

Title

Point Loma Lichens - Now and Then

Author¹

Charis C. Bratt

Abstract: The lichen flora of Pt. Loma (Cabrillo National Monument) was surveyed. The historical record was researched both for literature references and for actual specimens at various herbaria. Unpublished collections from 1936 were also used. These were then compared to recent collections and the changes in the flora were noted. Most of the fruticose lichens can no longer be found. The foliose lichens seem to be reduced in size.

¹ Research Associate, Santa Barbara Museum of Natural History, Santa Barbara, CA.

There is no inventory of the rare and endangered species of lichens in California. It was not until 1979 that a catalog of California lichens was published. That catalog lists the lichen species mentioned in literature up to that time, but does not give distributions or abundance. Anyone working with lichens soon becomes aware that there are many lichens no longer found in great quantity, if at all. Documenting changes in lichen vegetation can be a difficult and frustrating process. The lichens of Point Loma provide a case history.

Lichen collectors from the 1800's and early 1900's were notoriously lax when labeling their collections. "Coastal California" or even just "California" are too often the only locations listed. Fortunately, people who took the trouble to make their way from San Diego out to Point Loma often labelled their collections "Point Loma", so there is a scattered record of collectors and collections. Some of these are mentioned in literature, but others are unpublished. In no way is this report to be considered complete - quite the contrary. Collections from Point Loma will probably come to light for a long time yet. Nor can the present day collecting be called complete. A different collector with a different eye will inevitable see different things.

Point Loma forms the western arm of San Diego Bay. In 1854 the first lighthouse was built on Point Loma. The road to the lighthouse provided an access and it soon became a popular excursion site. In 1891 a new lighthouse was built farther out on the point and much closer to the water level. In 1913 the old lighthouse was designated a National Monument. Today Cabrillo National Monument encompasses 144 acres near the tip of Point Loma.

The rest of Point Loma is under the jurisdiction of various branches of the military. Parts of this are intensely developed. Within the National Monument are the remains of fortifications built during the World Wars.

The native vegetation is classified as Maritime Succulent Scrub, a coastal sage scrub with many succulents. This vegetation is best developed in Baja California. The Torrey Pines area marks its northernmost continental extension. The lichen flora consists of species endemic to Maritime Succulent Scrub, species from the California coastal bluffs lichen community, as well as lichen species of widespread distribution.

A summary of the lichen collections known to the author is set forth in Table 1. The lichen species are listed alphabetically in groups; foliose, fruticose and crustose. Currently accepted nomenclature for historic records is shown in parentheses. An asterisk denotes a misidentified specimen with its correct determination in parentheses. Historic collection were all from the period of 1830 to 1910. Weber and Santesson collected the area briefly in 1966 and the authors collections are all from the 1980's.

The foliose lichens are notable for their scarcity. Historically only one, Physcia erinacea (now Heterodermia) was collected. It is a sub-fruticose species and may be sensitive to air pollution as many of the fruticose species are. Although it was recollected in 1966 by Weber and Santesson, the author was unable to find any. However four other foliose species were collected, three of them from the bases of shrubs or trees and one from soil. None of the

LICHENS OF POINT LOMA

Pre 1910

1960's

1980's

FOLIOSE LICHENS

Physcia erinacea (Heterodermia)

Anaptychia erinacea
(Heterodermia)

Parmotrema hypoleucinum

Physcia tenella
Pseudoparmelia caperata
Xanthoparmelia mexicana

FRUTICOSE LICHENS

Evernia prunastri

Cladonia chlorophaea
Cladonia furcata
Cladonia sp.

Ramalina crinata (Trichoramalina)
Ramalina evernioides
Ramalina homalea (Niebla)
Roccella fuciformis (babingtonii)
Roccella leucophaea (Dendrographa)
Sterocaulon albicans
Teloschistes villosus

Ramalina homalea

Leprocaulon microscopicum

Niebla homalea

LICHENS OF POINT LOMA

Pre 1910	1960's	1930's
CRUSTOSE LICHENS		
Acarospora schleicheri	Acarospora schleicheri	Acarospora schleicheri Acarospora obpallens Acarospora smaragdula
Buellia halonia	Buellia oidalea Caloplaca bolacina	Buellia oidalea Buellia stellulata
Blastenia luteominia (Caloplaca)		Caloplaca cf. fraudans Caloplaca luteominia Dimelaena radiata Diploicia canescens Diploschistes scruposus Lecania brunonis Lecania fructigena
	Lecania fructigena Lecania sp. Lecanora atra	
Lecidea enteroleuca (Lecidella)		Lecanora caseiorubella ssp. merrillii Lecidella subincongrua var. elaeochromoides
Lecidea glebulosa		
Pertusaria flavicunda		Pertusaria flavicunda
* Pertusaria leioplaca (pustulata)		Pertusaria santamonicae
Placodium aurantiacum (Caloplaca)		Polysporina simplex
Rinodina turfacea	Rinodina angelica	
Sclerophyton californicum		Schismatomma californicum
	Siphula sp.	Siphula sp.
Toninia massata	Toninia sp.	Thelomma mommosum

foliose species collected could be termed abundant or common on Point Loma, but they are abundant and common in other locations. Perhaps that explains why they were not collected historically.

