

## A checklist of the bryophytes of Chiapas, Mexico

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**Abstract.** The vascular flora of Chiapas, Mexico, has been the subject of a long term study by Dennis Breedlove of the California Academy of Sciences. This has stimulated a related project dealing with the bryophyte flora of the region. A collecting expedition in 1988 generated 1420 collections of bryophytes. Specialists from 13 institutions assisted with identifications. Approximately 70% of the collections have been determined. Checklists of species of bryophytes of Chiapas are presented. These lists are based on collections at CAS and literature citations. A total of 364 species of mosses and 310 species of hepatics and hornworts are reported from Chiapas.

### Introduction

Dennis Breedlove, at the California Academy of Sciences has been collecting plants in Chiapas, Mexico since 1964. By 1981 Breedlove made more than 38,000 collections, including 500 bryophytes. These early bryophyte collections were identified by Harold Robinson of the Smithsonian Institution, Howard Crum of the University of Michigan, and Marshall Crosby and Robert Magill of the Missouri Botanical Garden. Most of the duplicates were distributed by Missouri Botanical Garden. In 1986 I compiled a list of the bryophyte species collected in Chiapas by Breedlove (Bourell, 1986). That compilation included 126 species of mosses and 22 species of hepatics.

During a collecting trip in Chiapas during May 1988 Dennis Breedlove and I made 1420 collections, including over 1000 mosses and nearly 400 hepatics from 19 different localities. Collections were made in the central highlands in pine-oak forests and evergreen cloud forests at 7

localities including Cerro Muktavitz in Municipio of Zinacantán, Cerro Tzontehuitz in Municipio of San Cristóbal de Las Casas, Ach'lum in Municipio of Tenejapa and Paraje Jokosik' in Municipio of Huistán, at elevations ranging from 2700-2830 m. We collected in the southeastern central highlands at the edge of the eastern highlands in the region near Parque Lagunas de Montebello. In this area we sampled 3 localities including montane rain forest on the road from Lago Tzizcao to Santa Elena and at a richly karsted limestone locality east of Trinitaria, Municipio of La Trinitaria, at elevations ranging from 1230-1600 m. In the Sierra Madre we collected in montane rain forests and seasonal mixed evergreen forests on the northeast slope of Cerro Venado above Finca Cuxtepeque, Municipio of Angel Albino Corzo at 1000-1370 m elevation. Areas collected in the central depression include sandstone bluffs north of Ocozocuatla and tropical deciduous forest east of Llano San Juan, Municipio Ocozocuatla; tropical deciduous forests northwest of San Fernando, Muni-

pio of San Fernando; and tropical deciduous forest near El Chorreadero, Municipio of Chiapa de Corzo. Elevations range from 710-1080 m. During this expedition of May 1988 we did not collect along the coastal plains, and we just barely sampled the edges of the northern and eastern highlands. However, Breedlove continued to collect bryophytes in other regions of Chiapas on his own during subsequent collecting trips in 1988 and 1991.

Of the approximately 2000 collections of Chiapas bryophytes at the California Academy of Sciences, about 70% have been identified. The following specialists provided determinations for their respective groups: H. Crum and R.E. Andrus, the *Sphagnaceae*; R.A. Pursell, the *Fissidentaceae*; J.-P. Frahm, the *Dicranaceae*, in part; W.D. Reese, the *Calymperaceae*; R.H. Zander, the *Pottiaceae*, in part; H. Ochi, the *Bryaceae*; D. Griffin, III, the *Bartramiaceae*; D.H. Vitt, the *Orthotrichaceae*; B.M. Thiers, the *Lejeuneaceae*; H. Inoue, *Plagiochila*; K. Yamada, *Radula*; Y. Yuzawa, *Frullania* and A.T. Whittimore, the thalloid hepatics. 253 species of mosses and 134 species of hepatics have been identified from CAS Chiapas collections.

In 1991 Howard Crum made available to me the unpublished manuscript of the **Mexican Moss Flora** (Sharp, *et al.* 1991). I worked with this manuscript to some degree to identify our collections. I also noted 136 species of mosses reported for the state of Chiapas in the manuscript for which CAS has no collections. These species are designated as \*\* in Table 1. Thus, at least 30% of the flora of the mosses known from Chiapas are not represented by CAS collections. Either they are undetermined as of yet or they were not collected. There are 8 species cited by Delgadillo and Cárdenas (1989) that were not cited in the **Mexican Moss Flora** as being from Chiapas, and for which CAS has no collections. I checked these collections at MEXU and 7 of these species are included in the list of mosses (Table 1), noted with the collector's name and number (MEXU).

The collections of Chiapas hepatics and hornworts at CAS represent 134 species. Fulford and Sharp (1990) list an additional 170 species of leafy hepatics for which CAS has no specimens. Alan Whittimore has collected 6 additional species of hepatics not present at CAS nor reported from the literature (pers. comm.). This brings the total hepatics for the state of Chiapas to 310 (Table 2).

Table 1. List of the *Musci* of Chiapas, Mexico with collection numbers or literature references. All collections cited are at CAS except those noted MEXU. Collectors: DEB = Dennis E. Breedlove, ACS = Angeles Cárdenas S., CDM = Claudio Delgadillo M., B&B = M.B. Bello & Bello, ATW = Alan T. Whittimore, LOT = Antonio Lot, RML = Robert M. Laughlin, AJS = A.J. Sharp, \*\* from Chiapas, cited in Sharp, Crum & Eckel, unpubl. manuscript 1991

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**SPHAGNACEAE**

SPHAGNUM  
SPHAGNUM

LIMBATUM MITT.  
MERIDENSE (HAMPE) C. MULL.

DEB 55854  
DEB 58348

<b>FISSIDENTACEAE</b>		
FISSIDENS	ALLENIANUS BRUGG.-NANN. & PURSELL	DEB 67950
FISSIDENS	ASPLENIOIDES HEDW.	DEB 67540
FISSIDENS	DUBIUS P.-BEAUV.	DEB 68304
FISSIDENS	ELEGANS BRID.	DEB 68046
FISSIDENS	FONTANUS (B.-PYL.) STEUD.	**
FISSIDENS	INTRAMARGINATUS (HAMPE) MITT.	DEB 67264A
FISSIDENS	PELLUCIDUS HORNSCH.	DEB 70205
FISSIDENS	POLYPODIOIDES HEDW.	DEB 68179
FISSIDENS	REPANDUS WILS.	DEB 68453
FISSIDENS	WEIRII MITT.	
	var. HEMICRASPEDOPHYLLUS (CARD.) PURSELL	DEB 67544
<b>BRYOXIPHIACEAE</b>		
BRYOXIPHIIUM	NORVEGICUM (BRID.) MITT.	DEB 55852
<b>BRUCHIACEAE</b>		
TREMATODON	LONGICOLLIS MICHX.	DEB 67587
<b>DITRICHACEAE</b>		
CERATODON	PURPUREUS (HEDW.) BRID.	
	ssp. STENOCARPUS (B.S.G.) DIX.	DEB 69710
CYGNIELLA	SHARPII CRUM	**
DITRICHUM	RUFESCENS (HAMPE) BROTH.	DEB 23876
<b>DICRANACEAE</b>		
AONGSTROEMIA	JAMAICENSIS C. MULL.	DEB 29429
AONGSTROEMIA	ORIENTALIS MITT.	**
BREEDLOVEA	CHIAPENSIS CRUM	**
BRYOHUMBERTIA	FILIFOLIA (HORNSCH.) FRAHM	DEB 25438
CAMPYLOPODIELLA	STENOCARPA (WILS. in SEEM.) MULLER & FRAHM	DEB 57082
CAMPYLOPUS	ANDERSSONII (C.MULL.) JAEG.	DEB 25742
CAMPYLOPUS	ARCTOCARPUS (HORNSCH.) MITT.	DEB 67801A
CAMPYLOPUS	CUSPIDATUS (HORNSCH.) MITT.	DEB 30109A
CAMPYLOPUS	FLEXUOSUS (HEDW.) BRID.	DEB 67240
CAMPYLOPUS	FRAGILIS (SCHULTZ) BRID.	DEB 68919
CAMPYLOPUS	HETEROSTACHYS (HAMPE) JAEG.	DEB 68781
CAMPYLOPUS	JAMESONII (HOOK.) JAEG.	DEB 68872
CAMPYLOPUS	NIVALIS (BRID.) BRID.	DEB 67310
CAMPYLOPUS	PAUPER (HAMPE) MITT.	
	var. LAMPRODICTYON (HAMPE) FRAHM	**
CAMPYLOPUS	PILIFER BRID.	DEB 68403
CAMPYLOPUS	PITTIERI WILLIAMS	**
CAMPYLOPUS	REFLEXISETUS (C. MULL.) BROTH.	DEB 68205
CAMPYLOPUS	SAVANNARUM (C. MULL.) MITT.	DEB 25777
CAMPYLOPUS	TALLULENSIS SULL. & LESQ.	DEB 67532
CAMPYLOPUS	cf. OBLONGUS THER.	DEB 15351
DICRANELLA	VARIA (HEDW.) SCHIMP.	DEB 71380
DICRANODONTIUM	DENUDATUM (BRID.) BRITT.	DEB 68922
DICRANUM	FLAGELLARE HEDW.	DEB 25310
DICRANUM	FRIGIDUM C. MULL.	DEB 58196
DICRANUM	RHABDOCARPUM SULL.	DEB 54854
DICRANUM	SUMICHRASTII DUBY	DEB 15156
LEUCOLOMA	CRUGERIANA (C. MULL.) JAEG.	DEB 67790
LEUCOLOMA	SERRULATUM BRID.	DEB 68055
MICRODUS	sp.	DEB 70487A
PILOPOGON	GADELOUPENSIS (BRID.) FRAHM	DEB 67345
RHABDOWEISIA	FUGAX (HEDW.) B.S.G.	ACS 4766(MEXU)
SYMBLEPHARIS	VAGINATA (HOOK.) WIJK & MARG.	DEB 24338
<b>LEUCOBRYACEAE</b>		
LEUCOBRYUM	ALBIDUM (BRID.) LINDB.	DEB 68410

