

A Newsletter for the flora of New Mexico, from the Range Science Herbarium and Cooperative Extension Service, College of Agricultural, Consumer, and Environmental Sciences, New Mexico State University.

Third Statistical Summary of the Flora of New Mexico

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Previous statistical summaries of the vascular flora of New Mexico appeared in issue 45 (October 16, 2008) and issue 28 (September 19, 2003) of The New Mexico Botanist. Recent tabulations of the flora facilitate a third accounting. This summation expands our inventory to include the mosses (Bryophyta).

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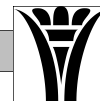
Group	Families	Genera	Species	Total Taxa
Mosses	38	130	299	309
Ferns & Allies	13	30	87	91
Gymnosperms	3	7	29	30
Dicotyledonous Plants	113	817	2878	3234
Monocotyledonous Plants	30	200	770	835
Vascular Plants	159	1054	3764	4190
Totals	197	1184	4063	4499

Mosses	Family	Genera	Species	Total Taxa
	Amblystegiaceae	17	19	19
	Andreaeaceae	1	1	1
	Anomodontaceae	1	3	3
	Aulacomniaceae	1	1	1
	Bartramiaceae	3	8	11
	Brachytheciaceae	3	17	18

Botanice est Scientia Naturalis quae Vegetabilium cognitiorem tradit.
— *Linnaeus*



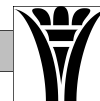
Mosses continued	Family	Genera	Species	Total Taxa
	Bryaceae	8	23	23
	Bryoxiphiaceae	1	1	1
	Climaceae	1	2	2
	Dicranaceae	7	16	16
	Ditrichaceae	4	4	5
	Encalyptaceae	1	3	3
	Entodontaceae	1	3	3
	Fabroniaceae	1	2	2
	Fissidentaceae	1	6	6
	Fontinalaceae	1	3	3
	Funariaceae	4	9	10
	Gigaspermaceae	1	1	1
	Grimmiaceae	4	24	24
	Hedwigiaceae	2	2	2
	Hylocomiaceae	2	2	2
	Hypnaceae	10	14	15
	Leskeaceae	8	12	13
	Meesiaceae	1	1	1
	Mniaceae	4	18	18
	Neckeraceae	2	2	2
	Orthotrichaceae	2	10	10
	Plagiotheciaceae	1	2	2
	Polytrichaceae	4	7	7
	Pottiaceae	24	72	74
	Ptychomitriaceae	1	1	1
	Rhytidiaceae	1	1	1
	Sphagnaceae	1	1	1



Mosses continued	Family	Genera	Species	Total Taxa
	Splachnaceae	1	1	1
	Stereophyllaceae	1	1	1
	Tetraphidaceae	1	1	1
	Thuidiaceae	2	3	3
	Timmiaceae	1	2	2
Totals	38	130	299	309
Ferns & Allies				
	Aspleniaceae	1	4	4
	Azollaceae	1	1	1
	Dennstaedtiaceae	1	1	1
	Dryopteridaceae	6	13	13
	Equisetaceae	1	6	6
	Isoetaceae	1	1	1
	Lycopodiaceae	2	3	3
	Marsiliaceae	1	1	1
	Ophioglossaceae	4	11	11
	Polypodiaceae	1	2	2
	Pteridaceae	9	32	35
	Salviniaceae	1	1	1
	Selaginellaceae	1	11	12
Totals	13	30	87	91
Gymnosperms				
	Cupressaceae	2	8	8
	Ephedraceae	1	6	6
	Pinaceae	4	15	16
Totals	3	7	29	30



