PRELIMINARY LIST OF VASCULAR PLANTS OF A SERPENTINE AREA AT THE SOUTHERN END OF THE SAN FRANCISCO WATERSHED RESERVE, SAN MATEO COUNTY, CALIFORNIA

The area covered by this list is shown in the enclosed figure. The area is an excellent example of serpentine grassland with some chaparral, particularly along Edgewood Road. Although it has been cut into two halves by the construction of Highway 280 and one corner of it at Canada Road and Edgewood Road was used as a construction equipment site, most of it is still intact.

During the spring, particularly in late March, April, and early May, this area is one of the most colorful in terms of the profusion of flowering plants that exists along all of Highway 280. All too much serpentine grassland has been destroyed for agricultural, residential, and commercial development in Central California and San Mateo County, in particular.

The list of plants, which is tentative as all the collections made have not yet been identified, contains some 41 families and about 139 species. Specimens of these are in the Dudley Herbarium of Stanford University.

The list will show a wide diversity of the plants. This area is then, an excellent example of serpentine grassland (and chaparral to a lesser extent), and should be left alone.

John H. Thomas

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Oct. 1, 1974

ANACARDIACEAE
Toxicodendron diversilobum

AMARYLLIDACEAE
Brodiaea elegans, laxa, pulchella, terrestris
Allium dichlamydeum, serratum

APIACEAE
Daucus pusillus
Foeniculum vulgare*
Lomatium utriculatum
Sanicula bipinnatifida, crassifolia
Tauschia kelloggii

ASCLEPIADACEAE
Asclepias fascicularis

ASTERACEAE
Achillea millefolium
Agoseris grandiflora, heterophylla
Baccharis pilularis
Blennosperma nanum
Centaurea melitensis*
Chaetopappa bellidiflora
Eriophyllum confertiflorum
Gnaphalium californicum
Hemizonia luzulaefolia
Lactuca serriola*
Lasthenia glabrata
Layia platyglossa
Madia exigua
Microseris douglasii, heterocarpa
Micropus californicus
Rigiopappus leptocladus
Sonchus asper*
Stylocline filaginea

BRASSICACEAE
Lepidium nitidum
Raphanus sativus*
Thelypodium lasiophyllum

BORAGINACEAE
Cryptantha microstachys

CAPRIFOLIACEAE
Lonicera hispidua
Symphoricarpus mollis

CARYOPHYLLACEAE
Arenaria douglasii
Sagina sp.
Silene californica
Stellaria nitens

CONVOLVULACEAE
Convolvulus occidentalis, subacaulis

DIPSACACEAE
Dipsacus fullonum*

ERICACEAE
Arbutus menziesii

EUPHORBIACEAE
Euphorbia spathulata

FABACEAE
Astragalus gambellianus
Lotus corniculatus*, humistratus, purshianus, subpinnatus
Lupinus bicolor, succulentus
Medicago polymorpha*
Melilotus indicus*
Spartium junceum*
Trifolium albopurpureum, fucatum, tridentatum, variegatum
Vicia sativa*

FAGACEAE
Quercus agrifolia, douglasii, dumosa, durata, lobata

GENTIANACEAE
Centarium davyi

GERANIACEAE
Erodium cicutarium*

HIPPOCASTANACEAE
Aesculus californica

IRIDACEAE
Sisyrinchium bellum

LINACEAE
Hesperolinon micranthum

LAURACEAE
Umbellularia californica.

LILIACEAE
Calochortus albus, luteus, venustus
Smilacina racemosa
Trillium chloropetalum
Zygadenus fremontii

MALVACEAE
Sidalcea diploscypha

LAMIACEAE
Monardella villosa
Stachys rigida quercetorum

MYRTACEAE
Eucalyptus globulus*

ONAGRACEAE
Clarkia purpurea
Epilobium minutum, paniculatum

POLEMONIACEAE
Gilia tricolor
Linanthus ambiguous, liniflorus
Navarretia sp.

POACEAE
Aira caryophyllea*
Avena fatua*
Bromus mollis*, rubens*
Elymus glaucus
Festuca octoflora
Hordeum vulgare*
Lolium multiflorum*
Poa annua*, scabrella
Polypogon monspessulanus*
Sitanion jubatum
Stipa pulchra

PAPAVERACEAE
Eschscholzia californica

PLANTAGINACEAE
Plantago erecta, lanceolata*

POLYGONACEAE
Eriogonum vimineum
Rumex crispus*, pulcher*

POLYPODIACEAE
Adiantum jordanii
Pityrogramma triangularis
Polypodium californicum

PORTULACACEAE
Calandrinia ciliata menziesii
Montia perfoliata, spathulata

PRIMULACEAE
Anagallis arvensis*
Dodecatheon hendersonii hendersonii

RANUNCULACEAE
Delphinium patens, variegatum
Ranunculus californicus

RHAMNACEAE
Rhamnus californica

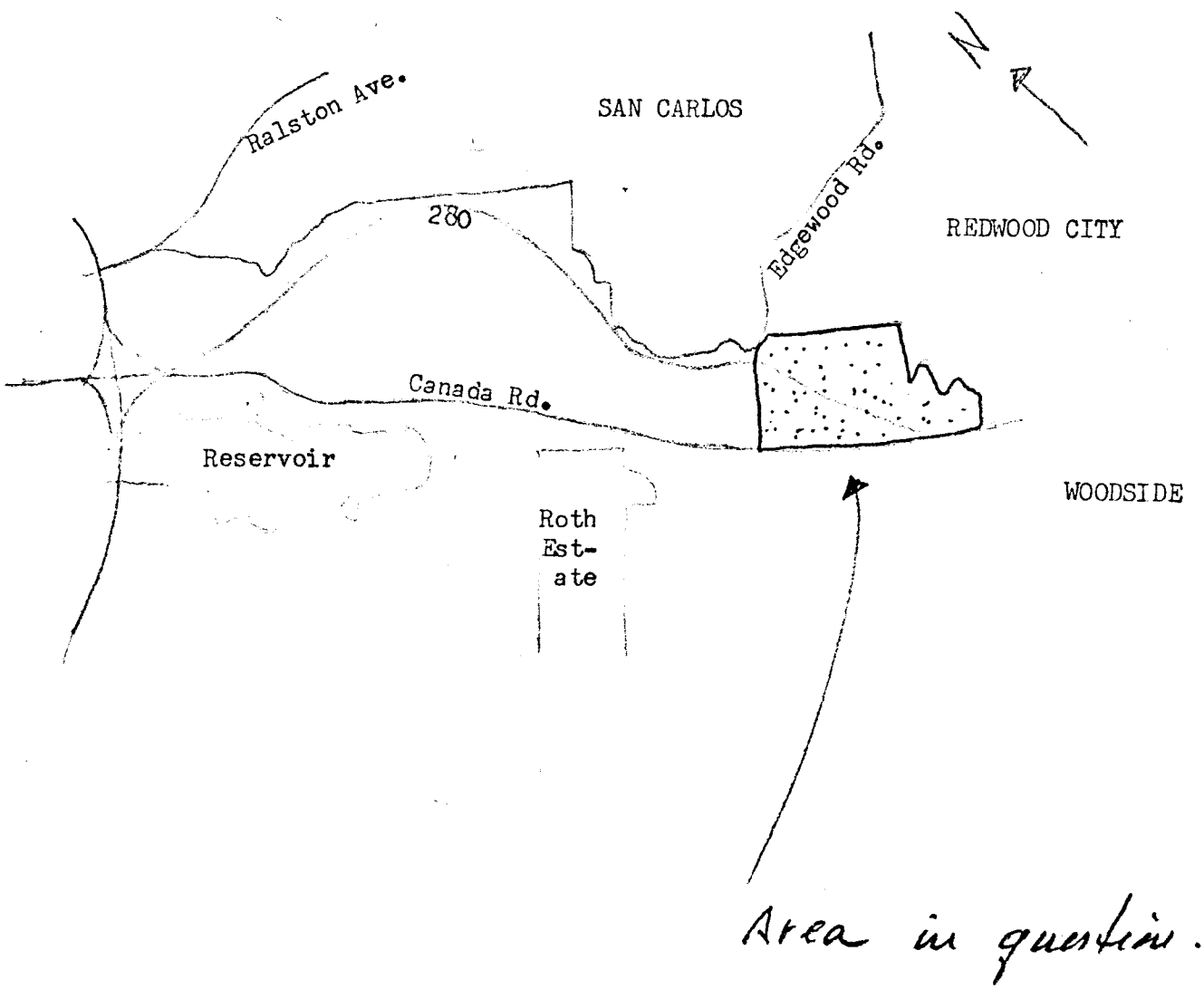
ROSACEAE
Adenostoma fasciculatum
Alchemilla occidentalis
Photinia arbutifolia

