichophora	1	1
Barbula agraria	1	1
Barbula arcuata	1	1
Barbula bescherellei	1	1
Barbula inaequifolia	1	
Barbula microglottis		1
Barbula orizabensis	1	
Barbula potosica	1	
Barbula pringlei	1	
Barbula purpuripes		1
Barbula subteretiuscula	1	1
Bartramia angustifolia	1	
Bartramidula tuerckheimii	1	
Brachymenium columbicum	1	
Brachymenium fabronioides	1	
Brachymenium jamesonii	1	1
Brachymenium systylium	1	1
Brachymenium wrightii	1	
Brachythecium plumosum	1	
Brachythecium rivulare	1	
Brachythecium zanonii	1	1
Brachytheciumn ruderale	1	1
Breutelia brittonae	1	1
Breutelia chrysea	1	
Breutelia deflexifolia	1	
Breutelia jamaicensis	1	1
Breutelia picardae		1

Breutelia scoparia	1	
Breutelia subarcuata	1	
Breutelia tomentosa	1	1
Bryoerythrophyllum jamesonii		1
Bryoerythrophyllum recurvirostrum	1	
Bryosedgwickia densa		1
Bryoxiphium norvegicum	1	
Bryum apiculatum	1	1
Bryum argenteum	1	1
Bryum billardieri	1	1
Bryum capillare	1	1
Bryum coronatum		1
Bryum densifolium		1
Bryum leptocladon	1	
Bryum limbatum	1	1
Bryum pseudocapillare	1	1
Bryum pseudotriquetrum	1	
Callicostella colombica	1	1
Callicostella depressa	1	1
Callicostella diatomophila	1	1
Callicostella pallida	1	1
Calliergon trifarium	1	
Calymperes erosum	1	
Calymperes guildingii	1	
Calymperes lonchophyllum	1	1
Calymperes richardii	1	1
Calympers donnellii	1	1
Calympers nashii		1
Calyptothecium duplicatum	1	1
Calyptrochaeta haitensis		1
Campylium chrysophyllum	1	1
Campylium praegracile	1	1
Campylium quisqueyanum	1	1
Campylium stellatum	1	
Campylopodium pusillum	1	
Campylopus angustiretis	?	?
Campylopus arctocarpus	1	
Campylopus cubensis	1	1
Campylopus cygneus	1	1
Campylopus filifolius (porphyreodictyon)	?	
Campylopus filifolius var. humilis (haitensis)	1	
Campylopus fragilis	1	1
Campylopus lamellinervis (tortuosus)		?
Campylopus oerstedianus	?	
Campylopus pilifer	1	
Campylopus richardii	1	
Campylopus shawii	1	
Campylopus subcuspidatus (praealtus)	?	
Campylopus surinamensis (gracilicaulis)	?	
Campylopus tallulensis	?	?
Ceratodon purpureus		1
Ceratodon stenocarpus	1	
Chrysoblastella chilensis	1	
Chryso-hypnum deminutivum	1	1
Crossomitrium epiphyllum		1
Crossomitrium patrisiae	1	
Cryphaea filiformis	1	

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Cryphaea jamesonii	1	1
Cryphaea patens	1	
Cryptopapillaria penicillata	1	1
Ctenidium malacodes	1	
Cyclodictyon albicans	1	1
Cyclodictyon albicaule	1	1
Cyclodictyon bicolor	1	
Cyclodictyon roridum	1	1
Cyclodictyon subtortifolium		1
Cyclodictyon varians	1	1
Cyrto-Hypnum involvens	1	1
Cyrto-Hypnum minutulum	1	1
Cyrto-Hypnum schistocalyx	1	
Cyrto-Hypnum sharpii	1	
Daltonia longifolia	1	1
Daltonia stenophylla	1	
Dicranella brachyblepharis		1
Dicranella harrisii	1	
Dicranella hilariana	1	1
Dicranella nicholsonii		1
Dicranella perrottetii	1	
Dicranella reticulata	1	
Dicranella vaginata	1	
Dicranella varia		1
Dicranum flagellare	1	1
Dicranum rhabdocarpum	1	
Dicranum sumichrastii	1	
Didymodon laevigatus	1	
Didymodon luridus		1
Didymodon planifolius		1
Didymodon tophaceus		1
Diphyscium domingense	1	
Ditrichum rufescens	1	1
Donnellia commutata	1	1
Drepanocladus aduncus	1	
Drepanocladus aduncus kneifii	1	
Ectropothecium aquaticum	1	
Ectropothecium leptochaeton	1	1
Encalypta ciliata	1	
Encalypta flowersiana		1
Entodon beyrichii	1	1
Entodon macropodus	1	1
Entodon serrulatus		1
Entodontopsis leucostega	1	1
Entosthodon bonplandii	1	1
Entosthodon jamesonii	1	
Epipterygium wrightii	1	
Erpodium domingense	1	1
Erpodium glazovii	1	
Erpodium pringlei	1	
Erythrodontium longisetum	1	1
Eucladium verticillatum	1	1
Eulacophyllum cultellifolium	1	1
Eurhynchium clinocarpum	1	1
Eurhynchium pulchellum	1	
Eustichia longirostris	1	
Fabronia ciliaris polycarpa	1	