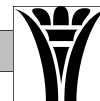
Dicotyledonous Plants	Family	Genera	Species	Total Taxa
	Acanthaceae	10	11	11
	Adoxaceae	2	3	5
	Aizoaceae	2	2	2
	Amaranthaceae	9	35	35
	Anacardiaceae	2	6	12
	Apiaceae	36	65	67
	Apocynaceae	5	12	15
	Araliaceae	2	2	2
	Aristolochiaceae	1	2	2
	Asclepiadaceae	4	35	36
	Asteraceae	189	618	713
	Berberidaceae	1	7	7
	Betulaceae	3	5	5
	Bignoniaceae	3	3	4
	Bixaceae	1	1	1
	Boraginaceae	15	62	73
	Brassicaceae	50	168	183
	Buddlejaceae	1	1	1
	Cactaceae	14	59	67
	Campanulaceae	4	9	10
	Cannabaceae	3	6	6
	Caprifoliaceae	5	19	19
	Caryophyllaceae	19	66	70
	Celastraceae	2	2	2
	Ceratophyllaceae	1	1	1
	Chenopodiaceae	20	64	75
	Cistaceae	1	2	2



Dicotyledonous Plants	Family	Genera	Species	Total Taxa
	Cleomaceae	4	10	10
	Convolvulaceae	7	47	50
	Cornaceae	1	2	2
	Crassulaceae	3	9	11
	Crossosomataceae	2	2	3
	Cucurbitaceae	12	18	18
	Elaeagnaceae	2	3	3
	Elatinaceae	2	4	4
	Ericaceae	10	19	19
	Euphorbiaceae	11	72	74
	Fabaceae	58	270	239
	Fagaceae	1	15	15
	Fouquieriaceae	1	1	1
	Frankeniaceae	1	1	1
	Fumariaceae	1	2	3
	Garryaceae	1	2	2
	Gentianaceae	10	22	24
	Geraniaceae	2	8	8
	Grossulariaceae	1	12	13
	Haloragaceae	1	5	5
	Heliotropaceae	1	4	5
	Hydrangeaceae	4	5	9
	Hydrophyllaceae	5	33	34
	Hypericaceae	1	3	3
	Juglandaceae	1	3	3
	Koerberliniaceae	1	3	3
	Lamiaceae	21	65	72



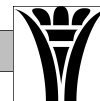
Dicotyledonous Plants	Family	Genera	Species	Total Taxa
	Lentibulariaceae	1	1	1
	Linaceae	1	15	15
	Loasaceae	2	24	26
	Loganiaceae	1	1	1
	Lythraceae	4	6	6
	Malpighiaceae	2	2	2
	Malvaceae	14	46	47
	Meliaceae	1	1	1
	Menyanthaceae	1	1	1
	Molluginaceae	1	2	2
	Moraceae	2	3	3
	Myrsinaceae	4	5	5
	Nyctaginaceae	10	37	44
	Nymphaeaceae	2	3	3
	Oleaceae	5	10	12
	Onagraceae	9	59	70
	Orobanchaceae	10	45	48
	Oxalidaceae	1	5	6
	Papaveraceae	3	9	10
	Parnassiaceae	1	2	2
	Passifloraceae	1	1	1
	Pedaliaceae	1	4	4
	Phytolaccaceae	2	2	2
	Plantaginaceae	18	94	104
	Platanaceae	1	1	1
	Plumbaginaceae	1	1	1
	Polemoniaceae	11	56	62



Dicotyledonous Plants	Family	Genera	Species	Total Taxa
	Polygonaceae	12	90	98
	Portulacaceae	9	30	32
	Primulaceae	2	9	9
	Rafflesiaceae	1	1	1
	Ranunculaceae	13	65	68
	Resedaceae	1	1	1
	Rhamnaceae	6	14	15
	Rosaceae	25	84	100
	Rubiaceae	7	23	27
	Rutaceae	3	3	8
	Salicaceae	2	34	39
	Santalaceae	1	1	1
	Sapindaceae	3	5	9
	Sapotaceae	1	1	1
	Saururaceae	1	1	1
	Saxifragaceae	6	24	24
	Scrophulariaceae	3	8	8
	Simaroubaceae	1	1	1
	Simmondsiaceae	1	1	1
	Solanaceae	9	46	52
	Sterculiaceae	1	3	3
	Tamaricaceae	1	3	3
	Theophrastaceae	1	2	2
	Ulmaceae	1	1	1
	Urticaceae	3	6	7
	Verbenaceae	8	33	35
	Violaceae	2	8	8