RUBIACEAE
Galium nuttallii, parisiense*

SCROPHULARIACEAE
Collinsia heterophylla, sparsiflora
Diplacus aurantiacus
Mimulus guttatus
Orthocarpus densiflorus, lithospermoides, pusillus
Pedicularis densiflora
Scrophularia californica

VALERIANACEAE
Plectritis ciliosa

VERBENACEAE
Verbena lasiostachys



LIST OF VASCULAR PLANTS OF A SERPENTINE AREA AT THE SOUTHERN END OF THE SAN FRANCISCO WATERSHED RESERVE, SAN MATEO COUNTY, CALIF.

The area covered by this list is shown on the enclosed map. The area is an excellent example of serpentine grassland with some chaparral, particularly along Edgewood Road. Although the area has been surrounded by roads and highways, especially by the construction of Highway 280, it is a very good example of a serpentine grassland (and chaparral), and there is not very much of this plant community left undisturbed in San Mateo and Santa Clara counties.

During the spring, particularly in late March and April this area is one of the most colorful in terms of the profusion of flowering plants that exists along all of Highway 280.

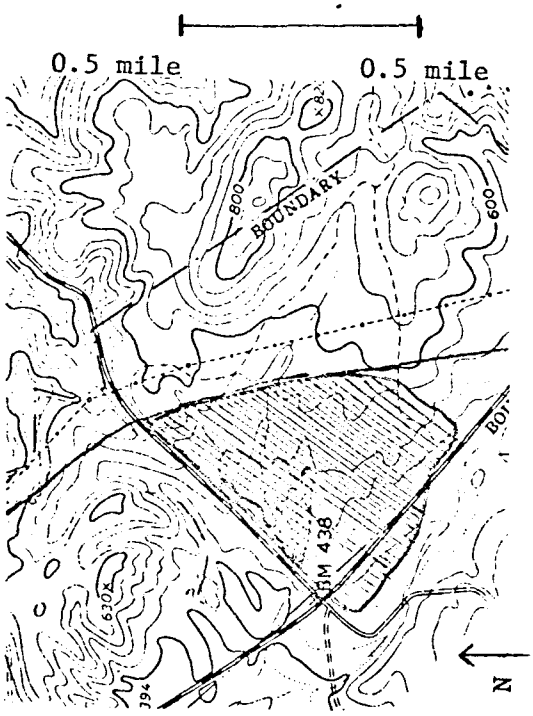
The list of plants is tentative and additional collection would probably turn up additional species. The list consists of about 48 families, 136 genera, and 179 species of vascular plants. Numbers after the taxa refer to specific collections: numbers below 1000 were made by Mr. Ned Cahill; those above 15000 by John H. Thomas. All specimens are in the Dudley Herbarium of Stanford University.

The following constitute particularly interesting members of the flora:

1. Lasthenia glabrata - formerly very common in San Mateo Co., but now much restricted.
2. Stylocline filaginea - only the second known collection from San Mateo Co.
3. Scribneria bolanderi - first known locality for this grass in San Mateo Co., known in the Santa Cruz Mountains otherwise only from Santa Cruz Co.
4. Chaetopappa bellidiflora - apparently the second known locality for San Mateo Co.
5. Bidens laevis --.apparently the first report for San Mateo Co.

This list was originally compiled by Ned Cahill as a part of the requirements of a M. S. degree in Biological Sciences at Stanford University and has been modified by John H. Thomas.

John H. Thomas
Mar. 22, 1975



DUDLEY HERBARIUM OF STANFORD UNIVERSITY

SAN MATEO COUNTY, CALIFORNIA

Serpentine fields bordered by chaparral near the intersection of Canada and Edgewood roads, about 3 mi westward from Redwood City. Area partly destroyed by road building. Serpentine soil. Grasslands with Layia platyglossa, Orthocarpus densiflorus, Lasthenia glabrata, Chaetopappa bellidiflora, Eschscholzia californica, Delphinium variegatum, Brodiaea pulchella, B. terrestris, Gilia tricolor as the common species.

Ned Cahill 1974

Amaryllicaceae

Allium serratum Wats., 246. A. dichlamydeum Greene, 245.
Brodiaea elegans Hoover, 323. B. laxa (Benth.) Wats., 174, 311, 15847. B. pulchella (Salisb.) Greene, 164, 152, 15849, 158. B. terrestris Kell., 122, 15808.

Anacardiaceae

Toxicodendron diversilobum (T. & G.) Greene, 241.

Apiaceae

Angelica tomentosa Wats., 255, 297.
Bowlesia incana R. & P., 391
Daucus pusillus Michx., 286
Foeniculum vulgare Mill., 335, 328.
Lomatium dasycarpum (T. & G.) C. & R., 196, 256, 280, 15845. L. macrocarpum (H. & A.) C. & R., 121, 313, 401. L. utriculatum (Nutt.) C. & R., 15846.
Sanicula bipinnatifida Hook., 215, 17132. S. crassicaulis DC., 265. S. sp., 219.
Tauschia kelloggii (Gray) Macbr., 262, 355, 15857.

Asclepiadaceae

Asclepias fascicularis Decne., 343.

Asteraceae

Achillea millefolium L. var. californica (Poll.) Jeps. 123, 144, 15819.
Agoseris grandiflora (Nutt.) Greene, 326. A. heterophylla (Nutt.) Greene, 142, 178, 195, 212, 295, 15816, 17137.
Baccharis pilularis DC. var. consanguinea (DC.) Kuntze, 118, 240, 376.
Bidens laevis (L.) B. S. P., 298.
Centaurea melitensis L., 338. C. solstitialis L., 351.
Chaetopappa bellidiflora (Greene) Keck, 154, 205, 15821, 17133.
Cirsium vulgare (Savi) Tnore, 380, 398.
Eriophyllum confertiflorum (DC.) Gray, 235, 267, 285.
Evax sparsiflora (Gray) Jeps., 191, 405, 15804, 17126.
Gnaphalium californicum DC., 340.
Helianthus annuus L., 373.
Hemizonia luzulaefolia DC., 188, 203, 224, 360, 365 367, 374. H. pungens (H. & A.) T. & G. ssp. maritima (Greene) Keck, 377.
Lactuca serriola L., 276, 366. 15794,
Lasthenia chrysostoma (F. & M.) Greene, 15825. L. glabrata DC.,130, 132, 138, 166, 17135.
Layia platyglossa (F. & M.)Gray, 117, 392, 15795, 17130.
Lessingia hololeuca Greene, 370, 372, 378, 381.
Madia elegans Lindl. ssp. densifolia (Greene) Keck, 379. M. exigua (Sm.) Gray, 211, 257, 15867.
Micropus californicus F. & M., 134, 15843, 17138B.
Microseris douglasii (DC.) Sch.-Bip., 150, 151, 202, 273, 15801. M. linearifolia (Nutt.) Sch.-Bip., 294, 15842.
Psilocarphus tenellus Nutt., 408
Rigiopappus leptocladus Gray, 272, 15840.
Silybum marianum (L.) Gaertn., 356.
Sonchus asper (L.) Hill, 227, 15869B.
Stylocline filaginea Gray, 15834.