Fabronia ciliaris wrightii	1	
Fabronia macroblepharis	1	1
Fissdens weirii	1	
Fissidens angustifolius	1	1
Fissidens asplenioides	1	1
Fissidens austroadianthoides	1	1
Fissidens bourgeanus	1	
Fissidens bryoides	1	
Fissidens cristatus	1	1
Fissidens curvatus		1
Fissidens cylindraceus	1	
Fissidens densiretis	1	1
Fissidens diplodus	1	1
Fissidens dissitifolius	1	1
Fissidens donnelii	1	
Fissidens elegans	1	1
Fissidens flaccidus	1	1
Fissidens fontanus	1	
Fissidens garberi	1	1
Fissidens guianensis	1	
Fissidens inaequalis	1	
Fissidens kegelianus	1	1
Fissidens papillosus	1	1
Fissidens pellucidus	1	
Fissidens petrophilus	1	1
Fissidens polypodioides	1	1
Fissidens radicans	1	
Fissidens repandus	1	1
Fissidens rochensis	1	
Fissidens similiretis	1	
Fissidens steerei	1	
Fissidens taxifolius	1	1
Fissidens yucatanensis	1	1
Forstroemia trichomitria	1	
Funaria calvescens	1	1
Grimmia longirostris	1	
Groutiella apiculata	1	1
Groutiella fragilis	1	
Groutiella husnotii		1
Groutiella wagneriana	1	1
Gymnostomiella orcutii	1	1
Gymnostomum aeruginosum		1
Hamatocaulis vernicosus	1	
Haplocladium angustifolium	1	1
Haplocladium microphyllum	1	1
Hedwigia ciliata	1	
Hedwigidium integrifolium	1	
Helicodontium capillare	1	1
Helicophyllum torquatum	1	1
Hemiragis aurea	1	1
Henicodium geniculatum	1	1
Herpetineuron toccoae	1	
Heterophyllium affine		1
Hildebrandtiella guyanensis	1	1
Holomitrium arboreum	1	
Holomitrium calycinum	1	
Homaliodendron flabellatum	1	1

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Hookeria acutifolia	1	1
Hookeriopsis luteorufescens		1
Hygroanblystegium fluviatile	1	
Hymenodon aeruginosus	1	1
Hymenostomum breutelii	1	1
Hymenostomum castaneum		1
Hymenostylium recurvirostrum	1	1
Hyophila involuta	1	1
Hypnella leptorhyncha	1	1
Hypnum amabile	1	
Hypnum cupressiforme	1	1
Hypnum polypterum	1	1
Hypopterygium tamariscinum	1	1
Irelandia robusticaulis		1
Isodrepanium lentulum	1	1
Isopterygium subbrevisetum	1	1
Isopterygium tenerifolium	1	
Isopterygium tenerum	1	1
Jaegerina scariosa	1	
Leiomela bartramioides	1	1
Lepidopilidium portoricense	1	
Lepidopilum amplirete	1	1
Lepidopilum brevipes	1	
Lepidopilum longifolium	1	1
Lepidopilum polytrichoides	1	1
Lepidopilum scabrisetum	1	1
Lepidopilum tortifolium	1	
Leptobryum pyriforme		1
Leptodictyum riparium	1	1
Leptodontium excelsum	1	1
Leptodontium luteum	1	
Leptodontium sulfureum	1	
Leptodontium ulocalyx	1	1
Lepyrodon tomentosus	1	
Lepyrodontopsis trichophylla	1	1
Leskeodon andicola	1	1
Leskeodon cubensis	1	1
Leucobryum albidum	1	1
Leucobryum antillarum	1	1
Leucobryum giganteum	1	
Leucobryum martianum	1	
Leucobryum megalophyllum		1
Leucobryum polakowskii	1	1
Leucobryum subulatum	1	1
Leucodon julaceus	1	
Leucoloma albulum	1	
Leucoloma cruegerianum	1	1
Leucoloma serrulatum	1	1
Leucomium strumosum	1	1
Limbella bartlettii		1
Loeskeobryim brevirostre	1	
Luisierella barbula	1	1
Macrocoma gastonyi	1	
Macrocoma tenue var. sullivantii	1	
Macromitrium cirrosum	1	1
Macromitrium cirrosum var. jamaicense	1	1
Macromitrium guatemalense	1	