Dicotyledonous Plants	Family	Genera	Species	Total Taxa
	Viscaceae	2	12	12
	Vitaceae	3	5	5
	Zygophyllaceae	5	7	7
Totals	113	817	2878	3234
Monocotyledonous Plants	Family	Genera	Species	Total Taxa
	Agavaceae	2	16	20
	Alismataceae	3	11	11
	Alliaceae	1	12	13
	Amaryllidaceae	1	1	1
	Anthericaceae	2	2	2
	Asparagaceae	1	1	1
	Asphodelaceae	1	1	1
	Bromeliaceae	1	1	1
	Commelinaceae	2	5	6
	Convallariaceae	2	3	3
	Cyperaceae	14	149	151
	Hyacinthaceae	1	1	1
	Hydrocharitaceae	4	7	7
	Hypoxidaceae	1	1	1
	Iridaceae	2	7	7
	Juncaceae	2	29	31
	Juncaginaceae	1	2	2
	Lemnaceae	2	9	9
	Liliaceae	7	11	12
	Melanthiaceae	4	7	7
	Nolinaceae	2	6	6



Monocotyledonous Plants	Family	Genera	Species	Total Taxa
	Orchidaceae	14	33	37
	Poaceae	119	428	476
	Pontederiaceae	1	2	2
	Potamogetonaceae	2	13	15
	Ruppiaceae	1	1	1
	Sparganiaceae	1	3	3
	Themidaceae	3	3	3
	Typhaceae	1	3	3
	Zanichelliaceae	1	1	1
Total	30	200	770	835

The largest families in each group, by number of species, is as follows:

Mosses	Pottiaceae	72	Monocotyledonous Plants	Poaceae	428
	Grimmiaceae	24		Cyperaceae	149
	Bryaceae	23		Orchidaceae	33
	Amblystegiaceae	19			
	Mniaceae	18	Top ten families over-all:	Asteraceae	618
Ferns & Allies	Pteridaceae	32		Poaceae	428
	Dryopteridaceae	13		Fabaceae	270
	Ophioglossaceae	11		Brassicaceae	168
	Selaginellaceae	11		Cyperaceae	149
Gymnosperms	Pinaceae	15		Plantaginaceae	94
Dicotyledonous Plants	Asteraceae	618		Polygonaceae	90
	Fabaceae	270		Rosaceae	84
	Brassicaceae	168		Euphorbiaceae	72
	Plantaginaceae	94		Caryophyllaceae	66



Plant Distribution Reports

New records and significant distribution reports for New Mexico plants should be documented by complete collection information and disposition of a specimen (herbarium). Exotic taxa are indicated by an asterisk (*), endemic taxa by a cross (+). Comments [in brackets] are the editor's.

— Richard Worthington [P.O. Box 13331, El Paso, TX 79913]

Ptychomitrium serratum (C. Mull.) Bruch. & Schimp.

(Bryophyta, Ptychomitriaceae): Eddy County: Guadalupe Mts, Fir Canyon, N32° 04.986' W104° 45.273', limestone canyon bottom, woodland with Douglas fir, growing on limestone rock, 6300 ft, 21 Oct 2007, R.D. Worthington 35044 (COLO, NMCR, NYS, UTEP). [determined by William A. Weber; also just reported in Miller & Robinson 2010 (see Botanical Literature of Interest)]

Grimmia trichophylla Grev. (Bryophyta, Grimmiaceae):

Lincoln County: Capitan Mts, upper Copeland Canyon n of the Wilderness marker, wooded canyon bottom on shaded igneous boulder, 6900 ft, 13 June 2007, R.D. Worthington 34828.4 (COLO, NMCR, UTEP). [determined by William A. Weber; first report for NM]