Boraginaceae

Cryptantha flaccida (Dougl.) Greene, 137, 206, 281, 15824, 15852.

Brassicaceae

Brassica nigra (L.) Koch, 331, 375.
Lepidium nitidum Nutt., 17138A.
Sisymbrium altissimum L., 170.
Thelypodium lasiophyllum (H. & A.)Greene, 189.
Raphanus sativus L., 214.

Caprifoliaceae

Lonicera hispidula Lindl., 242, 263, 264.
Symphoricarpus mollis Nutt., 254, 274.

Caryophyllaceae

Arenaria douglasii T. & G., 148, 169, 15813.
Sagina apetala Ard. var. barbata Ledeb., 15835.
Silene californica Durand, 283.
Stellaria nitens Nutt., 15832.

Convolvulaceae

Convolvulus occidentalis Gray, 278., C. subacaulis (H. & A.) Greene, 120, 194, 15827.

Crassulaceae

Tillaea erecta H. & A., 407.

Cyperaceae

Carex serratodens Boott., 288.

Dipsacaceae

Dipsacus fullonum L., 290, 350.

Ericaceae

Arbutus menziesii Pursh, 233.

Euphorbiaceae

Euphorbia spathulata Lam., 192, 292, 15826.

Fabaceae

Acacia decurrens Willd., 238.
Astragalus gambellianus Sheld., 114, 15822.
Lotus corniculatus L., 345. L. humistratus Greene, 207, 15837. L. purshianus (Benth.) Clem. & Clem., 342, 362. L. subpinnatus Lag., 111, 15869C, 17127.
Lupinus bicolor Lindl., 127, 17138. L. succulentus Koch, 113, 126.
Medicago polymorpha L., 140, 116.
Melilotus indicus (L.) All., 115, 312, 336, 353.
Spartium junceum L., 330.
Trifolium albopurpureum T. & G., 135, 268, 15817. T. fucatum Lindl., 271, 15809. T. microdon H. & A. 15797. T. tridentatum Lindl., 131, 216, 15869A. T. variegatum 112, 163, 15796.
Vicia angustifolia L., 119, 15803.

Fagaceae

Quercus agrifolia Nee, 158, 237, 258. Q. douglasii H. & A., 327. Q. durata Jeps., 143, 399, 15858. Q. lobata Nee, 159, 17136.

Gentianaceae

Centaurium davyi (Jeps.) Abrams, 347, 359.

Geraniaceae

Erodium cicutarium (L.) L'Her., 162

Hippocastanaceae

Aesculus californica (Spach) Nutt., 329.

Hydrophyllaceae

Phacelia californica Cham., 440.

Iridaceae

Sisyrinchium bellum Wats., 155, 15799.

Juncaceae

Juncus bufonius L., 17124. J. patens Meyer, 344.

Linaceae

Hesperolinon micranthum (Gray) Small, 15841.

Lauraceae

Umbellularia californica (H. & A.) Nutt., 234, 15860.

Liliaceae

Calochortus albus Benth., 270, 15859. C. luteus Lindl., 279. C. venustus Benth., 305.
Chlorogalum pomeridianum (DC.) Kunth, 171.
Smilacina racemosa (L.) Desf. var. amplexicaulis (Nutt.) Wats., 251.
Trillium chloropetalum (Torr.) Howell, 247.
Zygadenus fremontii (Torr.) Wats., 293, 302.

Malvaceae

Sidalcea diploscypha (T. & G) Benth., 181, 15830.

Menthaceae

Monardella villosa Benth., 209, 236, 253, 334, 357, 15862.
Pogogyne serpylloides (Torr.) Gray, 403, 404.
Stachys bullata Benth., 199, 361. S. rigida Benth. ssp. quercetorum (Hell.) Epl., 230, 259, 15853.

Myrtaceae

Eucalyptus globulus Labill., 146, 225.

Onagraceae

Clarkia purpurea (Curtis) Nels. & Macbr., 208, 220, 284, 15844.
Epilobium minutum Lindl., 239, 266, 15836. E. paniculatum Nutt., 187, 369, 385.

Papaveraceae

Eschscholzia californica Cham., 124, 125, 393, 15812.

Plantaginaceae

Plantago erecta Morris, 141, 15802, 17129. P. lanceolata L., 346, 348.

Poaceae

Aira caryophyllea L., 15833.
Avena fatua L., 221, 324, 15869E. A. sativa L., 315.
Bromus carinatus H. & A., 184, 317. B. mollis L. 175, 190, 222, 304, 15869D.
B. rubens L., 217.
Danthonia californica Bol., 322.
Elymus glaucus Buckl., 301.
Hordeum brachyantherum Nevski, 183, 320. H. leporinum Link., 319. H. vulgare L., 269, 17123.
Lolium multiflorum Lam., 176, 318, 15818.
Melica torreyana Scribn., 15850.
Phalaris californica H. & A., 296, 363, 369.
Poa annua L., 15868. P. scabrella (Thurb.) Vasey, 179, 186, 226, 308, 310, 15839.
Polypogon monspeliensis (L.) Desf., 289, 339.
Scribneria bolanderi (Hack.)Thurb., 15969.
Sitanion jubatum Sm., 306, 316, 352, 15811.
Stipa lepida Hitchc., 325, 15855. S. pulchra Hitchc., 180, 307, 15869F.
Vulpia microstachys Benth. 182, 309, 314, 15798.

Polemoniaceae

Gilia achilleifolia Benth., 173, 15814.
Linanthus amgiguus (Rattan) Greene, 149, 210, 15815, 15866. L. liniflorus (Benth.) Greene, 134, 371, 15810.
Navarretia heterodoxa (Greene) Greene, 287, 299, 303, 15838, 15851.

Polygonaceae

Eriogonum nudum Benth., 384. E. vimineum Benth., 382. E. virgatum Benth., 193, 383, 15823.
Rumex crispus L., 275, 349. R. pulcher L. 337.

Polypodiaceae

Adiantum jordanii Muell., 250.
Pityrogramma triangularis (Kaulf.) Maxon, 244.
Polypodium californicum Kaulf., 232 , 249, 396.

Portulacaceae

Calandrinia ciliata (R. & P.) DC. var. menziesii (Hook.) Macbr., 15805, 17128.
Montia perfoliata (Willd.) Howell, 168. M. spathulata (Dougl.) Howell, 15854, 17131.

Primulaceae

Anagallis arvensis L., 161.
Dodecatheon hendersonii Gray ssp. cruciatum (Greene) Thompson, 15856.

Ranunculaceae

Delphinium hesperium Gray, 277. D. variegatum T. & G., 153, 200, 15829, 17134.
Ranunculus californicus Benth., 165, 15828.

Rhamnaceae

Rhamnus californica Esch., 157, 15863.

Rosaceae

Adenostoma fasciculatum H. & A., 260, 332, 15864.
Alchemilla occidentalis T. & G., 197, 387, 406, 15831, 17125.
Photinia arbutifolia (Ait.) Lindl. 145, 15865.
Rubus ursinus C. & S., 397.
Rosa californica C. & S., 333.

Rubiaceae

Galium aparine L., 396., G. nuttallii Gray, 228, 321, 15861. G. parisiense L., 223.

