

Update to the Moss Catalog for Santa Cruz County

December 15, 2009

Additions and corrections by the author to:

Kellman, K. M., 2003. A catalog of the mosses of Santa Cruz County, California. Madroño:50:61-82.

All changes are in alphabetical order of the name in the catalog. (*KMK*) are the author's initials. For the entity codes, and the format of the additional specimen citations see the original paper.

Corrections and Deletions in Appendix I

Aloina rigida (Hedw.) Limpr.

Claudio Delgadillo reviewed the specimen *KMK 1137* (CAS) and identified it as *A. aloides* (Schultz) Kindb. As the latter was already listed in the catalog, this represents a simple deletion.

Bryum lisae De Not.

After taking a class in the Bryaceae, I have determined that the proper name for this specimen (*KMK 1058* CAS) is *Ptychostomum kunzei* (Hornsch.) J.R. Spence. This same plant has been found in Monterey County *KMK 3594* (CAS).

Campylopus subulatus Schimp. in Rabenh.

The correct identification of this specimen (*KMK 1123* CAS) is *Campylopus pyriformis* (Schultz) Brid. After reading the *Campylopus* treatment in Bryophyte Flora of North America by J. P. Frahm, I sent a portion of the specimen to him, and he made the correct determination in February 2009.

Grimmia ungeri Jur.

The original determination was made on sterile plants, based on the juxtacostal cell shape. *G. ungeri* is autoicous, and is not accepted in North America by Hastings and Greven^{1 2} Given the variability of any single character in this genus, it seems prudent to remove *G. ungeri* from the catalog. The name applied to *KMK 120* (CAS) and *KMK 121* (CAS, MA) is *Grimmia montana* B. S. G.

Gymnostomum aeruginosum Sm.

All Santa Cruz County specimens previously determined as *G. aeruginosum* are correctly identified as *G. calcareum* Nees & Hornsch. See the addition of *G. viridulum* below.

Orthotrichum obtusifolium Sm.

All of the specimens labeled as *O. obtusifolium* are under review. This species is only found in high elevations. The whole *O. tenellum* group is being revised by Lara and Garilleti in Spain. There will undoubtedly be some additions when that work is completed. For now, *O. obtusifolium* is deleted from the catalog.

Racomitrium microcarpum (Hedw.) Brid.

This species is deleted from the catalog, as the correct identification for *KMK 1153* (CAS) is *Bucklandiella heterosticha* (Hedw.) Bednarek-Ochyra & Ochyra.

Syntrichia bartramii (Steere in Grout) Zand.

This specimen (KMK 867 BUF) was identified based solely on the basis of the plane margins. The awn was incorrect for *S. bartramii*, and so was the upper dorsal costa. This is correctly identified as *S. laevipila* Brid., which occasionally has plane margins. Therefore, *S. bartramii* is deleted from the catalog.

Syntrichia bolanderi (Lesq. and James) Zand.

This species has been shown by Werner et al. to be in the genus *Tortula* and should therefore be named *Tortula bolanderi* (Lesq. & James) M. Howe.

Additions to Appendix I

Didymodon eckeliae Zand.

Uncommon, on tree bark, and rarely on rock. Sporophytes unknown in the county.

On bark of *Quercus lobata* between San Lorenzo Valley High School and the elementary school, 2009, 100m, KMK 6016 (CAS); WRSP, in fissures in rocks in Wilder Creek, 1999, 45m., KMK 813(CAS).

Didymodon fallax (Hedw.)Zand.

Rare, on rock at the immediate coast. Sporophytes unknown in the county.

On moist mudstone cliff at Davenport Landing Beach, 2001, 5m, KMK 1488 (CAS).

Grimmia moxleyi Williams

Rare, on dry sandstone in the Ben Lomond Sandhills. Sporophytes unknown in county.

On sandstone conglomerate trailbank near an abandoned sand quarry off Geyer Road in Scotts Valley, 2008, 135m, KMK 5947 (CAS).

Grimmia torenii Hastings

Rare, on exposed sandstone in BBRSP. Sporophytes uncommon.