LEUCOBRYUM		ANTILLARUM SCHIMP.	DEB 33690
LEUCOBRYUM		MARTIANUM (HORNSCH.) HAMPE	DEB 28118
LEUCOBRYUM		POLAKOWSKYI (C. MULL.) CARD.	DEB 25321
OCTOBLEPHARUM		ALBIDUM HEDW.	ATW 2254
OCTOBLEPHARUM		PULVINATUM (DOZY & MOLK.) MITT.	B&B S.N.
<b>CALYMPERACEAE</b>			
CALYMPERES		LONCHOPHYLLUM SCHWAEGR.	DEB 57384
SYRRHOPODON		GARDNERI (HOOK.) SCHWAEGR.	DEB 67551
SYRRHOPODON		INCOMPLETUS SCHWAEGR.	
	var.	INCOMPLETUS	DEB 67420
SYRRHOPODON		PROLIFER SCHWAEGR.	DEB 67967
<b>POTTIACEAE</b>			
ANOECTANGIUM		AESTIVUM (HEDW.) MITT.	DEB 69762
BARBULA		AGRARIA HEDW.	DEB 70800
BARBULA		ARCUATA GRIFF.	DEB 70424
BARBULA		INDICA (HOOK.) SPRENG.	**
BARBULA		ORIZABENSE C. MULL.	DEB 67174
BRYOERYTHROPHYLLUM		CAMPYLOCARPUM (C.M.) CRUM	**
BRYOERYTHROPHYLLUM		INAEQUALIFOLIUM (TAYL.) ZANDER	**
BRYOERYTHROPHYLLUM		RECURVIROSTRUM (HEDW.) CHEN	**
DIDYMODON		FALLAX (HEDW.) ZAND.	**
DIDYMODON		RIGIDULUS HEDW.	**
EUCLADIUM		sp.	DEB 70182
GYMNOSTOMUM		AERUGINOSUM SM.	**
HYMENOSTYLIUM		RECURVIROSTRUM (HEDW.) DIX.	DEB 71269
HYOPHILA		INVOLUTA (HOOK.) JAEG. & SAUERB.	DEB 68526
LEPTODONTIUM		FLEXIFOLIUM (DICKS. ex WTH.) HAMPE	**
LEPTODONTIUM		VITICULOSOIDES (P. BEAUV.) WIJK & MARG.	
	var.	SULPHUREUM (LOR.) ZAND.	DEB 15348
MERCEYA		sp.	DEB 70670
MOLENDIA		SENDTNERIANA (B.S.G.) LIMPR.	DEB 68223
MORINIA		sp.	DEB 67317
OXYSTEGUS		TENUIROSTRIS (HOOK. & TAYL.) A.J. SM.	**
PLEUROCHAETE		SQUARROSA (BRID.) LINDB.	DEB 53974
PSEUDOCROSSIDIUM		REPLICATUM (TAYL.) ZAND.	DEB 67360
PSEUDOSYMBLEPHARIS		SCHIMPERIANA (PAR.) CRUM	DEB 15160
RHAMPHIDIUM		sp.	DEB 71177
STREPTOCALYPTA		TORTELLOIDES (CARD.) ZANDER	DEB 67446
STREPTOPOGON		CALYMPERES C. MULL.	DEB 29271
STREPTOPOGON		ERYTHRODONTUS (TAYL.) WILS.	**
TORTELLA		sp.	DEB 68299
TORTULA		AMPHIDIACEA (C. MULL.) BROTH.	**
TORTULA		sp.	DEB 71321
TORTULA		FRAGILIS TAYL.	DEB 68403A
TRICHOSTOMUM		BRACHYDONTIUM BRUCH	**
WEISSIA		CONTROVERSA HEDW.	**
WEISSIA		JAMAICENSIS (MITT.) GROUT	DEB 67994
<b>GRIMMIACEAE</b>			
GRIMMIA		TRICHOPHYLLA GREV.	CDM 4779
RACOMITRIUM		CRISPULUM (HOOK. f. & WILS.) HOOK. f. & WILS.	ACS 4215
RACOMITRIUM		sp.	DEB 67347
<b>FUNARIACEAE</b>			
FUNARIA		HYGROMETRICA HEDW.	
	var.	CALVESCENS (SCHWAEGR.) KINDB.	DEB 67447
<b>SPLACHNACEAE</b>			
BRACHYMITRIUM		JAMESONII TAYL.	ACS 4769(MEXU)

## BRYACEAE

ACIDODONTIUM	<i>cf.</i> HETERONEURON (MITT.) BROTH.	DEB 25813
ACIDODONTIUM	<i>cf.</i> SEMINERVE HOOK.f. & WILS.	DEB 53488
ANOMOBRYUM	PROSTRATUM (C. MULL.) BESCH.	DEB 68855
ANOMOBRYUM	<i>cf.</i> FILIFORME (DICKS.) SOLMS. <i>in</i> RABENH.	DEB 29979
ANOMOBRYUM	<i>cf.</i> OCHIANUM SHAW	DEB 58246
BRACHYMENTUM	CONSIMILE MITT.	**
BRACHYMENTUM	KLOTZSCHII (SCHWAEGR.) PAR.	DEB 70623
BRACHYMENTUM	RADICULOSUM (SCHWAEGR.) HAMPE	DEB 71430
BRACHYMENTUM	SYSTILIUM (C. MULL.) JAEG.	DEB 68309
BRYUM	RGENTEUM HEDW.	DEB 70471
BRYUM	BEYRICHIANUM (HORNSCH.) C. MULL.	DEB 27936
BRYUM	BILLARDIERI SCHWAEGR.	DEB 68402
BRYUM	CAPILLARE HEDW.	DEB 69778
BRYUM	CORONATUM SCHWAEGR.	DEB 70145
BRYUM	DENSIFOLIUM BRID.	DEB 68113
BRYUM	GRANDIFOLIUM TAYL.	DEB 30097
BRYUM	HUILLENSE WELW. & DUB.	DEB 30096
BRYUM	LIMBATUM C. MULL.	**
BRYUM	PERCONCAVIFOLIUM OCHI	DEB 15154
BRYUM	PETELOTTII THER. & HENRY	**
BRYUM	PROCERUM SCHIMP. <i>in</i> BESCH.	DEB 68815
BRYUM	PSEUDOTRIQUETRUM (HEDW.) GAERTN., MEYER. & SCHERB.	**
BRYUM	VERTICILLATUM (HORNSCH.) C. MULL.	DEB 70278
BRYUM	possible sp. nov.	DEB 70241
BRYUM	possible sp. nov.	DEB 70617
EPIPTERYGIUM	<i>cf.</i> TOZERI (GREV.) LINDB.	DEB 67496
MIELICHHOFFERIA	sp.	DEB 70259
POHLIA	ELONGATA HEDW.	ATW 2808
POHLIA	OERSTEDIANA (C. MULL.) SHAW	**
POHLIA	PAPILLOSA (JAEG.) BROTH.	DEB 69696
POHLIA	<i>cf.</i> PROLIGERA (LINDB.) LINDB.	DEB 67323
POHLIA	<i>cf.</i> WAHLENBERGII (WEB. & MOHR) ANDREWS	DEB 69759
PSEUDOPOHLIA	DIDYMODONTIA (MITT.) ANDREWS	DEB 71179
RHODOBRYUM	ROSEUM (BRUCH. & SCHIMP.) LIMPR.	**
<b>MNIACEAE</b>		
PLAGIOMNIUM	ROSTRATUM (SCHRAD.) T. KOP.	DEB 68377
PLAGIOMNIUM	RHYNCHOPHORUM (HOOK.) T. KOP.	**
<b>BARTRAMIACEAE</b>		
BARTRAMIA	MICROSTOMA MITT.	**
BREUTELIA	CHRYSEA (C. MULL.) JAEG. & SAUERB.	**
BREUTELIA	INCLINATA (HAMPE & LOR.) JAEG.	DEB 67356
BREUTELIA	JAMAICENSIS (MITT.) JAEG.	DEB 67484
BREUTELIA	SUBARCUATA (C. MULL.) SCHIMP.	DEB 24332
BREUTELIA	TOMENTOSA (SW.) SCHIMP.	DEB 68873
LEIOMELA	BARTRAMIOIDES (HOOK.) PAR.	DEB 68454
PHILONOTIS	BUCKII GRIFFIN	DEB 58131
PHILONOTIS	CERNUA (WILS.) GRIFFIN & BUCK	**
PHILONOTIS	ELONGATA (DISM.) CRUM & STEERE	DEB 67567B
PHILONOTIS	LONGISETA (MX.) BRITT.	**
PHILONOTIS	SPHAEROCARPA (HEDW.) BRID.	DEB 67490
PHILONOTIS	UNCINATA (SCHWAEGR.) BRID.	
PHILONOTIS	var. GLAUDESCENS (HORNSCH.) FLORSCH.	DEB 70546
PHILONOTIS	UNCINATA (SCHWAEGR.) BRID.	DEB 71088
<b>RHIZOGONIACEAE</b>		
PYRRHOBRYUM	SPINIFORME (HEDW.) MITT.	DEB 67639
<b>ERPODIACEAE</b>		
ERPODIUM	CORONATUM BRITT.	**