Salicaceae

Salix lasiolepis Benth., 358.

Saxifragaceae

Grossularia californica (H. & A.) C. & B., 243.

Scrophulariaceae

Collinsia heterophylla Grah., 231, 261.
Cordylanthus rigidus (Benth.) Jeps., 368.
Diplacus aurantiacus (Curtis) Jeps., 229.
Mimulus guttatus DC., 129, 282, 300, 15807.
Orthocarpus densiflorus Benth., 147, 149A, 15820. O. lithospermoides Benth., 185. 213, 15806.
Pedicularis densiflora Hook., 248, 402.
Scrophularia californica C. & S., 167, 354.

Solanaceae

Solanum umbelliferum Esch., 395.

Valerianaceae

Plectritis ciliosa (Greene) Jeps. ssp. insignis (Suksd.) Morey, 218. P. congesta (Lindl.) DC., 291.

Verbenaceae

Verbena lasiostachys Link., 341.

THE COLLECTION

by Ned Cahill

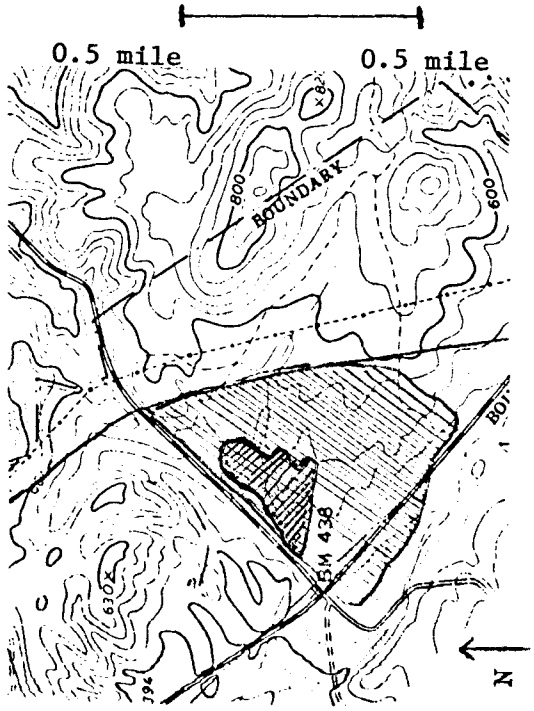
March 17, 1975

Stanford Universty

Master's Research Project

THE COLLECTION

I have attempted to collect all the species growing in the area which has been shaded in red. The serpentine parent material provides a substrate for many species native to California. There has been no attempt to quantify the numbers of each species present in this area. Although, the labels have specified several of the most prevalent species of the grassland. Other predominant species of the grassland are Hemizonia luzulaefolia, Mimulus guttatus, Plantago erecta, Linanthus ambiguus, Navarretia heterodoxa, Poa scrabella, Bromus mollis, Lolium multiflorum, Avena fatua, Agoseris heterophylla, Microseris douglasii, and Lomatium dasycarpum. The chaparral area which is cross-hatched in blue is composed primarily of Adenostoma fasciculatum, Quercus durata, Quercus agrifolia, Toxicodendron diversilobum, Polypodium californicum, Baccharis pilularis consanguinea, Eriophyllum confertiflorum, Galium nuttallii, and Lonicera hispidula.One should note that all of the specimens with numbers greater than 10,000 have been collected by John Hunter Thomas Phd., curator of the Dudley Herbarium. All of the specimens with numbers less than 1,000 have been collected by Ned Cahill.



DUDLEY HERBARIUM OF STANFORD UNIVERSITY
SAN MATEO COUNTY, CALIFORNIA

Serpentine fields bordered by chaparral near the intersection of Canada and Edgewood roads, about 3 mi westward from Redwood City. Area partly destroyed by road building. Serpentine soil. Grasslands with Layia platyglossa, Orthocarpus densiflorus, Lasthenia glabrata, Chaetopappa bellidiflora, Eschscholzia californica, Delphinium variegatum, Brodiaea pulchella, B. terrestris, Gilia tricolor as the common species.