BBRSP, On exposed sandstone rock outcrop in chaparral off Pine Mountain Trail northeast of Buzzard's Roost, 2002, 600m, KMK 2522 (CAS), Det by Hastings; BBRSP, on sandstone bedrock below the Basin Trail, below China Grade ~1.5 miles beyond the intersection with SR236, 660m, 2008, Kellman, Shevock, & Lodder 5877 (CAS); On dry sandstone outcrop, south facing side of saddle of road leading to Eagle Rock Lookout Tower from Empire Grade, 2008, 715m, Kellman, Shevock, & Lodder 5889 (CAS).

Gymnostomum viridulum Brid.

Rare, on rock in chaparral. Sporophytes unknown in county.

BBRSP, in fissures in calcareous sandstone rock in chaparral at the margin of the large sandstone slab below the Basin Trail and China Grade Rd, 1.45 miles from the northern intersection with SR 236, 2008, 660m, KMK 5873 (CAS).

Homalothecium aeneum (Mitt.) Lawt.

Common, on soil over rock. Sporophytes uncommon.

FC, on limestone rock of Blue Cliff, 1999, 245m, KMK 660 CAS; BBRSP, On thin soil over sandstone outcrop in chaparral-*Pinus attenuata* forest near China Grade, 2001, 680m, KMK 5533 (CAS).

Orthotrichum consimile Mitt.

Uncommon, on hardwood twigs in coast redwood forests. Sporophytes common.

FC, On hardwood twig that had fallen to the ground along the North Fork of Fall Creek, 1997, 230m, KMK 442 (Herb kmk); FNMSP, on maple twig near Aptos Creek, 2008, 80m, Kellman & Buck 5871 (CAS).

Orthotrichum hallii Sull. & Lesq.

Rare, on calcareous rock. Sporophytes common. Note that this species is extremely close to *O. cupulatum* (personal communication, Francisco Lara) and the two may be combined in the future.

FC, on limestone boulders below Blue Cliff Quarry, 2008, 255 m, *Lodder 1711* (Herb. Lodder); BBRSP, On shaded dry sandstone rock under a overhanging calcareous sandstone boulder above the Basin trail below China Grade at a point 1.45 miles from SR 236, 2008, 690m, *KMK 5898* (CAS).

Pohlia andalusica (Hoehnel) Broth.

Rare, on rock in the flood zone of the San Lorenzo River. Sporophytes unknown in the county.

On sandstone rock in the bed of the San Lorenzo River ca 12" above waterline downstream from the Ben Lomond Dam, 2000, 90m, *KMK 2918* (CAS).

Pohlia annotina (Hedw.) Lindb.

Rare, on damp sandstone in forest. Sporophytes unknown in county.

BDEP, on sandstone bank of a drainage ditch in mixed forest off the loop trail, 2008, 435m, *Lodder 1492* (Herb Lodder).

Rosulabryum gemmascens Kindb.

Common but overlooked. Sporophytes unknown in county.

On bark of roadside *Pseudotsuga* along Hwy 9 immediately north of Brookdale (the tree has since been felled), 2001, 140m, *KMK 1881* (CAS).

Schizymerium shevockii Shaw

Rare, on sandstone rock in chaparral. Sporophytes common. Note the following populations survived the fire of 1998.

BDEP, On shaded vertical and overhanging surfaces of dry sandstone boulders in chaparral, 1999, 525m, *KMK 738*(CAS)

Syntrichia papillosissima (Coppe) Loeske

Rare. On seasonally moist rock. Sporophytes unknown in the county.

BBRSP, Eagle Rock, In a large cushion on wet rock surface, 30 m from fire tower, 2006, 725m, *Lodder 2006-25* (Herb Lodder).

Clarifications of the undescribed species in Appendix II

Bryum sp. A has been determined by John Spence to be ***Gemmabryum californicum*** (Lesq.)Spence, a taxon that was incorrectly synonymized with *B. bicolor*. New specimens with a distinct form of neotonous bulbils have been found that justify resurrection of *Bryum californicum*, and the bulbils justify placement in the new genus.

Bryum sp. B. is still undescribed. It is a relatively common plant on marine sandstone rocks throughout the central coast of California.

Orthotrichum sp. A has been named ***Orthotrichum kellmanii*** (Norris, Shevock & Goffinet)

Schistidium sp. A & B are still undescribed.

Tortula sp. A is still in question. It is very close to the European plant *T. brevissima* Schiffn. And may be the same, but there are slight differences. Further investigation is necessary.

Taxiphyllum sp. A has been named *Dacryophyllum falcifolium* Ireland.