The fruticose species present a different story. Of the eight species collected historically, only one has been recollected. Ramalina nomalea (now Niebla) is the most commonly collected Niebla. Its coastal bluff habitat outside of parklands has all but disappeared.

Ramalina crinita (now Trichoramalina) and Teloschistes villosus are lichens whose North American distributions are limited to coastal areas along Baja California and extending north to Torrey Pines for Trichoramalina crinita and Santa Cruz Island for Teloschistes villosus. Trichoramalina crinita has not been collected in the United States since 1929 and is presumed extinct within our boundaries. Teloschistes villosus has not been recollected at Point Loma or on Santa Cruz Island. It was collected on Santa Barbara Island in 1965 by the author. It certainly could be classified as rare.

Roccella fuciformis is the name put on specimens collected by W.G. Farlow when he visited Point Loma in 1885. The catalog of California lichens lists this as a probable misidentification, as Point Loma is not within the known distribution pattern. The specimen of Farlow that is at the Smithsonian Institution has been annotated to R. phycopsis and later to R. babingtonii. Along with R. leucophaea (now Dendrographa) these species are a part of the coastal bluff lichen community whose habitat is disappearing.

While Ramalina evernioides and Evernia prunastri have not

been recollected on Point Loma, they can be found in other localities.

Stereocaulon albicans is a puzzle that won't be solved until the specimen is found. This is most likely a misidentification. Its description as "not rare on ground under bushes" could refer to the Leprocaulon microscopicum collected by the author.

The three species of *Cladonia* collected by the author were probably overlooked by earlier collectors as being common elsewhere. In certain places they form extensive mats over the soil. Their role as soil consolidators is very evident along the Bayside Trail.

The crustose lichens show even different results. It is to be expected that an attempt to do a thorough collection would result in a greater number of crustose species collected. Weber and Santesson spent less than an hour on their hurried collection trip to Point Loma. Of the nine crustose lichens they collected, only one was a recollection of an historic collection. The author's more thorough collections yielded 20 crustose species but only four were recollections. There is a rich variety of crusts on rocks, soils and plants. It is this area especially that different collectors see different things. Perhaps another collector would be able to find more of the historic species.

Acarospora schleicheri, a bright yellow crust lichen common on rocks, was the only crust lichen in all three collections. Pertusaria flavicunda, which was collected historically and again by the author, is part of the coastal lichen community. Its light yellow-green color makes it readily identifiable in the field. Blastenia luteominea (now *Caloplaca*) is another recollected species.

With Lecania brunonis and Polysporina simplex, this lichen fulfills a valuable function of binding soils and preventing erosion.

Lecidea enteroleuca is now known as Lecidella subincongrua var. elaeochromoides and is the fourth of the crustose recollections as well as being another soil consolidator.

The Siphula species collected by Weber and Santesson and by the author is probably the most common soil lichen in southern California. When collected in 1966 Santesson remarked that it resembled a Siphula that he had collected in Chile. Weber distributed it under this name in his Exsiccati. No one has ever followed up on this and determined whether or not this is the proper genus for this lichen or given it a species name. It seems strange that so widespread a species should remain so little known.

It is unfortunate that the early collectors never made a thorough collection of the area. Without that information, it is not possible to know for certain what crusts were present historically on Point Loma. What we know of crust lichens at that time in the greater San Diego area would indicate that many more were probably present that are recorded here.

In summary we find that the fruticose lichen species have declined drastically. Whether this is due to air pollution is not known. This could be tested by doing some lichen transplants using common lichens such as Evernia prunastri and monitoring them over a period of time to see how they fare. The foliose lichens are mostly small and hard to find. It will be interesting to check again in a few years to see how they are surviving. Further work on the crust lichens will provide an even better record to use for comparison in future years.

It was 50 years ago that Dr. A.W. Herre published in Madroño

an impassioned plea to botanists to save our vanishing lichen flora. He lamented the destruction of habitat in the previous 25 years and feared what would happen in the future. What would he think today? Development, air pollution, acid rain and the ever increasing impact of man have taken their toll.

Hopefully some day, the same level of caring and effort put into rare and endangered vascular plants will be extended to the lichens.

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