Macromitrium harrisii	1	
Macromitrium homalocron	1	1
Macromitrium longifolium	1	
Macromitrium microstomum	1	1
Macromitrium podocarpi	1	
Macromitrium proliferum	1	
Macromitrium punctatum	1	1
Macromitrium richardii	1	1
Macromitrium scoparium	1	
Meiohecium boryanum	1	1
Mesonodon flavescens	1	
Meteoridium remotifolium	1	1
Meteorium deppei	1	1
Meteorium nigrescens	1	1
Meteorium pseudoteres		1
Mittenothamnium reptans	1	1
Mittenothamnium substriatum	1	
Molendoa sendtneriana	1	
Neckera scabridens	1	
Neckera urnigera	1	1
Neckeropsis disticha	1	1
Neckeropsis undulata	1	1
Neocladiella pendula	1	
Neophophila sprengelii	1	1
Octoblepharum albidum	1	1
Octoblepharum erectifolium	1	
Octoblepharum pulvinatum	1	1
Oligotrichum aligerum	1	
Orthodontium pellucens	1	1
Orthostichella hexasticha	1	1
Orthostichopsis tetragona	1	
Orthostichopsis tortilipilis	1	
Oxystegus tenuirostris		1
Palamocladium leskeoides	1	1
Papillaria deppei	1	1
Philonotis angulata	1	
Philonotis elegantula		1
Philonotis elongata	1	
Philonotis glaucescens	1	1
Philonotis rufiflora	1	
Philonotis sphaerocarpa	1	1
Philonotis uncinata	1	1
Phyllodon truncatulus	1	1
Phyllogonium fulgens	1	1
Phyllogonium viride		
Physcomitrium cupuliferum	1	
Pilopogon gracilis	1	1
Pilosium chlorophyllum	1	1
Pilotrichella cuspidans	1	1
Pilotrichella flexilis	1	1
Pilotrichum affine	1	1
Pilotrichum cristatum		1
Pilotrichum evanescens	1	1
Pilotrichum lophophyllum	1	1
Pinatella minuta	1	1
Pireella angustifolia	1	1
Pireella cymbifolia	1	1

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Pireella filicina	1	1
Pireella papillosula	1	
Pireella pohlii	1	1
Plagiomnium rhynchophorum	1	1
Plagiothecium conostegium	1	
Plagiothecium drepanophyllum	1	
Plagiotheciuum lucidum	1	
Platyhypnidium aquaticum	1	1
Pleuridium holdridgei	1	1
Pleurochaete luteola	1	1
Pogonatum cafionis	1	
Pogonatum leptopelma	1	
Pogonatum procerum	1	1
Pogonatum tortile	1	1
Pohlia cruda	1	
Pohlia elongata	1	
Pohlia elongata		1
Pohlia flexuosa	1	1
Pohlia richardsii	1	
Pohlia wahlenbergii	1	
Polytrichum brevipes	1	
Polytrichum juniperinum	1	1
Porotrichodendron lindigii	1	1
Porotrichodondron superbum	1	1
Porotrichum korthalsianum	1	
Porotrichum lancifrons	1	
Porotrichum longirostre	1	
Porotrichum mutabile	1	1
Porotrichum substriatum	1	1
Prionodon densus	1	1
Pseudocryphaea domingensis	1	1
Pseudosymblepharis schimperiana	1	1
Pseudotaxiphyllum distichaceum	1	
Pseudotrachypus martinicensis	1	
Pterobryon densum	1	1
Pterogonidium pulchellum	1	
Ptychomitrium lepidomitrium	1	
Pylaisidadelpha tenuirostris		1
Pyrrhobryum spiniforme	1	1
Racomitrium crispulum	1	
Racomitrium microcarpon	1	
Racopilum tomentosum	1	1
Rauiella praelonga		1
Rhabdoweisia crispata	1	
Rhacocarpus purpurascens	1	
Rhamphidium borinquense	1	
Rhamphidium dicranoides	1	
Rhizogonium lindigii	1	
Rhodobryum domingense	1	1
Rhynchostegiopsis flexuosa	1	1
Rhynchostegiopsis tunguraguana	1	
Rhynchostegium robustum	1	1
Rhynchostegium scariosum	1	1
Rhynchostegium serrulatum	1	1
Rigodium toxarion	1	1
Schistidium apocarpum	1	
Schistidium gracile	1	