<b>ORTHOTRICHACEAE</b>		
AMPHIDIUM	CYATHICARPUM (MONT.) BROTH.	DEB 29357
FLORSCHUETZIELLA	STEEREI VITT.	**
GROUTIELLA	APICULATA (HOOK.) CRUM & STEERE	DEB 67153
GROUTIELLA	CHIMBORAZENSE (MITT.) FLORSCH.	DEB 67441
GROUTIELLA	MUCRONIFOLIA (HOOK. & GREV.) CRUM & STEERE	DEB 24939
MACROCOMA	TENUIS (HOOK. & GREV.) VITT	
	ssp. SULLIVANTII (C. MUELL.) VITT	DEB 69835
MACROMITRIUM	ALTTUBERCULOSUM BARTR.	DEB 71051
MACROMITRIUM	CIRROSUM (HEDW.) BRID.	DEB 67832
MACROMITRIUM	CONTEXTUM HAMPE	**
MACROMITRIUM	FRAGILICUSPIS CARD.	**
MACROMITRIUM	GUATEMALIENSE C. MULL.	DEB 67692
MACROMITRIUM	LONGIFOLIUM (HOOK.) BRID.	DEB 67250
MACROMITRIUM	MAMMILLOSUM BARTR.	DEB 71223
MACROMITRIUM	MICROSTOMUM HORNSCH.	**
MACROMITRIUM	PUNCTATUM (HOOK. & GREV.) BRID.	DEB 67731
MACROMITRIUM	RICHARDII SCHWAEGR.	**
MACROMITRIUM	SCHWANECKEANUM HAMPE	DEB 68599
MACROMITRIUM	SERRULATUM C. MULL.	DEB 68337
MACROMITRIUM	SHARPII VITT	DEB 68019
ORTHOTRICHUM	AEQUATOREUM MITT.	**
ORTHOTRICHUM	HORTONAE VITT	**
ORTHOTRICHUM	PYCNOPHYLLUM SCHIMP. in C. MULL.	**
ORTHOTRICHUM	TRACHYMITRIUM MITT.	CDM 4794(MEXU)
SCHLOTHEIMIA	JAMESONII (ARNOTT) BRID.	DEB 71222
SCHLOTHEIMIA	RUGIFOLIA (HOOK.) SCHWAEGR.	DEB 67158
SCHLOTHEIMIA	TECTA HOOK. & WILS.	**
ZYGODON	CAMPYLOPHYLLUS C. MULL.	**
ZYGODON	EHRENBERGII (DICKS.) BRID.	**
ZYGODON	REINWARDTII (HORNSCH.) BRAUN	ACS 4283
ZYGODON	VIRIDISSIMUS (DICKS.) BRID.	**
<b>HELICOPHYLLACEAE</b>		
HELICOPHYLLUM	TORQUATUM (HOOK.) BRID.	DEB 52117
<b>HEDWIGIACEAE</b>		
BRAUNIA	SECUNDA (HOOK.) B.S.G.	DEB 25803
BRAUNIA	SQUARRULOSA (HAMPE) BROTH.	DEB 69817
HEDWIGIA	CILIATA (HEDW.) P. BEAUV.	**
HEDWIGIDIUM	INTEGRIFOLIUM (P. BEAUV.) DIX.	**
<b>LEUCODONTACEAE</b>		
LEUCODON	CURVIROSTRIS HAMPE	DEB 68190
LEUCODONTOPSIS	sp.	DEB 67175
PSEUDOCRYPHAEA	DOMINGENSIS (SPRENG.) BUCK	DEB 67406
<b>ANOMODONTACEAE</b>		
ANOMODON	ATTENUATUS (HEDW.) HUEBEN.	DEB 28199
ANOMODON	MINOR (HEDW.) FURNR.	AJS 3515(MEXU)
ANOMODON	ROSTRATUS (HEDW.) SCHIMP.	DEB 15142
HERPETINEURON	TOCCOAE (SULL. & LESQ.) CARD.	DEB 68948
<b>CRYPHAEACEAE</b>		
CRYPHAEA	ATTENUATA B.S.G.	**
CRYPHAEA	PATENS HORNSCH	DEB 26267
CRYPHAEA	RETICULATA BESCH.	**
DENDROPOGONELLA	RUFESCENS (SCHIMP.) BRITT.	DEB 68470
SCHOENOBRYUM	GARDNERI (MITT.) MANUEL	**

SPHAEROTHECIELLA	PACHYCARPA (SCHIMP. <i>ex</i> BESCH.) MANUEL	**
SPHAEROTHECIELLA	PINNATA (B.S.G.) MANUEL	DEB 23942
<b>PRIONODONTACEAE</b>		
PRIONODON	DENSUS (HEDW.) C. MULL.	DEB 31761
PRIONODON	DICHOTOMUS HAMPE	ACS 4229(MEXU)
PRIONODON	FUSCULUTESCENS HAMPE	DEB 25840
PRIONODON	LUTEOVIRENS TAYL.	**
<b>TRACHYPODACEAE</b>		
TRACHYPODOPSIS	sp.	DEB 71408
<b>PTEROBRYACEAE</b>		
CALYPTOTHECIUM	DUPLICATUM (SCHWAEGR.) BROTH.	**
HILDEBRANDTIELLA	GUYANENSIS (MONT.) BUCK	DEB 25265
ORTHOSTICHOPSIS	TETRAGONA (HEDW.) BROTH.	DEB 33239
PIREELLA	CAVIFOLIA (CARD. & HERZ. <i>ex</i> CARD.) CARD.	**
PIREELLA	PACHYCLADA (REN. & CARD.) CARD.	DEB 23912
PTEROBRYON	DENSUM (SCHWAEGR.) HORNSCH.	DEB 71462
PTEROBRYOPSIS	MEXICANA (REN. & CARD.) FLEISCH.	**
RENAULDIA	MEXICANA (MITT.) CRUM	DEB 67463
<b>METEORACEAE</b>		
BARBELLA	CUBENSIS (MITT.) BROTH.	**
METEORIDIUM	REMOTIFOLIUM (C.MULL.) MANUEL	DEB 68021
METEORIUM	ILLECEBRUM (C.MULL.) MITT.	DEB 70079
METEORIUM	TERES MITT.	**
PAPILLARIA	DEPPEI (HORNSCH.) JAEG.	DEB 67763
PAPILLARIA	IMPONDEROSA (TAYL.) BROTH.	DEB 68426
PAPILLARIA	NIGRESCENS (HEDW.) JAEG.	DEB 68252
PILOTRICHELLA	FLEXILIS (HEDW.) JAEG.	DEB 67819
PILOTRICHELLA	RIGIDA (C.MULL.) BESCH.	DEB 68040
RHYNCHOSTEGIELLA	CAPILLACEA (HORNSCH.) VISNADI & ALLEN	**
SQUAMIDIUM	LEUCOTRICHUM (TAYL.) BROTH.	DEB 67375
SQUAMIDIUM	NIGRICANS (HOOK.) BROTH.	DEB 24818
ZELOMETEORIUM	PATULUM (HEDW.) MAN.	DEB 67979
<b>PHYLLOGONIACEAE</b>		
PHYLLOGONIUM	FULGENS (HEDW.) BRID.	DEB 67779
<b>NECKERACEAE</b>		
HOMALIA	GLABELLA (HEDW.) MITT.	DEB 24874
HOMALIADDELPHUS	SHARPII (WILL.) SHARP	**
HOMALIODENDRON	DECOMPOSITUM (BRID.) WAGN.	**
NECKERA	CHLOROCAULIS C. MULL.	**
NECKERA	EHRENBERGII C. MULL.	DEB 25316
NECKERA	URNIGERA C. MULL.	RML 540B
NECKEROPSIS	DISTICHA (HEDW.) KINDB.	**
NECKEROPSIS	UNDULATA (HEDW.) REICHARDT	DEB 67406A
POROTRICHUM	COBANENSE C. MULL.	DEB 68078
POROTRICHUM	INSULARUM MITT.	DEB 68174
POROTRICHUM	LONGIROSTRE (HOOK.) MITT.	DEB 29214
POROTRICHUM	PLAGIORHYNCHUM REN. & CARD.	**
<b>LEMBOPHYLLACEAE</b>		
POROTRICHODENDRON	SUPERBUM (TAYL.) BROTH.	ACS 4239(MEXU)
<b>HOOKERIAACEAE</b>		
ADELOTHECIUM	BOGOTENSE (HAMPE) MITT.	DEB 67729
CALYPTROCHAETA	sp.	DEB 67754
CYCLODICTYON	ALBICANS (HEDW.) BROTH.	DEB 34201
CYCLODICTYON	ERUBESCENS BARTR.	**