Ned Cahill

1974

THE COLLECTION

AMARYLLIDACEAE

Allium serratum Wats. 246

Allium dichlamydeum Greene 245

Brodiaea elegans Hoover 323

Brodiaea laxa (Benth.) Wats. 174

B. laxa (Benth.) Wats. 311

B. laxa (Benth.) Wats. 15847

B. pulchella (Salisb.) Greene 164

B. pulchella (Salisb) Greene 152

B. pulchella (Salisb.) Greene 15849

B. pulchella (Salisb.) Greene 158

B. terrestris Kell. 122

B. terrestris Kell. 15808

ANACARDIACEAE

Toxicodendron diversilobum T. & G. 241

APIACEAE

Angelica tomentosa Wats. 255

A. tomentosa Wats. 297

Bowlesia incana R. & P. 391

Daucus pusillus Michx. 286

Foeniculum vulgare Mill. 335

Foeniculum vulgare Mill. 328

Lomatium dasycarpum (T. & G.) C. & R. 196

L. dasycarpum (T. & G.) C. & R. 15845

L. dasycarpum (T. & G.) C. & R. 280

APIACEAE

Lomatium dasycarpum (T. & G.) C. & R. 256

Lomatium macrocarpum (H. & A.) C. & R. 401

L. macrocarpum (H. & A.) C. & R. 121

L. macrocarpum (H. & A.) C. & R. 313

L. utriculatum (Nutt.) C. & R. 15846

Sanicula bipinnatifida Hook. 215

Sanicula bipinnatifida Hook. 17132

Sanicula crassicaulis DC. 265

Sanicula sp. 219

Tauschia kelloggii (Gray) Macbr. 15857

Tauschia kelloggii(Gray)Macbr. 262

T. kelloggii(Gray) Macbr. 355

ASCLEPIADACEAE

Asclepias fascicularis Decne. 343

ASTERACEAE

Achillea millefolium L. var. californica (Pollard) Jeps. 123

Achillea millefolium L. var. californica (Pollard) Jeps. 144

A. millefolium L. var. californica (Pollard) Jeps. 15819

Agoseris grandiflora (Nutt.) Greene 326

Agoseris heterophylla (Nutt.) Greene 212

A. heterophylla(Nutt.) Greene 142

A. heterophylla (Nutt.) Greene 15816

A. heterophylla (Nutt.) Greene 195

A. heterophylla (Nutt.) Greene 295

A. heterophylla (Nutt.) Greene 178

A. heterophylla (Nutt.) Greene 17137

ASTERACEAE

Baccharis pilularis DC. var. consanguinea (DC.) Kuntze 118

B. pilularis DC. var. consanguinea (DC.) Kuntze 240

B. pilularis DC. var. consanguinea (DC.) Kuntze 376

Bidens laevis (L.) BSP 298

Centaurea melitensis L. Tocalote 338

C. solstitialis L. 351

Chaetopappa bellidiflora (Greene) Keck 205

C. bellidiflora (Greene) Keck 154

C. bellidiflora (Greene) Keck 15821

C. bellidiflora (Greene) Keck 17133

Cirsium vulgare (Savi) Tenore 398

C. vulgare (Savi) Tenore 380

Eriophyllum confertiflorum (DC.) Gray 285

E. confertiflorum (DC.) Gray 235

E. confertiflorum (DC.) Gray 267

Evax sparsiflora (Gray) Jepson 405

E. sparsiflora (Gray) Jepson 191

E. sparsiflora (Gray) Jeps. 15804

E. sparsiflora (Gray) Jeps. 17126

Gnaphalium californicum DC. 340

Helianthus annus L. 373

Hemizonia luzulaefolia DC. 360

H. luzulaefolia DC. 365

H. luzulaefolia DC. 374

H. luzulaefolia DC. 367

H. luzulaefolia DC. 188

H. luzulaefolia DC. 16848

H. luzulaefolia DC. 203

ASTERACEAE

Hemizonia luzulaefolia DC. 224

H. pungens (H. & A.) T. & G. ssp. maritima (Greene) Keck

Lactuca serriola L. 366

L. serriola L. 276

Lasthenia chrysostoma (F. & M.) Greene 15825

Lasthenia glabrata DC. 15794

Lasthenia glabrata Lindl. 17135

L. glabrata Lindl. 166

L. glabrata Lindl. 130

L. glabrata Lindl. 138

L. glabrata Lindl. 132

Layia platyglossa (F. & M.) Gray 17130

L. platyglossa (F. & M.) Gray 15795

L. platyglossa (F. & M.) Gray campestris Keck 392

L. platyglossa (F. & M.) Gray campestris Keck 117

Lessingia hololeuca Greene var. hololeuca 378

L. hololeuca Greene var. hololeuca 370

L. hololeuca Greene var. hololeuca 381

L. hololeuca Greene var. hololeuca 372

Madia elegans D. Don ex Lindl. ssp. densifolia (Greene) Keck 379

Madia exigua (Smith) Gray 15867

M. exigua (Smith) Gray 257

M. exigua (Smith) Gray 211

Micropus californicus F. & M. 134

M. californicus F. & M. 15843

M. californicus F. & M. 17138B

Microseris douglasii (DC.) Sch.-Bip. 15801

M. douglasii (DC.) Sch.-Bip. 150

M. douglasii (DC.)

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M. douglasii (DC.) Sch.- Bip. 202

M. douglasii (DC.) Sch.-Bip. 273

M. linearifolia (Nutt.) Sch.-Bip. 294

M. linearifolia (Nutt.) Sch.-Bip. 273

M. linearifolia (Nutt.) Sch.-Bip. 15842

Psilocarphus tenellus Nutt. 408

Rigiopappus leptocladus Gray 272

R. leptocladus Gray 15840

Silybum marianum (L.) Gaertn. 356

Sonchus asper (L.) Hill 227

S. asper (L.) Hill 15869B

Stylocline filaginea Gray 15834

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Cryptantha flaccida (Dougl.) Greene 281

C. flaccida (Dougl.) Greene 15852

C. flaccida (Dougl.) Greene 137

C. flaccida (Dougl.) Greene 15824

C. flaccida (Dougl.) Greene 206

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B. nigra (L.) Koch 375

Lepidium nitidum Nutt. 17138A

Sisymbrium altissimum L. 170

Thelypodium lasiophyllum (H. & A.) Greene var. lasiophyllum 198

Raphanus sativus L. 214

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L. hispidula Dougl. ex. Lindl. 263

L. hispidula Dougl. ex. Lindl. 264

Symphoricarpos mollis Nutt. 274

Symphoricarpos mollis Nutt. 254

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Arenaria douglasii Torr. & Gray 15813

A. douglasii Torr. & Gray 148

Sagina apetala Ard. var. barbata 15835

Silene californica Durand 283

Stellaria nitens Nutt. 15832

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C. subcaulis (H. & A.) Greene 15827

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Arbutus menziesii Pursh. 233

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Euphorbia spathulata Lam. 192

E. spathulata Lam. 15826

E. spathulata Lam. 292

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Astragalus gambellianus Sheldon 114

A. gambellianus Sheldon 15822

Lotus subpinnatus Lag. 15800

Lotus subpinnatus Lag. 17127

L. subpinnatus Lag. 111

L. subpinnatus Lag. 15869C

L. purshianus (Benth.) Clem. & Clem. 362

L. purshianus (Benth.) Clem. & Clem. 342

L. corniculatus L. 345

L. humistratus Greene 207

L. humistratus Greene 15837

Lupinus bicolor Lindl. 17138

L. bicolor Lindl. 127

L. succulentus Dougl. ex. Koch. 113

L? succulentus Dougl. ex. Koch 126

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M. polymorpha L. var. vulgaris (Benth.) Shinners f. vulgaris 116

Melilotus indicus(L) All. 353

M. indicus (L.) All. 115

M. indicus (L.) All. 312

M. indicus (L?) All. 336

Spartium junceum L. 330

Trifolium albopurpureum T. & G. 135

T. albopurpureum T. & G. 268

T. albopurpureum T. & G. 15817

T. fucatum Lindl. 271

T. fucatum Lindl. 15809

T. microdon H. & A. 15797

T. tridentatum Lindl. 216

T.tridentatum Lindl. 131

T. tridentatum Lindl. 15869A

T. variegatum Nutt. 112

T.. variegatum Nutt. 15796

T. variegatum Nutt. 163

Vicia augustifolia L.15803

Vicia augustifolia L. 119

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Quercus agrifolia Nee 258

Q. agrifolia Nee237

Q. durata Jeps. 143

Q. durata Jeps. 15858

Q. durata Jeps. 399

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Q. lobata Nee 159

Q. lobata Nee 17136

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Phacelia californica Cham. 400

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Sisyrinchium bellum Watson 155

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Juncus buffonius L. 17124

Juncus patens Meyer 344

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Hesperolinon micranthum (Gray) Small 15841

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Umbellularia californica (H. &A.) Nutt. 234

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C. albus Bentham 15859

C. luteus Dougl. es. Lindl. 279

C. venustus Dougl. ex. Benth. 305

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Smilacina racemosa (L.) Desf. var. amplexicaulis (Nutt.) Wats. 251

Trillium choropetalum (Torr.) Howell 247

Zygadenus fremontii (Torr.) Torr. ex Wats. var. fremontii 293

Z. fremontii (Torr.) Torr. ex. Wats. var. fremontii 302

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Sidalcea diploscypha (T. & G.) Gray ex. Benth. 15830

S. diploscypha (T. & G.) Gray ex. Benth. 181

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M. villosa Benth. var. villosa 209

M. villosa Benth. var. villosa 15862

M. villosa Benth. var. villosa 334

M. villosa Benth. var. villosa 253

M. villosa Benth. var. villosa 236

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P. serpylloides (Torr.) Gray 404

Stachys 252

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S. bullata Benth. 361

S. rigida Nutt. ex Benth. ssp. quercetorum (Heller) Epling 230

S. rigida Nutt. ex. Benth. ssp. quercetorum (Heller) Epling 15853

S. rigida Nutt. ex. Benth. ssps quercetorum (Heller) Epling 259

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Clarkia purpurea (Curtis) Nels. & Macbr. ssp. viminea (Dougl.) Lewis & Lewis 284

C. purpurea (Curtis) Nels. & Macbr. ssp. viminea (Dougl.) Lewis & Lewis 208

C. purpurea (Curtis) Nels. & Macbr. ssp. quadrivulnera (Dougl.) Lew. & Lew. 220

C. purpurea (Curtis) Nels. & Macbr. 15844

Epilobium minutum Lindl. 15836

E. minutum Lindl. 239

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E. californica Cham. 393

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P. lanceolata L. 348

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B. mollis L. 15869 D

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Danthonia californica Bol. 322

Elymus glaucus Buckl. 301

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P. scrabella (Thurb.) Benth. ex. Vasey 179

P. scrabella (Thurb.) Benth. ex. Vasey 310

P. scrabella (Thurb.) Benth. ex. Vasey 226

Polypogon monspeliensis (L.) Desf. 289

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Sitanion jubatum Smith 352

S. jubatum Smith 316

S. jubatum Smith 306

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S. lepida Hitchc. 325

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V. microstachys Munro ex Benth. 309

V. microstachys Munro ex Benth. 314

V. microstachys Munro ex Benth. 15793

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G. achilleaefolia Benth. 173