Schlotheimia rugifolia	1	1
Schlotheimia texta	1	
Schlotheimia torquata	1	1
Schoenobryum concavifolium	1	
Sematophyllum adnatum	1	1
Sematophyllum galipense	1	1
Sematophyllum subpinnatum	1	1
Sematophyllum subsimplex	1	1
Sematophyllum swartzii	1	1
Solmsiella biseriata	1	
Sphagnum limbatum	1	
Sphagnum magellanicum	1	
Sphagnum meridense	1	
Sphagnum perichaetiale		1
Sphagnum strictum	1	
Sphagnum subsecundum		1
Splachnobryum mairei		1
Splachnobryum obtusum	1	1
Squamidium isocladum		
Squamidium leucotrichum	1	1
Squamidium livens	1	
Squamidium nigricans	1	1
Steereobryum subulirostrum	1	
Stenodictyum pallidum	1	1
Stereophyllum radiculosum	1	1
Streptopogon calymperes	1	
Streptopogon cavifolius	1	
Symphyodon machrisianus	1	
Syrrhopodon gaudichaudii	1	1
Syrrhopodon incompletus	1	1
Syrrhopodon incompletus var. berteroanus	1	1
Syrrhopodon ligulatus	1	
Syrrhopodon parasiticus	1	
Syrrhopodon prolifer	1	1
Tachyxyphium guadeloupense	1	1
Taxiphyllum scalpelliforme	1	
Taxiphyllum taxirameum	1	1
Taxithelium planum	1	1
Taxithelium portoricense	1	
Teniolophora fluviatilis		1
Thamniopsis incurva		1
Thamniopsis undata	1	
Thamnobryum fasciculatum	1	1
Thelia hirtella	1	
Thuidium delicatulum	1	
Thuidium pseudoprotensum	1	1
Thuidium tomentosum	1	
Thuidium urceolatum	1	1
Toloxis imponderosa	1	1
Tortella humilis	1	1
Tortella richardsii	1	
Tortella tortuosa	1	
Tortula domingensis	1	
Tortula fragilis	1	1
Tortula husnotii	1	
Tortula mniifolia	1	1
Trachypus viridulus	1	1

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Trichosteleum subdemissum	1	
Trichostelium vincentinum	1	
Trichostomum brachydontium	1	1
Trichostomum involutum	1	1
Trichostomum perviride	1	
Trichostomum portoricense	1	
Trichostomum sublamprothecium	1	1
Tuerckheimia linearis	1	1
Vesicularia vesicularis var. crassicaulis	1	1
Vesicularia vesicularis var. portoricensis	1	1
Vesicularia vesicularis var. rutilans	1	1
Vesicularia vesicularis var. vesicularis	1	1
Weissia controversa	1	1
Weissia jamaicensis		1
Wijkia flagellifera	1	
Zelometeorium patulum	1	1
Zygodon campylophyllus	1	1
Zygodon reinwardtii	1	1
Zygodon viridissmus	1	

Appendix 2: List of mosses reported from the province of Puerto Plata (extracted from Buck & Steere 1983, completed by own collections)

Acroporium pungens
Barbula subulifolia
Calyptothecium duplicatum
Erpodium domingense
Erpodium pringleiFissidens angustifolius
Fissidens kegelianus
Fissidens muriculatus
Fissidens taxifolius
Groutiella mucronifolia
Haplocladium microphyllum
Helicodontium capillare
Holomitrium calycinum
Hymenostylium recurvirostrum
Hyophila involuta
Hypopterygium tamariscinum
Leucobryum polakowskii
Leucobryum serrulatum
Macromitrium cirrosum
Meteoridium remotifolium
Meteorium illecebrum
Neckersopsis disticha
Orthostichopsis crinita
Palamocladium leskeoides
Papillaria deppei
Papillaria nigrescens
Philonotis sphaerocarpa
Phyllogonium fulgens
Pilopogon guadeloupensis

Pilotrichella cuspidans
Pilotrichella flexilis
Pilotrichella hexasticha
Pireella angustifolia
Pireella cymbifolia
Pireella pohlii
Polytrichum juniperinumPorotrichum insularum
Pseudosymblepharis schimperiana
Pyrrhobryum spiniforme
Racopilum tomentosum
Rhodobryum domingense
Rhynchostegium serrulatum
Rigodium toxarion
Schlotheimia rugifolia
Schlotheimia torquata
Sematophyllum caespitosum
Sematophyllum galipense
Sematophyllum subsimplex
Stereophyllum radiculosum
Syrrhopodon incompletus
Thuidium minutulum
Thuidium urceolatum
Toloxis imponderosa
Tortella humilis
Tortella richardsii
Tortella subfragilis
Tortula mniifolia
Trichosatomum jamaicense
Weissia controversa
Zelometeorium patulum

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Figs. 1-2: Notothylas breutelii

Fig. 3: Riccia sp. 1

Fig. 4: Riccia sp. 2

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Fig. 5: Riccia sp. 3

Fig. 6. Herbertus divergens

Figs. 7-8. Herbertus divergens

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