CYCLODICTYON	HUMECTATUM CARD.	DEB 38105
DALTONIA	GRACILIS MITT.	**
DALTONIA	LINDIGIANA HAMPE	CDM 4764
DALTONIA	TENUIFOLIA MITT.	**
HEMIRAGIS	sp.	DEB 67881
HOOKERIA	ACUTIFOLIA HOOK. & GREV.	**
ISODREPANUM	LENTULUM (WILS.) BRITT.	DEB 67884
LEPIDOPILUM	HAPLOCILIATUM (C. MULL.) PAR.	**
LEPIDOPILUM	POLYTRICHOIDES (HEDW.) BRID.	DEB 38080
LEPIDOPILUM	PRINGLEI CARD.	**
LEPIDOPILUM	RADICALE MITT.	**
LESKEODON	sp.	DEB 70226
PILOTRICHIDIUM	CALLICOSTATUM (C.MULL.) JAEG. & SAUERB.	**
SCHIZOMITRIUM	PALLIDUM (HORNSCH.) CRUM & ANDERS.	**
SCHIZOMITRIUM	VATTERI (BARTR.) CRUM	DEB 34180
<b>CALLICOSTACEAE</b>		
CALLICOSTA	EVANESCENS C. MULL.	**
CALLICOSTA	RAMOSISSIMA (MITT.) CROSBY	DEB 67968
<b>LEUCOMNIACEAE</b>		
LEUCOMNIUM	sp.	DEB 70207
RHYNCHOSTEGIOPSIS	FLEXUOSA (SULL.) C. MULL.	DEB 68186
RHYNCHOSTEGIOPSIS	PLANIFOLIA CRUM & BARTR.	DEB 67966
<b>RACOPILACEAE</b>		
RACOPILUM	TOMENTOSUM (HEDW.) BRID.	DEB 68276
<b>HYPOPTERYGIACEAE</b>		
HYPOPTERYGIUM	TAMARISCINUM (HEDW.) BRID.	DEB 67975
<b>RIGODIACEAE</b>		
RIGIDIUM	GRACILE REN. & CARD.	DEB 68172
<b>LESKEACEAE</b>		
LINDBERGIA	MEXICANA (BESCH.) CARD.	**
<b>FABRONIACEAE</b>		
ANACAMPTODON	COMPACTUS (THER.) BUCK	**
FABRONIA	MACROBLEPHARIS SCHWAEGR.	**
SCHWETSCHKEA	sp.	DEB 70727
<b>MYRINIACEAE</b>		
HELICODONTIUM	CAPILLARE (HEDW.) JAEG. & SAUERB.	**
<b>REGMATODONTACEAE</b>		
REGMATODON	FILIFORMIS SCHIMP.	DEB 68488
REGMATODON	ORTHOSTEGIUS MONT.	DEB 28207
<b>THUIDIACEAE</b>		
BRYOHAPLOCLADIUM	PRAELONGUM (SCHIMP. ex BESCH.) CRUM	**
BRYOHAPLOCLADIUM	LAGOENSIS (HAMPE) BUCK	**
CYRTOHYPNUM	MEXICANUM (MITT.) BUCK & CRUM	**
CYRTOHYPNUM	MINUTULUM (HEDW.) BUCK & CRUM	DEB 15161
CYRTOHYPNUM	SCHISTOCALYX (C. MULL.) BUCK & CRUM	DEB 68084
CYRTOHYPNUM	SHARPII (CRUM) BUCK & CRUM	**
THUIDIELLA	sp.	DEB 71346
THUIDIOPSIS	FURFUROSA (HOOK.f. & WILS.) FLEISCH.	ACS 4271(MEXU)
THUIDIUM	DELICATULUM (HEDW.) B.S.G.	
THUIDIUM	var. RADICANS (KINDB.) CRUM, STEERE & ANDERS.	DEB 24327
THUIDIUM	var. DELICATULUM (HEDW.) B.S.G.	
THUIDIUM	var. PERUVIANUM (MITT.) CRUM	DEB 24325



THUIDIUM	TOMENTOSUM SCHIMP. ex BESCH.	**
<b>AMBLYSTEGIACEAE</b>		
CAMPYLUM	CHRYSOPHYLLUM (BRID.) LANGE	DEB 68378
CAMPYLUM	HISPIDULUM (BRID.) MITT.	DEB 70070
CAMPYLUM	POLYGAMUM (B.S.G.) JENS.	DEB 15178
CAMPYLUM	STELLATUM (HEDW.) C. JENS.	**
DREPANOCLADUS	ADUNCUS (HEDW.) WARNST.	**
DREPANOCLADUS	EXANNULATUS (B.S.G.) WARNST.	**
LEPTODICTYUM	RIPARIUM (HEDW.) WARNST.	LOT 2653
PLATYHYPNIDIUM	sp.	DEB 68083
<b>BRACHYTHECIACEAE</b>		
BRACHYTHECIUM	CONOSTOMUM (TAYL.) JAEG. & SAUERB.	**
BRACHYTHECIUM	STEREOPOMA (SPRUCE) JAEG.	DEB 67483B
BRACHYTHECIUM	TENUINERVE CARD.	**
LEPYRODON	sp.	DEB 67255
PALAMOCLADIUM	LESKEOIDES (HOOK.) BRITT.	DEB 37291
RHYNCHOSTEGIUM	RIPARIOIDES (HEDW.) CARD.	DEB 39820
RHYNCHOSTEGIUM	SEMISCABRUM (BARTR.) ROBINS.	**
RHYNCHOSTEGIUM	SERRULATUM (HEDW.) JAEG. & SAUERB.	DEB 70878
RHYNCHOSTEGIUM	SUBRUSCIFORME (C.MULL.) JAEG. & SAUERB.	**
ROZEA	ANDRIEUXII (C. MULL.) BESCH.	
ROZEA	fo. CHRYSEA (BESCH.) BUCK	DEB 25832
	SUBJULACEA BESCH.	**
<b>ENTODONTACEAE</b>		
ENTODON	BEYRICHII (SCHWAEGR.) C. MULL.	**
ENTODON	BREVIROSTRIS (SCHIMP.) JAEG.	CDM 4825
ENTODON	HAMPEANUS C.MULL.	DEB 24915
ENTODON	JAMESONI (TAYL.) MITT.	DEB 24763
ENTODON	SERRULATUS MITT.	**
ERYTHRODONTIUM	LONGISETUM (HOOK.) PAR.	DEB 23948
ERYTHRODONTIUM	SQUARROSUM (C. MULL.) PAR.	DEB 27937
<b>PLAGIOTHECIACEAE</b>		
PLAGIOTHECIUM	DREPANOPHYLLUM REN. & CARD.	**
<b>STEREOPHYLLACEAE</b>		
ENTODONTOPSIS	LEUCOSTEGA (BRID.) BUCK. & IRELAND	**
STEREOPHYLLUM	RADICULOSUM (HOOK.) MITT.	DEB 68521
<b>CATAGONIACEAE</b>		
CATAGONIUM	BREVICAUDATUM C. MULL.	DEB 24336
<b>SEMATOPHYLLACEAE</b>		
APTYCHELLA	PROLIGERA (BROTH.) HERZ.	**
HETEROPHYLLUM	AFFINE (HOOK.) FLEISCH.	DEB 68756
HORRIDOHYPNUM	MEXICANUM (THER.) BUCK.	**
MEIOTHECIUM	sp.	EB 69901
PTEROGONIDIUM	sp.	DEB 67806
PYLAISIADELPHA	DEPLANATULA (CARD.) BUCK.	**
PYLAISIADELPHA	TENUIROSTRIS (B.S.G.) BUCK	**
SEMATOPHYLLUM	ADNATUM (MX.) BRITT.	**
SEMATOPHYLLUM	CUSPIDIFERUM MITT.	**
SEMATOPHYLLUM	GALIPENSE (C.M.) MITT.	**
SEMATOPHYLLUM	INSULARUM (SULL.) BARTR.	AJS 4109
SEMATOPHYLLUM	SERICIFOLIUM MITT.	ACS 4174(MEXU)
SEMATOPHYLLUM	SUBPINNATUM (BRID.) BRITT.	**
SEMATOPHYLLUM	SUBSIMPLEX (HEDW.) MITT.	DEB 25022
TAXITHELIUM	PLANUM (BRID.) MITT.	DEB 27452
WIJLIA	COSTARICENSIS (BARTR. & DIX. ex BARTR.) CRUM	**