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L. ambiguus (Rattan) Greene 15815

L. ambiguus (Rattan) Greene 15866

L. ambiguus (Rattan) Greene 210

L. liniflorus (Benth.) Greene 371

L. liniflorus (Benth.) Greene 15810

L. liniflorus (Benth.) Greene 134

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N. heterodoxa (Greene) Greene 15838

N. heterodoxa (Greene) Greene 15851

N. heterodoxa (Greene) Greene 287

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E. virgatum Benth. 15823

E. virgatum Benth. 193

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Pitryrogramma triangularis (Kaulf.) Maxon. 244

Polypodium californicum Kaulf. 386

P. californicum Kaulf. 249

P. californicum Kaulf. 232

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Calandrinia ciliata (R. &P.) DC. var. menziesii (Hook.) Macbr. 15805

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D. variegatum T. &. G. 153

D. variegatum T. & G. 200

D. variegatum T. &.G. 15829

Ranunculus californicus Bentham 15828

R. californicus Bentham 165

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A. fasciculatum H. & A. 332

A. fasciculatum H. & A. 15864

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Rubus ursinus C..& S. 397

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Galium nuttallii Gray 228

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Diplacus aurantiacus (Curtis) Jeps. 229

Mimulus guttatus DC. 15807

M. guttatus DC. 282

M. guttatus DC. 300

M. guttatus DC. 129

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STANFORD, CALIFORNIA 94305

DEPARTMENT OF BIOLOGICAL SCIENCES

The following is a partial list of the vascular plants of the serpentine areas across Farm Hill Drive from Canada College and to the east of Highway 280, San Mateo County, California.

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In comparison with other neighboring serpentine areas, which have been much more thoroughtly collected, this area should have a list of plants at least two to three times as long. There is no question about this.

It should be pointed out that this whole serpentine area has not been dealt with in a kindly fashion by the owners and the public.

The areason which these collections have been made are indicated in shading on the enclosed sketch.

The determinations are in most cases correct, however, this list was put together hastily and should be considered as tentative. Specimens of everything on the list exist, hence should there be questions about identification, they can be looked at again.

This area, although badly disturbed in some places, with much debris about, is a piece of open space and in particular is a serpentine grassland. In both San Mateo and Santa Clara counties, much serpentine grassland has been built upon and few serpentine species survive the activities of man.

When one considers areas for preservation, one must think not only of the "endangered species" on the area, but also of the uniqueness of the assemblage of plants. Lists of "endangered species" are drawn up with certain criteria in mind. The California Native Plant Society list covers the whole state. It should not be taken as ever being final. If one were drawing up a list of "endangered species" for Central California, the list would be quite different than the California list. The CNPS list has been worked on by a number of people, but it is not accurate in all details. Let me state again that any such list should not and cannot every be considered as final. If we could produce a final list, then there would not be anything more for systematic botanists to do!

This area, so far as I can see, has only one "endangered species" on it: Fritillaria

liliacea. It is interesting to note, in confirmation about the accuracy of lists of "endangered species", that in the 1973 version of the CNPS list, F. liliacea is not listed from San Mateo County, although even a casual look at the literature (for instance, Thomas' Flora of the Santa Cruz Mountains) lists it from three localities in this county. However, the importance of this area does not lie alone in the number or lack of numbers of "endangered species." What in the long run may be more important is the total composition of the biota. And as I have indicated above, serpentine grasslands are not all that common now in California. Some are threatened by potential development, particularly in the Santa Cruz Mountains.

Except for an overriding public need, and no such need has been shown for this area, no remaining areas of serpentine grassland should be disturbed in the Santa Cruz Mountains in the future.

John H. Thomas

John H. Thomas
Aug. 12, 1974

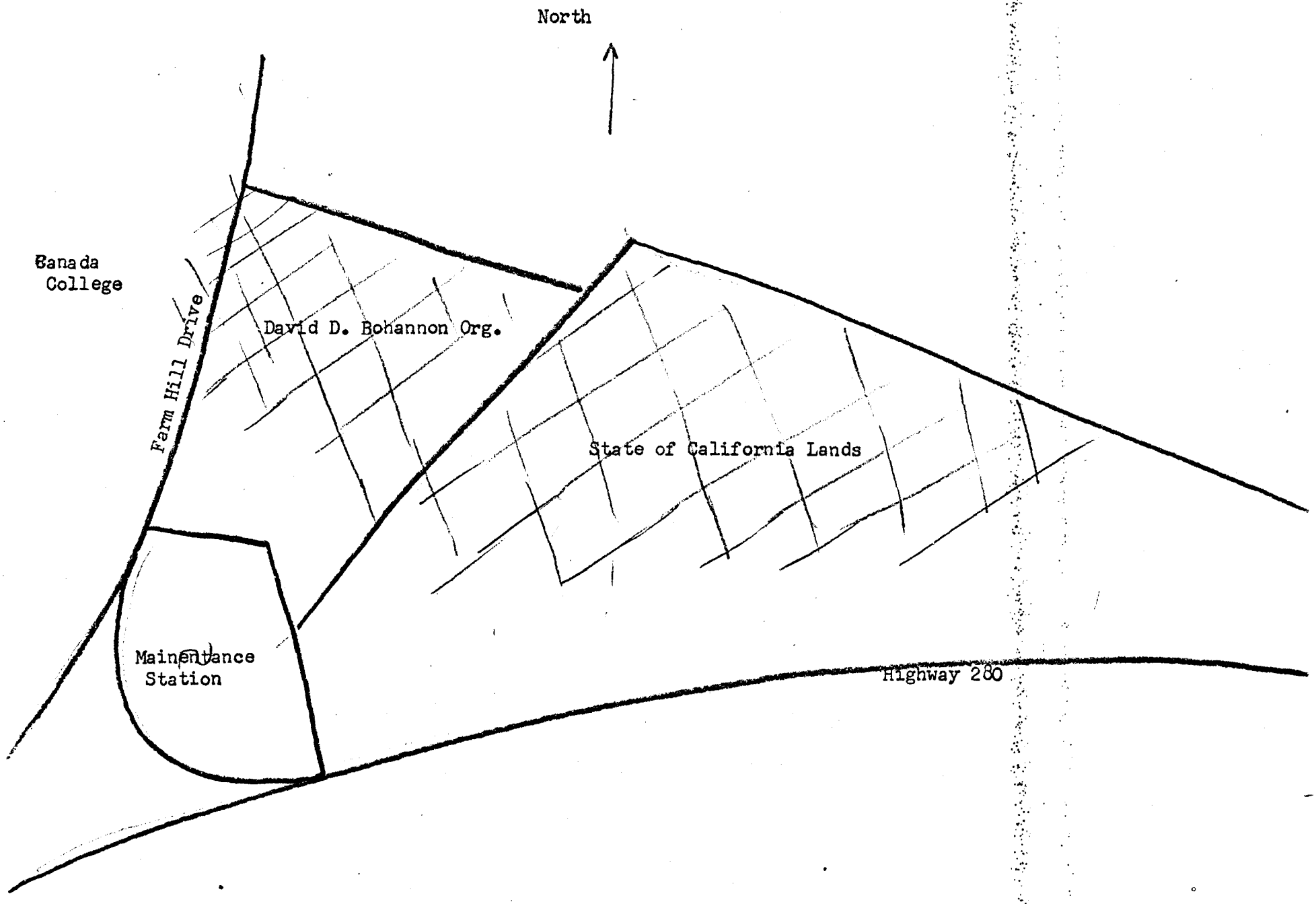
Botanical Name	Family	Collection Nos.	Notes
Achillea millefolium L.	Asteraceae	W863	Fairly common and widespread.
Adenostoma fasciculatum H. & A.	Rosaceae	F1001	A common chaparral shrub.
Allium serratum Wats.	Liliaceae	14905	Usually restricted to serpentine and not too common.
Amsinckia intermedia F. & M.	Boraginaceae	17490	Common.
Baccharis pilularis DC. var. consanguinea (DC.) Kuntze	Asteraceae	15483	A common shrub.
Baeria chrysostoma F. & M.	Asteraceae	14922A	Most common locally on serpentine.
*Brassica nigra (L.) Koch	Brassicaceae	14918	
Brodiaea elegans Hoover	Liliaceae	W867	Becoming rarer locally.
*Bromus wildenowii Kunth	Poaceae	14902	
Calochortus venustus Benth.	Liliaceae	W860	Best stands occur in serpentine.
Calycadenia multiglandulosa (DC.) Benth.	Asteraceae	17491	Rarely seen on non-serpentine soil.
Carex sp.	Cyperaceae	W883	
Centaurium davyi (Jeps.) Abrams	Gentianaceae	W886, W922, 17483	Extinct in many areas locally.
Chlorogalum pomeridianum (DC.) Kunth	Liliaceae	W868	Fairly common.
*Cichorium intybus L.	Asteraceae	W862	
*Circium vulgare (Savi) Tenore	Asteraceae	W996	
Clarkia purpurea (Curtis) N. & M.	Onagraceae	W879	Widespread locally.
Collinsia heterophylla Grah.	Scrophulariaceae	14919	Occasional.
Convolvulus subacaulis (H.&A.) Greene	Convolvulaceae	14913	Most common in serpentine grasslands and adjacent to them.