— Costea & Stefanovic [see Costea & Stefanovic 2010 in Botanical Literature of Interest]

Cuscuta liliputana Costea & Stefanovic (Convolvulaceae, liliputan dodder): southern New Mexico. [first report for NM of this new species]

— Mark Porter [see Porter, 2011, in Botanical Literature of Interest]

Aliciella cliffordii J.M. Porter (Polemoniaceae, Clifford's gilia): San Juan County. [first report for NM of this new species]

Ipomopsis congesta (Hooker) V.E. Grant subsp. *matthewii* J.M. Porter (Polemoniaceae, Matthew's skyrocket): San Juan County. [first report for NM of this new subspecies]

— Timothy Lowrey [Herbarium, Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM]

****Gnaphalium uliginosum*** Linnaeus (Asteraceae, marsh cudweed): New Mexico: Taos County: Upper Rio Grande Watershed, Rio Grande Gorge State Park, ca. 1.6 miles north of Pilar, UTM: 429650E 4016474 NAD83 Zone 13, 6660 ft, with *Salix exigua* and *Agrostis gigantea*, 9/1/1992, Juanita Ladyman 92RW012-F9 (UNM). [first report for NM]

— Jim McGrath [20 Robin Ct., Edgewood, NM]

Schoenus nigricans Linnaeus (Cyperaceae, black bog-rush): Otero County: Karr Canyon, roadside alkaline seep shaded by *Prunus serotina* and *Quercus gambelii*, UTM: 423492E, 3644047N (Datum: NAD 27) (CONUS), NW/4 NE/4 sec 9, T16S, R11E, growing in dense clump with *Aquilegia chrysantha*, *Cirsium wrightii*, *Campanula rotundifolia*,

Rosa woodsii, *Clematis*, *Triglochin maritimum*, and *Prunella vulgaris*, 6900 ft, 2 August 2010, Jim McGrath 964 (UNM).

— Kelly W. Allred [New Mexico State University, MSC 3-I, Las Cruces, NM 88003]

Rhabdoweisia crispata (Dickson ex Withering) Lindberg (Bryophyta, Dicranaceae): Grant County: Black Range, Gila National Forest, Spring Canyon off of hwy 152, about 1.5 miles south of Railroad Canyon, N32° 54.1608 W107° 49.0734, mixed conifer forest dominated by ponderosa pine, in moist shaded spots, on large loose bark slabs, 7040 ft, 14 Aug 2010, Kelly W. Allred s.n. & Russ Kleinman (COLO, NMCR). [determined by William A. Weber; first report for NM]

Ditrichum gracile (Mitten) Kuntze (Bryophyta, Ditrichaceae): Mora County: Sangre de Cristo Mts, Pecos Wilderness, Pecos Baldy Lake, subalpine coniferous forest with bristlecone pine and spruce, boggy ground at edge of lake, 11500 ft, 30 July 1997, Kelly W. Allred 6861 (COLO, NMCR). [determined by William A. Weber; first report for NM]

Pylaisia selwynii (Kindberg) Crum, Steere, & L.E. Anderson (Bryophyta, Hypnaceae): Otero County: Sacramento Mts, Lincoln National Forest, along Carr Gap Canyon Road (Forest Road 607), N32.9203° W105.46512°, mixed conifer forest, growing in full shade on dry boulders, 6700 ft (2040 m), 25 March 2010, Kelly W. Allred 10015 (COLO, NMCR). [determined by William A. Weber; first report for NM]

— Bob Sivinski [P.O. Box 1948, Santa Fe, NM 87504]

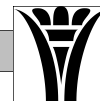
Linum subteres (Trelease) Winkler (Linaceae, sprucemont flax): Sandoval County: collected west of San Ysidro on tan sandstone, T15N R1E, 29 May 1981, P. Knight 1441 UNM. [reported by Heil (The New Mexico Botanist 24:1-4, 2002), but that plant was determined to be *Linum aristatum*; this is the first verified report of this species for NM]