<b>HYPNACEAE</b>			
CARIBAEOHYPNUM		POLYPTERUM (MITT.) ANDO & HIGUCHI	DEB 67773
CHRYSOHYPNUM		DIMINUTIVUM (HAMPE) BUCK	DEB 68176
CTENIDIUM		MALACODES MITT.	DEB 68187
ECTROPOTHECIUM		sp.	DEB 69027
HERZOGIELLA		CYLINDRICARPA (CARD.) IWATS.	DEB 68380
HYPNUM		AMABILE (MITT.) BROTH.	DEB 68816
HYPNUM		CUPRESSIFORME HEDW.	
	var.	LACUNOSUM BRID.	ACS 4217
HYPNUM		CURVIFOLIUM HEDW.	CDM 4763
ISOPTERYGIUM		TENERUM (SW.) MITT.	DEB 70485
MITTENOTHAMNIUM		REPTANS (HEDW.) CARD.	DEB 68370
MITTENOTHAMNIUM		SALLEANUM (BESCH.) CARD.	DEB 68287
MITTENOTHAMNIUM		SCALPELLIFOLIUM (C.MULL.) CRUM	**
PLATYGYRIELLA		DENSA (HOOK.) BUCK	**
PLATYGYRIELLA		PRINGLEI (CARD.) BUCK	**
PLATYGYRIUM		FUSCOLUTEUM CARD.	**
PSEUDOTAXIPHYLLUM		MACHRISIANUM (CRUM) IREL.	**
PYLAIISIELLA		FALCATA (B.S.G.) ANDO	CDM 4771
PYLAIISIELLA		SELWYNII (KINDB.) CRUM, STEERE & ANDERS.	DEB 70074
RHACOPILOPSIS		TRINTENSIS (C.MULL.) BRITT.	DEB 70754
TAXIPHYLLUM		TAXIRAMEUM (MITT.) FL.	**
VESICULARIA		VESICULARIS (SCHWAEGR.) BROTH.	**
	var.	RUTILANS (BRID.) BUCK	**
VESICULARIA		VESICULARIS (SCHWAEGR.) BROTH.	**
	var.	PORTORICENSIS (BRID.) BUCK	**
<b>BUXBAUMIACEAE</b>			
DIPHYSCIUM		CHIAPENSE NORRIS	**
DIPHYSCIUM		FOLIOSUM (HEDW.) MOHR	**
<b>POLYTRICHACEAE</b>			
ATRICHUM		MUELLERI SCHIMP. <i>ex</i> BESCH.	**
ATRICHUM		OERSTEDIANUM (C. MULL.) MITT.	DEB 25314
ATRICHUM		POLYCARPUM (C.M.) SCHIMP. <i>ex</i> BESCH.	DEB 24901
OLIGOTRICHUM		ALIGERUM MITT.	**
POGONATUM		CAMPYLOCARPUM (C. MULL.) MITT.	CDM 4750A
POGONATUM		OLIGODUS (C. MULL.) MITT.	**
POGONATUM		SUBFLEXUOSUM (LOR.) BROTH.	**
POLYTRICHASTRUM		TENELLUM (C. MULL.) G. SM.	**
POLYTRICHUM		JUNIPERINUM HEDW.	DEB 58074

Table 2. List of *Hepaticae* and *Anthocerotae* of Chiapas, Mexico with collection numbers or literature references. DEB = Dennis E. Breedlove collections at CAS, \* Alan T. Whittemore collections as yet undistributed (pers. comm.), \*\* cited from Chiapas (Fulford & Sharp, 1990).

<b>HERBERTACEAE</b>		
HERBERTUS	GROSSISPINUS (STEPH.) FULF.	**
HERBERTUS	JUNIPEROIDEUS (SW.) GROLLE	DEB 14519
HERBERTUS	LIMBATUS (STEPH.) HERZOG.	**
HERBERTUS	SUBDENTATUS (STEPH.) FULF.	**
<b>TRICHOCOLEACEAE</b>		
TRICHOCOLEA	BREVIFISSA STEPH.	DEB 67868
TRICHOCOLEA	ELLIOTTII STEPH.	DEB 67847
TRICHOCOLEA	FLACCIDA (SPRENG.) JACK & STEPH.	DEB 68486
TRICHOCOLEA	PARAPHYLLINA (SPRENG.) STEPH.	DEB 25449
TRICHOCOLEA	TOMENTOSA (SW.) GOTT.	**
<b>LEPIDOZIACEAE</b>		
BAZZANIA	ACUMINATA (LINDENB. & GOTT.) TREV.	ATW 2805*
BAZZANIA	AFFINIS (LINDENB. & GOTT.) TREV.	**
BAZZANIA	ARCUATA (LINDENB. & GOTT.) TREV.	DEB 15005
BAZZANIA	BREUTELIANA (LINDENB. & GOTT.) TREV.	DEB 67749
BAZZANIA	HOOKEI (LINDENB.) TREV.	DEB 67835
BAZZANIA	LONGA (NEES) TREV.	**
BAZZANIA	LONGISTIPULA (LINDENB.) TREV.	DEB 14514
BAZZANIA	SCHLIMIANA (GOTT.) FULF.	DEB 67839
BAZZANIA	STOLONIFERA (SW.) TREV.	DEB 15345
BAZZANIA	TALEANA (GOTT.) FULF.	DEB 67905
BAZZANIA	TERETIUSCULA (LINDENB. & GOTT.) TREV.	**
LEPIDOZIA	CAESPITOSA SPRUCE	**
LEPIDOZIA	CUPRESSINA (SW.) LINDENB.	**
LEPIDOZIA	MUENCHIANA STEPH.	DEB 67226
LEPIDOZIA	REPTANS (LINN.) DUM.	**
LEPIDOZIA	WALLISIANA STEPH.	**
TELARANEA	NEMATODES (AUST.) M.A. HOWE	ATW 2231B*
<b>CALYPOGEEACEAE</b>		
CALYPOGEIA	LAXA GOTT. & LINDENB.	**
CALYPOGEIA	PERUVIANA NEES & MONT.	DEB 70541
CALYPOGEIA	SUBINTEGRA (GOTT., LINDENB. & NEES) BISCHL.	**
<b>ADELANTHACEAE</b>		
ADELANTHUS	LINDENBERGIANUS (LEHM.) MITT.	**
ADELANTHUS	PITTIERI (STEPH.) GROLLE	**
<b>JUNGERMANNIACEAE</b>		
ANASTROPHYLLUM	CONFORME (LINDENB. & GOTT.) STEPH.	**
ANASTROPHYLLUM	LEUCOSTOMUM (TAYL.) STEPH.	**
ANASTROPHYLLUM	STELLATUM SCHUST.	**
ANASTROPHYLLUM	TUBULOSUM (NEES) GROLLE	DEB 67327
ISOTACHIS	SERRULATA (SW.) GOTT.	**
JAMESONIELLA	AUTUMNALIS (DC) STEPH.	DEB 67277
JAMESONIELLA	RUBRICAULIS (NEES) GROLLE	DEB 67808
JUNGERMANNIA	AMOENA LINDENB. & GOTT.	**
JUNGERMANNIA	CALLITHRIX LINDENB. & GOTT.	**
JUNGERMANNIA	LINGUIFOLIA GOTT.	DEB 67225
JUNGERMANNIA	SPHAEROCARPA HOOK.	**
NARDIA	NUDA (LINDENB. & GOTT.) VANA	**
SYZYGIELLA	CONCRETA (GOTT.) SPRUCE	**