Delphinium variegatum T. & G.	Ranunculaceae	14914	Usually found only on serpentine.
Epilobium paniculatum Nutt.	Onagraceae	15487	A very common native, often weedy.
Eremocarpus setigerus (Hook.) Benth.	Euphorbiaceae	17482	Becoming very weedy.
Eriogonum nudum Benth.	Polygonaceae	W873	Occasional.
Eriogonum vimineum Benth.	Polygonaceae	15478, 17480	Fairly common.
Eriophyllum confertiflorum (DC.) Gray	Asteraceae	F1005	Fairly common on brushy slopes.
**Erodium cicutarium* (L.) L'Her.	Geraniaceae	F1003	
Eryngium aristulatum Jeps.	Ammiaceae	F1010	Most common near and on serpentine outcrops, forming dense stands, but these not that common.
Eschscholzia californica Cham.	Papaveraceae	17493	Widespread in California and often weedy
Euphorbia spathulata Lam.	Euphorbiaceae	F1012, 14911	In grasslands.
**Festuca dertonensis* (All.) A. & G.	Poaceae	14908	
**Foeniculum vulgare* Mill.	Ammiaceae	15488	
Fritillaria liliacea Lindl.	Liliaceae	15031	Rare.
Gilia tricolor Benth.	Polemoniaceae	14915	Fairly common in grasslands.
**Gnaphalium luteo-album* L.	Asteraceae	W918	
Hemizonia luzulaefolia DC.	Asteraceae	W886, W923, 15480, F1002	A common summer and fall tarweed, but much reduced in range in California.
**Hordeum hystrix* Roth	Poaceae	W881	
**Hordeum vulgare* L.	Poaceae	14922	
Juncus phaeocephalus Engelm.	Juncaceae	17494	Widespread in moist places.
**Lactuca saligna* L.	Asteraceae	15481, 17486	

*Lactuca serriola L.	Asteraceae	17487	
Lagophylla ramosissima Nutt.	Asteraceae	F1000, 17481	Occasional in grasslands.
Layia platyglossa (F. & M.) Greene	Asteraceae	W884, W993, 14909	Most frequent in this area in serpentine soil.
Lessingia hololeuca Greene	Asteraceae	W871, W924, W998, 15479, 17495	Occasional in grasslands.
Lewisia rediviva Pursh	Portulacaceae	14901	One of the two known localities in the Santa Cruz Mountains.
Linanthus liniflorus (Benth.) Greene	Polemoniaceae	F1009, W880, 14906, 17492	Most common on serpentine soil.
*Lolium multiflorum Lam.	Poaceae	W882	
Lomatium macrocarpum (H. & A.) C. & R.	Ammiaceae	14912, 15033	Not common.
Lonicera hispidula Lindl.	Caprifoliaceae	W861	Shrubby areas.
Lotus humistratus Greene	Fabaceae	W864, 14922C	Fairly common in grasslands.
Lotus subpinnatus Lag.	Fabaceae	F1014, 14922B	Fairly common in grasslands.
Madia sativa Molina	Asteraceae	W926, W994	Occasional in several plant communities.
*Melilotus indicus (L.) All.	Fabaceae	F1013	
*Mentzelia lindleyi T. & G.	Loasaceae	14920	Probably introduced here recently.
Micropus californicus F. & M.	Asteraceae	17489	Common in grasslands.
Microseris douglasii (DC.) Sch.-Bip.	Asteraceae	14903	Fairly common in grasslands.
Mimulus guttatus DC.	Scrophulariaceae	F1015, W995	Common in moist ground along seeps.
Monardella villosa Benth.	Mentaceae	W887, W920	Occasional in brushy areas.
Muilla maritima (Torr.) Wats.	Liliaceae	14910	Not common.

Navarretia heterodoxa (Greene) Greene	Polemoniaceae	W870	Occasional in dry, open ground.
Orthocarpus lithospermoides Benth.	Scrophulariaceae	W875	Fairly common in serpentine grasslands, occasionally elsewhere locally.
Perideridia kelloggii (Gray) Mathias	Ammiaceae	W921, 17485	Grasslands, but not too common.
*Phacelia campanularia Gray	Hydrophyllaceae	14916	Introduced from southern California, probably not persisting for long.
Photinia arbutifolia (Ait.) Lindl.	Rosaceae	W919, 15485	Fairly common in shrubby areas and in chaparral.
Plantago erecta Morris	Plantaginaceae	W874	Most common on serpentine soil.
Platystemon californicus Benth.	Papaveraceae	14904	Not nearly as common as formerly.
*Polygonum aviculare L.	Polygonaceae	17488	
Quercus durata Jeps.	Fagaceae	15482, 15486	Restricted to serpentine.
Ranunculus californicus Benth.	Ranunculaceae	15032	Common in grasslands.
Rhamnus californica Esch.	Rhamnaceae	15484	Fairly common in chaparral and shrubby areas.
Rhamnus crocea Nutt.	Rhamnaceae	17474	Shrubby areas and chaparral.
*Rumex crispus L.	Polygonaceae	W885	
Sidalcea dipsoscypha (T. & G.) Benth.	Malvaceae	W865, W925	Not widespread locally.
Sisyrinchium bellum Wats.	Iridaceae	W969	Fairly common in grasslands.
Stachys rigida Benth. ssp. quercetorum (Hell.) Epl.	Menthaceae	W878, W917	Fairly common in several plant communities.
*Trifolium fucatum Lindl.	Fabaceae	15030	
*Trifolium incarnatum L.	Fabaceae	14921	

*Trifolium pratense L.	Fabaceae	14917	
*Tragopogon porifolius L.	Asteraceae	W888	
Verbena robusta Greene	Verbenaceae	W997	Occasional.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The determinations are in most cases correct, however, this list was put together hastily and should be considered as tentative. Specimens of everything on the list exist, hence should there be questions about identification, they can be looked at again.

This area, although badly disturbed in some places, with much debris about, is a piece of open space and in particular is a serpentine grassland. In both San Mateo and Santa Clara counties, much serpentine grassland has been built upon and few serpentine species survive the activities of man.