Linum allredii Sivinski & Howard (Linaceae, Allred's flax): New Mexico, Eddy County, and Texas, Culberson County. See Sivinski & Howard (2011), in Botanical Literature of Interest, for full distribution. [first report for NM]

Linum berlandieri Hooker var. *filifolium* (Shinners) C.M. Rogers (Linaceae, Berlandier's yellow-flax): Eddy County: Chihuahuan Desert 8 miles northwest of Carlsbad, May 1961, L.D. Potter 333 (UNM). [first report for NM]

Botany is the natural science that transmits the knowledge of plants.

— *Linnaeus*



Botanical Literature of Interest

- Adams, R.P., C.J. Earle, & D. Thorburg. 2011. **Taxonomy of infraspecific taxa of *Abies lasiocarpa*: leaf essential oils and DNA of *Abies lasiocarpa*, var. *bifolia* and var. *arizonica*.** *Phytologia* 93(1):73-87.
- Canfield, M.R. (ed.). 2011. **Field Notes on Science and Nature.** Harvard University Press. 320 pp. [an inspiring look into the field notes and methods of various scientists]
- Costea, M. & S. Stefanovic. 2010. **Evolutionary history and taxonomy of the *Cuscuta umbellata* complex (Convolvulaceae): Evidence of extensive hybridization from discordant nuclear and plastid phylogenies.** *Taxon* 59(6):1783-1800.
- Huygh, W., I. Larridon, M. Reynders, A.M. Muasya, R. Govaerts, D.A. Simpson, & P. Goetghebeur. 2010. **Nomenclature and typification of names of genera and subdivisions of genera in *Cyperaceae* (Cyperaceae): 1. Names of genera in the *Cyperus* clade.** *Taxon* 59(6):1883-1890.
- Liede, S. & U. Meve. 2004. **Revision of *Metastelma* (Apocynaceae - Asclepiadoideae) in southwestern North America and Central America.** *Ann. Missouri Bot. Gard.* 91:31-86.
- Miller, N.G. & S.C. Robinson. 2010. **Introduction and recent range expansion in the moss *Ptychomitrium serratum* (Ptychomitriaceae) in the southern and eastern United States.** NRC Research Press, Botany 88:336-344.
- Nixon, E. & B.L. Cunningham. 2010. **Gymnosperms of the United States & Canada.** Bruce Lyndon Cunningham Productions (www.forester-artist.com). 200 pp.
- Porter, J.M. 2011. **Two new *Aliciella* species and a new subspecies in *Ipomopsis* (Polemoniaceae) from the western United States of America.** *Phytotaxa* 15:15-25.
- Sivinski, R.C. & M.O. Howard. 2011. **A new species of *Linum* from the northern Chihuahuan Desert.** *Phytoneuron* 2011:33:1-7.
- Welsh, S.L. 2007. **North American species of *Astragalus* Linnaeus (Leguminosae), a taxonomic revision.** Brigham Young University Press, Provo, Utah. 932 pp.
- Williams, W. 2011. **Kraken: The Curious, Exciting, and Slightly Disturbing Science of Squid.** Abrams Image Publ. 224 pp.
- * * *
- Harvard Papers in Botany, Issue 15(2) — A BICENTENNIAL CELEBRATION: A TRIBUTE TO ASA GRAY (1810-1888). Among other delectables, we find the following:
- Miller, N.G. 2010. **Asa Gray and the development of bryology in the United States.** *Harvard Papers in Botany* 15(2):287-304.
- Moore, G., J. Macklin, & L. DeCesare. 2010. **A Brief History of Asa Gray's *Manual of Botany*.** *Harvard Papers in Botany* 15(2):277-286.
- Reveal, J.L. 2010. **Asa Gray and the botanical exploration of the American west.** *Harvard Papers in Botany* 15(2):309-315.



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Kelly Allred, editor



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