SYZYGIELLA	MANCA (MONT.) STEPH.	**
SYZYGIELLA	PERFOLIATA (SW.) SPRUCE	**
<b>GYMNOMITRIACEAE</b>		
GYMNOMITRIUM	LACERATUM (STEPH.) HORIKAWA	**
MARSUPELLA	MEXICANA (LINDENB. & GOTT.) STEPH.	**
<b>SCAPANACEAE</b>		
DIPLOPHYLLUM	ANDREWSII EVANS	**
DIPLOPHYLLUM	APICULATUM (EVANS) STEPH.	**
SCAPANIA	PORTORICENSIS HAMPE & GOTT.	DEB 71474
<b>GEOCALYCEAE</b>		
HETEROSCYPHUS	MIRADORENSIS (STEPH.) SCHIFFN.	DEB 67863
LEPTOSCYPHUS	AMPHIBOLIUS (NEES) GROLLE	DEB 69028
LEPTOSCYPHUS	CUNEIFOLIUS(HOOK.) MITT.	ATW 2806C*
LEPTOSCYPHUS	PORPHYRIUS (NEES) GROLLE	**
LOPHOCOLEA	COADUNATA (SW.) NEES	DEB 67399A
LOPHOCOLEA	CONNATA (SW.) MONT. & NEES	**
LOPHOCOLEA	GRANULOSA GOTT.	**
LOPHOCOLEA	LONGIFLORA HAMPE EX GOTT.	AJS4230A
LOPHOCOLEA	MARTIANA (NEES) GROLLE	ATW 2528*
LOPHOCOLEA	MURICATA (LEHM.) NEES	**
<b>PLAGIOCHILACEAE</b>		
PLAGIOCHILA	ACANTHODA LINDENB. & GOTT.	**
PLAGIOCHILA	AFFINIS LINDENB. & GOTT.	**
PLAGIOCHILA	ALIENA GOTT.	**
PLAGIOCHILA	ALTERNANS LINDENB.	DEB 15352
PLAGIOCHILA	ANGUSTICEDENS STEPH.	DEB 67260
PLAGIOCHILA	ARCUATA LINDENB.	DEB 67738
PLAGIOCHILA	BOGOTENSIS GOTT.	DEB 68448
PLAGIOCHILA	BURSATA (DESV.) LINDENB.	DEB 67231
PLAGIOCHILA	CONNATA LINDENB. & GOTT.	**
PLAGIOCHILA	CORNICULATA (DUM.) DUM.	**
PLAGIOCHILA	CRISPATA GOTT.	**
PLAGIOCHILA	CRISTATA (SW.) DUM.	**
PLAGIOCHILA	DISTICHA LINDENB.	DEB 68395
PLAGIOCHILA	DISTINCTIFOLIA LINDENB.	**
PLAGIOCHILA	DIVARICATA LINDENB.	DEB 68132
PLAGIOCHILA	DIVERSIFOLIUM LINDENB. & GOTT.	**
PLAGIOCHILA	DUBIA LINDENB. & GOTT.	**
PLAGIOCHILA	EXIGUA TAYL.	DEB 25836
PLAGIOCHILA	EXPANSA GOTT.	**
PLAGIOCHILA	FASTIGIATA LINDENB. & GOTT.	**
PLAGIOCHILA	FLAVESCENS (G.L.& N.) GOTT.	DEB 67960
PLAGIOCHILA	FUSCOLUTEA TAYL.	DEB 15007
PLAGIOCHILA	GENICULATA LINDENB.	DEB 67757
PLAGIOCHILA	GOEBELIANA STEPH.	DEB 14402
PLAGIOCHILA	HORRIDA GOTT.	**
PLAGIOCHILA	INTERMEDIA LINDENB. & GOTT.	**
PLAGIOCHILA	IRREGULARIS GOTT.	**
PLAGIOCHILA	LAETEVIRENS LINDENB.	DEB 68134
PLAGIOCHILA	MIQUELIANA LEHM. & LINDENB.	**
PLAGIOCHILA	MULLERIANA GOTT.	**
PLAGIOCHILA	NEORICHARDSII INOUE	ATW 2220A*
PLAGIOCHILA	PAUPERCUA GOTT.	**
PLAGIOCHILA	PERROTTETIANA MONT. & GOTT.	**
PLAGIOCHILA	PINNATA SPRUCE	DEB 28206A
PLAGIOCHILA	PLICATA LINDENB. & GOTT.	**
PLAGIOCHILA	PROCERA LINDENB.	**
PLAGIOCHILA	PUNCTUALIS GOTT.	**

PLAGIOCHILA	RETRORSA GOTT.	DEB 67303
PLAGIOCHILA	RUSBYI SPRUCE	DEB 67890
PLAGIOCHILA	RUTILANS LINDENB.	DEB 14394
PLAGIOCHILA	SPECIOSA LINDENB.	DEB 68446
PLAGIOCHILA	STOLONIFERA LINDENB. & GOTT.	**
PLAGIOCHILA	SUBCONTRACTA LINDENB. & GOTT.	**
PLAGIOCHILA	SUBCONVOLUTA GOTT.	**
PLAGIOCHILA	SUBCRISTATA GOTT.	**
PLAGIOCHILA	SUBPILIFOLIA STEPH.	**
PLAGIOCHILA	SUPERBA (NEES) DUM.	DEB 67654
PLAGIOCHILA	SWARTZIANA (WEB.) TREV.	DEB 69108
PLAGIOCHILA	TRUNCATA GOTT.	**
PLAGIOCHILA	UMBROSA STEPH.	DEB 68138
PLAGIOCHILA	ZACUAPANA GOTT.	**
<b>ARNELLIACEAE</b>		
GONGYLANTHUS	LIEBMANNIANUS (LINDENB. & GOTT.) STEPH.	DEB 67325
GONGYLANTHUS	MUELLERI (GOTT.) STEPH.	**
<b>CEPHALOZIACEAE</b>		
CEPHALOZIA	ARMATA STEPH.	**
CEPHALOZIA	BICUSPIDATA (LINN.) DUM.	**
CEPHALOZIA	CARIBBEANIA FULF.	**
CEPHALOZIA	CRASSIFOLIA (LINDENB. & GOTT.) FULF.	**
NOWELLIA	CURVIFOLIA (DICKS.) MITT.	DEB 67814
ODONTOSCHISMA	CORDIFOLIUM STEPH.	**
ODONTOSCHISMA	DENUDATUM (NEES) DUM.	DEB 67133
ODONTOSCHISMA	STOLONIFERUM (LINDENB. & GOTT.) TREV.	**
ODONTOSCHISMA	VARIABLE (LINDENB. & GOTT.) TREV.	**
<b>CEPHALOZIELLACEAE</b>		
CEPHALOZIELLA	GRANATENSIS (JACK <u>ex</u> STEPH.) FULF.	**
CEPHALOZIELLA	HAMPEANA (NEES) SCHIFFN. <u>in</u> LOESKE	**
<b>RADULACEAE</b>		
RADULA	AFFINIS LINDENB. & GOTT.	**
RADULA	ELEGANS STEPH.	**
RADULA	EVANSII CASTLE	**
RADULA	INFLEXA GOTT. <u>ex</u> STEPH.	**
RADULA	KEGELII GOTT. <u>ex</u> STEPH.	**
RADULA	KORTHALSII STEPH.	DEB 68621
RADULA	MACROSTACHYA LINDENB. & GOTT.	**
RADULA	MEXICANA LINDENB. & GOTT. <u>ex</u> GOTT.	**
RADULA	MOLLIS LINDENB. & GOTT.	**
RADULA	OBTUSILOBA STEPH.	DEB 68131
RADULA	QUADRATA GOTT.	DEB 68320
RADULA	RAMULINA TAYL.	**
RADULA	SUBINFLATA LINDENB. & GOTT.	**
RADULA	TECTILOBA STEPH.	**
RADULA	VOLUTA TAYL.	DEB 68485
RADULA	sp. ( <u>aff.</u> NUDICAULIS)	DEB 67780
<b>PORELLACEAE</b>		
PORELLA	ALPINA (LINDENB. & GOTT.) TREV.	**
PORELLA	BRACHIATA (TAYL.) SPRUCE	**
PORELLA	BRASILIENSIS (RADDI) SCHIFFN.	**
PORELLA	COMPLANATA (STEPH.) SWAILS	**
PORELLA	FULFORDIANA SWAILS	**
PORELLA	LEIBOLDII (LEHM.) TREV.	DEB 68394
PORELLA	LIEBMANNIANA (LINDENB. & GOTT.) TREV.	DEB 28208A
PORELLA	SHARPII SWAILS	**
PORELLA	SWARTZIANA (WEB.) TREV.	DEB 67187

## JUBULACEAE

FRULLANIA	AMBRONNI STEPH.	DEB 68140
FRULLANIA	ARECAE (SPRENG.) GOTT.	DEB 68393
FRULLANIA	ATRATA (SW.) DUM.	DEB 68813
FRULLANIA	BEYRICHIANA (LHEM. & LINDENB.) LEHM. & LINDENB. **	
FRULLANIA	BRASILIENSIS RADDI	DEB 67212
FRULLANIA	BREUTELIANA GOTT.	**
FRULLANIA	BREVICALYCINA STEPH.	DEB 68101
FRULLANIA	CAULISEQUA (NEES)NEES	DEB 67815
FRULLANIA	CHLAPASANA STEPH.	**
FRULLANIA	CLOSTERANTHA SPRUCE	DEB 67803
FRULLANIA	COMPACTA GOTT.	DEB 68946A
FRULLANIA	CONVOLUTA LINDENB. & HAMPE	DEB 71410
FRULLANIA	CRISPILOBA STEPH.	DEB 67502
FRULLANIA	ERICOIDES (NEES) MONT.	**
FRULLANIA	GIBBOSA NEES	DEB 67110
FRULLANIA	GLOMERATA LEHM.& LINDENB.	DEB 67157
FRULLANIA	GYMNOTIS NEES & MONT.	DEB 36974
FRULLANIA	HAMIFLORA HERZ. & CLARK	**
FRULLANIA	HUMILIS SPRUCE	DEB 67152
FRULLANIA	INTUMESCENS (LEHM.& LINDENB.)LEHM.& LINDENB.	DEB 68445
FRULLANIA	INVOLUTA HAMPE <u>ex</u> STEPH.	**
FRULLANIA	MACROCEPHALA (LEHM.& LINDENB.)LEHM.& LINDENB.	DEB 67328
FRULLANIA	MIRADORENSIS LINDENB. & GOTT.	**
FRULLANIA	MONTAGNEI GOTT.	DEB 67471
FRULLANIA	MORITZIANA LINDENB. & GOTT.	**
FRULLANIA	PRINGLEI FULF. & SHARP	**
FRULLANIA	RABENHORSTII STEPH.	**
FRULLANIA	RIOJANEIRENSIS (RADDI) AONGST.	DEB 67154
FRULLANIA	SEBANETICA STEPH.	DEB 67723
FRULLANIA	SEMICONNATA LINDENB. & GOTT.	**
FRULLANIA	SEMIWILLOSA LINDENB. & GOTT.	**
FRULLANIA	SETIGERA STEPH.	DEB 67220
FRULLANIA	TENUIS HAMP.	DEB 67787
FRULLANIA	TRIQUETRA LINDENB. & GOTT.	**
FRULLANIA	TURFOSA LINDENB. & GOTT.	**
FRULLANIA	WINTERI STEPH.	**

## LEJEUNEACEAE

ACANTHOCOLEUS	sp.	DEB 71352
ACROLEJEUNEA	EMERGENS (MITT.) STEPH.	**
ACROLEJEUNEA	HETEROPHYLLA (EVANS) GROLLE & GRADST.	**
ANOPOLEJEUNEA	CONFERTA (MEISSN.) EVANS	**
APHANOLEJEUNEA	EXIGUA EVANS	DEB 68139
ARCHILEJEUNEA	PARVIFLORA (NEES) SCHIFFN.	**
AUREOLEJEUNEA	AURIFERA SCHUST.	DEB 67835A
BRACHIOLEJEUNEA	LAXIFOLIA (TAYL.) SCHIFFN.	DEB 67305
BRYOPTERIS	DIFFUSA (SW.) NEES	DEB 68517
BRYOPTERIS	FILICINA (SW.) NEES	DEB 67659
BRYOPTERIS	LIEBMANNIANA LINDENB. & GOTT.	DEB 70560
BRYOPTERIS	TRINITENSIS (LEHM. & LINDENB.) LEHM. & LINDENB.**	**
CERATOLEJEUNEA	DIVERSILOBA STEPH.	**
CERATOLEJEUNEA	MARITIMA (SPRUCE) STEPH.	DEB 67529A
CERATOLEJEUNEA	MIRADORENSIS (STEPH.) STEPH.	**
CHEILOLEJEUNEA	ACUTANGULA (NEES) GROLLE	**
CHEILOLEJEUNEA	ADNATA (KINZE <u>ex</u> LEHM.) GROLLE	**
CHEILOLEJEUNEA	INFLEXA (HAMPE <u>ex</u> LEHM. & LINDENB.) GROLLE	DEB 67191
CHEILOLEJEUNEA	RIGIDULA (NEES <u>ex</u> MONT.) SCHUST.	DEB 67680A
CHEILOLEJEUNEA	TRIFARIA (REINW. <u>et al.</u> ) MIZUT.	DEB 67146
CHEILOLEJEUNEA	<u>cf.</u> MYRIANTHA (NEES & MONT.) SCHUST.	DEB 67908
COLOLEJEUNEA	CONTRACTILOBA EVANS	**
COLURA	TENUICORNIS (EVANS) STEPH.	**

CROSSOTOLEJEUNEA	BERMUDIANA EVANS	DEB 67402
CROSSOTOLEJEUNEA	BOGOTENSIS STEPH.	**
CROSSOTOLEJEUNEA	INTRICATA JACK & STEPH.	**
CROSSOTOLEJEUNEA	LINDENIANA GOTT. ex STEPH.	**
CROSSOTOLEJEUNEA	PRIONOCALYX GOTT. ex STEPH.	**
DICRANOLEJEUNEA	AXILLARIS (MONT.) SCHIFFN.	DEB 67920
DICRANOLEJEUNEA	DUBIOSA (LINDENB. & GOTT.) STEPH.	**
DICRANOLEJEUNEA	MEXICANA (LINDENB.) STEPH.	**
DIPLASIOLEJEUNEA	ARMATILOBA STEPH.	**
DIPLASIOLEJEUNEA	BRACHYCLADA EVANS	**
DIPLASIOLEJEUNEA	BRUNNEA STEPH.	**
DIPLASIOLEJEUNEA	CAVIFOLIA STEPH.	DEB 67938
DIPLASIOLEJEUNEA	HEIMII JOVET-AST	**
DIPLASIOLEJEUNEA	JOHNSONII EVANS	**
DIPLASIOLEJEUNEA	RUDOLPHIANA STEPH.	DEB 67820
DREPANOLEJEUNEA	ANOPLANTHA (SPRUCE) STEPH.	DEB 68424
DREPANOLEJEUNEA	BIDENS STEPH.	**
DREPANOLEJEUNEA	BIOCELLATA EVANS	**
DREPANOLEJEUNEA	HAMATIFOLIA (HOOK.) SCHIFFN.	**
DREPANOLEJEUNEA	LICHENICOLA (SPRUCE) STEPH.	**
DREPANOLEJEUNEA	ORTHOPHYLLA (NEES & MONT.) BISCHL.	**
EUOSMOLEJEUNEA	CLAUSA (NEES & MONT.) EVANS	**
EUOSMOLEJEUNEA	PARVISTIPULA (LINDENB. & GOTT.) SCHIFFN.	**
FRULLANOIDES	DENSIFOLIA RADDI	**
FRULLANOIDES	MEXICANA VAN SLAG.	**
HARPALEJEUNEA	OVATA (HOOK.) SCHIFFN.	**
HARPALEJEUNEA	STRICTA (LINDENB. & GOTT.) STEPH.	**
HYGROLEJEUNEA	CERINA (LEHM. & LINDENB.) STEPH.	**
KINGIOLEJEUNEA	ORNATA ROBINSON	**
LEJEUNEA	<u>cf.</u> ANGUSTA GOTT.	DEB 67212A
LEJEUNEA	<u>cf.</u> CAESPITOSA LINDENB.	DEB 67209
LEJEUNEA	CHIAPASANA FULFORD & SHARP	**
LEJEUNEA	FLAVA (SW.) NEES	DEB 68419
LEJEUNEA	HALEI ROBINSON	**
LEJEUNEA	LAETA (LEHM. & LINDENB.) LEHM. & LINDENB.	**
LEJEUNEA	LAETEVIRENS NEES & MONT.	**
LEJEUNEA	LEPIDA LINDENB. & GOTT.	**
LEJEUNEA	SERIATA LINDENB. & GOTT.	**
LEJEUNEA	INVOLUTA (GOTT.) GROLLE	**
LEPIDOLEJEUNEA	ELLIPTICA (LEHM. & LINDENB.) SCHIFFN.	DEB 67777
LEPTOLEJEUNEA	UNCILOBA (LINDENB.) EVANS	DEB 67821
LEUCOLEJEUNEA	XANTHOCARPA (LEHM. & LINDENB.) EVANS	DEB 68420
LEUCOLEJEUNEA	MUELLERIANA (GOTT.) SCHIFFN.	**
LOPHOLEJEUNEA	LANCIFOLIA (STEPH.) HERZ.	DEB 14900
MACROLEJEUNEA	BRACHIATA (SW.) SCHIFFN.	DEB 67423
MARCHESINIA	LONGIROSTRIS var. RIVULARIS HERZOG	**
MARCHESINIA	TROLLII HERZOG	**
MARCHESINIA	AURICULATA (WILS.) SCHIFFN.	**
MASTIGOLEJEUNEA	BULLATA (TAYL.) STEPH.	**
MICROLEJEUNEA	COLOMBIANA BISCHL.	**
MICROLEJEUNEA	STRICTA (G.L. & N.) STEPH.	**
MICROLEJEUNEA	BREUTELII (GOTT.) EVANS	DEB 68012
NEUROLEJEUNEA	DEVEXA (LINDENB. & GOTT.) HERZOG	**
NEUROLEJEUNEA	LUNULATA (WEB.) SCHIFFN.	DEB 67735
ODONTOLEJEUNEA	RHOMALEA (SPRUCE) STEPH.	DEB 67726
ODONTOLEJEUNEA	SIEBERIANA (GOTT.) SCHIFFN.	**
OMPHALANTHUS	FILIFORMIS (SW.) NEES	DEB 67830
OMPHALANTHUS	OVALIS (LINDENB. & GOTT.) GRADST.	DEB 69780
PELTOLEJEUNEA	WALLISII (JACK & STEPH.) SCHIFFN.	ATW s.n.
PRIONOLEJEUNEA	<u>cf.</u> MICRODONTA (GOTT.) STEPH.	DEB 56548
PRIONOLEJEUNEA	SCHIMPERIANA (GOTT. ex SCHIMP.) STEPH.	**
PYCNOLEJEUNEA	DENTATA ROBINS.	DEB 14876

PYCNOLEJEUNEA	MIRADORENSIS STEPH.	**
RECTOLEJEUNEA	CONCAVA (LINDENB. & GOTT.) STEPH.	**
RECTOLEJEUNEA	MELASTOMATIS (LINDENB. & GOTT.) STEPH.	**
RECTOLEJEUNEA	PHYLLOBOLA (NEES & MONT.) EVANS	**
SCHIFFNERIOLEJEUNEA	POLYCARPA (NEES) GRADST.	**
STICTOLEJEUNEA	SQUAMATA (WILLD. <u>ex</u> WEB.) SCHIFFN.	DEB 67970
STREPSILEJEUNEA	OBTUSISTIPULA STEPH.	**
STYLOLEJEUNEA	SPINOLOBA (LINDENB. & GOTT.) EVANS	**
STYLOLEJEUNEA	TRINTENSIS (LINDENB.) FULF.	**
SYMBIEZIDIUM	TRANSVERSALE (SW.) TREV.	DEB 67762
TAXILEJEUNEA	CORDISTIPULA (LINDENB. & GOTT.) STEPH.	**
TAXILEJEUNEA	DEBILIS (LEHM. & LINDENB.) STEPH.	**
TAXILEJEUNEA	LAEVICALYX (GOTT.) STEPH.	**
TAXILEJEUNEA	LUSORIA (LINDENB. & GOTT.) STEPH.	**
TAXILEJEUNEA	PTERIGONIA (LEHM. & LINDENB.) SCHIFFN.	DEB 68051
TAXILEJEUNEA	SULPHUREA (LEHM. & LINDENB.) SCHIFFN.	DEB 67774
TRACHYLEJEUNEA	AMBIGUA (LINDENB. & GOTT.) STEPH.	**
<b>ANEURACEAE</b>		
ANEURA	PINGUIS (L.) DUM.	DEB 67734
RICCARDIA	sp.	DEB 68460
<b>METZGERIACEAE</b>		
METZGERIA	ALBINEA SPRENG.	DEB 67302
METZGERIA	AURANTIACA STEPH.	DEB 67278
METZGERIA	AUSTRALIS STEPH.	DEB 67941
METZGERIA	FRUTICOSA SPRENG.	DEB 68854
<b>PALLAVACINIACEAE</b>		
SYMPHOGYNA	ASPERA STEPH.	DEB 68482
<b>MONOCLEACEAE</b>		
MONOCLEA	GOTTSCHKEI LINDB.	DEB 68497
<b>TARGIONIACEAE</b>		
TARGIONIA	HYPOPHYLLA L.	DEB 67458
<b>AYTONIACEAE</b>		
ASTERELLA	ECHINELLA (GOTT.) UNDERW.	ATW 2251*
ASTERELLA	LATERALIS M.A. HOWE	DEB 67548
ASTERELLA	PRINGLEI UNDERW.	DEB 67454
PLAGIOCHASMA	CRENULATUM GOTT.	
PLAGIOCHASMA	INTERMEDIUM LINDENB. & GOTT.	DEB 67359
PLAGIOCHASMA	LANDII EVANS	DEB 71389
PLAGIOCHASMA	WRIGHTII SULL. <u>in</u> A. GRAY	DEB 70185
<b>MARCHANTIACEAE</b>		
DUMMORTIERA	HIRSUTA (SW.) NEES	DEB 70220
MARCHANTIA	CHENOPODA L.	DEB 67486
MARCHANTIA	PALEACEA BERT.	DEB 68397
MARCHANTIA	POLYMORPHA L.	DEB 68852
<b>ANTHOCEROTACEAE</b>		
ANTHOCEROS	sp.	DEB 67447A
ANTHOCEROS	GRANULATUS GOTT.	ATW 2194 *



not listed in Fulford and Sharp (1990)

The moss collection, DEB 58131, from Cerro Mozotal was described as a new species, *Philonotis buckii*, by D. Griffin (1991). H. Ochi noted that *Acidodontium seminerve* was a new record for Mexico and *Bryum perconcaevifolium* was new record for Chiapas. Two possible new species of *Bryum* were noted by Ochi. *Macromitrium mammillosum* was noted by D. Vitt to be a new record for Mexico. *Syrhodon gardneri*, a new record for Chiapas was reported by W. Reese. An additional 10 species of mosses for which collections exist at CAS or MEXU, but were not cited in Sharp *et al.* (1991) are listed in Table 3. A critical revision of the specimens or a closer look at recent taxonomic treatments is necessary before these taxa are confirmed as new records for Mexico.

Table 3. Species of *Musci* not listed in Sharp *et al.* (1991).

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BRYOXIPHIMUM NORVEGICUM (BRID.) MITT.  
 ANOMOBRYUM OCHIANUM SHAW  
 BRYUM VERTICILLATUM (HORNSCH.) C. MULL.  
 MACROMITRIUM SCHWANECKEANUM HAMPE  
 M. SERRULATUM C. MULL.  
 PLAGIOTHECIUM SCHRADERI (C. MULL.) KINDB.  
 POHLIA PROLIGERA (LINDB.) LINDB.  
 PRIONODON DICHOTOMUS HAMPE  
 REGMATODON ORTHOSTEGIUS MONT.  
 SEMATOPHYLLUM SERICIFOLIUM MITT.

There are 40 species of CAS collections of Chiapas leafy hepatics that are not included in the 550 species listed in Fulford and Sharp (1990). These represent probable new records for Mexico (Table 4).

Table 4. Species of leafy *Hepaticae* from Chiapas

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TRICHOCOLEA BREVISSA STEPH.  
 ANASTROPHYLLUM TUBULOSUM (NEES) GROLLE  
 PLAGIOCHILA ANGUSTICEDENS STEPH.  
 P. ARCUATA LINDENB.  
 P. BOGOTENSIS GOTT.  
 P. DISTICHA LINDENB.  
 P. DIVARICATA LINDENB.  
 P. EXIGUA TAYL.  
 P. FUSCOLUTEA TAYL.  
 P. GENICULATA LINDENB.  
 P. LAETEVIRENS LINDENB.  
 P. PINNATA SPRUCE  
 P. RUSBYI SPRUCE  
 P. SUPERBA (NEES) DUM.  
 P. SWARTZIANA (WEB.) TREV.  
 RADULA KORTHALSII STEPH.  
 R. OBTUSILOBA STEPH.  
 R. VOLUTA TAYL.  
 FRULLANIA AMBRONNI STEPH.  
 F. BREVICALYCINA STEPH.  
 F. CAULISEQUA (NEES) NEES  
 F. CLOSTERANTHA SPRUCE  
 F. COMPACTA GOTT.  
 F. GLOMERATA LEHM. & LINDENB.  
 F. GYMNOTIS NEES & MONT.  
 F. HUMILIS SPRUCE  
 F. MACROCEPHALA (LEHM. & LINDENB.) LEHM. & LINDENB.  
 F. SEBANETICA STEPH.  
 F. TENUIS HAMP.  
 ACANTHOCOLEUS sp.  
 AUREOLEJEUNEA AURIFERA SCHUST.  
 CHEILOLEJEUNEA MYRIANTHA (NEES & MONT.) SCHUST.  
 CROSSOTOLEJEUNEA BERMUDIANA EVANS  
 DIPLASIOLEJEUNEA CAVIFOLIA STEPH.  
 D. RUDOLPHIANA STEPH.  
 LEJEUNEA CAESPITOSA LINDENB.  
 MACROLEJEUNEA LANCIFOLIA (STEPH.) HERZ.  
 ODONTOLEJEUNEA RHOMALEA (SPRUCE) STEPH.  
 OMPHALANTHUS OVALIS (LINDENB. & GOTT.) GRADST.  
 SYMBIEZIDIUM TRANSVERSALE (SW.) TR.  
 At least 913 species of mosses occur in Mexico

(Sharp *et al.* 1991). Thus 39% of the mosses now known from Mexico occur in the state of Chiapas. There are at least 550 species of leafy hepatics in Mexico (Fulford & Sharp 1990). The list presented in Table 2 accounts for 288 leafy hepatics in the state of Chiapas. Therefore 50% of the leafy hepatics now known from Mexico occur in the state of Chiapas. Given the overall size and diversity of Mexico and the relatively small size of Chiapas, results from this study indicate that Chiapas indeed does have a very rich bryoflora. However, with completion of determinations of our collections and further exploration of uncollected regions of Chiapas, the flora will undoubtedly increase significantly.

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