When one considers areas for preservation, one must think not only of the "endangered species" on the area, but also of the uniqueness of the assemblage of plants. Lists of "endangered species" are drawn up with certain criteria in mind. The California Native Plant Society list covers the whole state. It should not be taken as ever being final. If one were drawing up a list of "endangered species" for Central California, the list would be quite different than the California list. The CNPS list has been worked on by a number of people, but it is not accurate in all details. Let me state again that any such list should not and cannot every be considered as final. If we could produce a final list, then there would not be anything more for systematic botanists to do!

This area, so far as I can see, has only one "endangered species" on it: Fritillaria

liliacea. It is interesting to note, in confirmation about the accuracy of lists of "endangered species", that in the 1973 version of the CNPS list, F. liliacea is not listed from San Mateo County, although even a casual look at the literature (for instance, Thomas' Flora of the Santa Cruz Mountains) lists it from three localities in this county. However, the importance of this area does not lie alone in the number or lack of numbers of "endangered species." What in the long run may be more important is the total composition of the biota. And as I have indicated above, serpentine grasslands are not all that common now in California. Some are threatened by potential development, particularly in the Santa Cruz Mountains.

Except for an overriding public need, and no such need has been shown for this area, no remaining areas of serpentine grassland should be disturbed in the Santa Cruz Mountains in the future.

John H. Thomas

John H. Thomas
Aug. 12, 1974

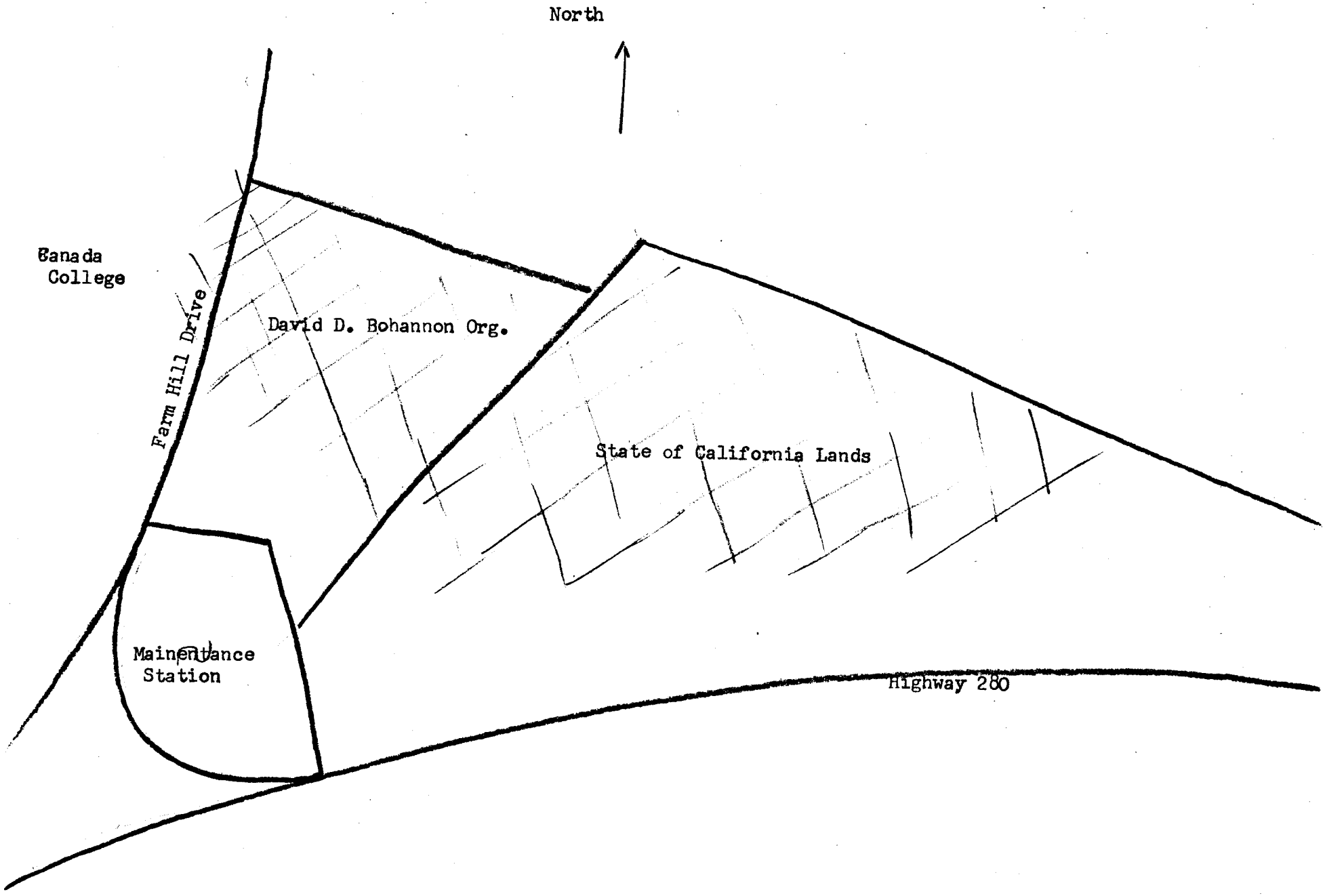
Botanical Name	Family	Collection Nos.	Notes
Achillea millefolium L.	Asteraceae	W863	Fairly common and widespread.
Adenostoma fasciculatum H. & A.	Rosaceae	F1001	A common chaparral shrub.
Allium serratum Wats.	Liliaceae	14905	Usually restricted to serpentine and not too common.
Amsinckia intermedia F. & M.	Boraginaceae	17490	Common.
Baccharis pilularis DC. var. consanguinea (DC.) Kuntze	Asteraceae	15483	A common shrub.
Baeria chrysostoma F. & M.	Asteraceae	14922A	Most common locally on serpentine.
*Brassica nigra (L.) Koch	Brassicaceae	14918	
Brodiaea elegans Hoover	Liliaceae	W867	Becoming rarer locally.
*Bromus wildenowii Kunth	Poaceae	14902	
Calochortus venustus Benth.	Liliaceae	W860	Best stands occur in serpentine.
Calycadenia multiglandulosa (DC.) Benth.	Asteraceae	17491	Rarely seen on non-serpentine soil.
Carex sp.	Cyperaceae	W883	
Centaurium davyi (Jeps.) Abrams	Gentianaceae	W886, W922, 17483	Extinct in many areas locally.
Chlorogalum pomeridianum (DC.) Kunth	Liliaceae	W868	Fairly common.
*Cichorium intybus L.	Asteraceae	W862	
*Circium vulgare (Savi) Tenore	Asteraceae	W996	
Clarkia purpurea (Curtis) N. & M.	Onagraceae	W879	Widespread locally.
Collinsia heterophylla Grah.	Scrophulariaceae	14919	Occasional.
Convolvulus subacaulis (H.&A.) Greene	Convolvulaceae	14913	Most common in serpentine grasslands and adjacent to them.

Delphinium variegatum T. & G.	Ranunculaceae	14914	Usually found only on serpentine.
Epilobium paniculatum Nutt.	Onagraceae	15487	A very common native, often weedy.
Eremocarpus setigerus (Hook.) Benth.	Euphorbiaceae	17482	Becoming very weedy.
Eriogonum nudum Benth.	Polygonaceae	W873	Occasional.
Eriogonum vimineum Benth.	Polygonaceae	15478, 17480	Fairly common.
Eriophyllum confertiflorum (DC.) Gray	Asteraceae	F1005	Fairly common on brushy slopes.
*Erodium cicutarium (L.) L'Her.	Geraniaceae	F1003	
Eryngium aristulatum Jeps.	Ammiaceae	F1010	Most common near and on serpentine outcrops, forming dense stands, but these not that common.
Eschscholzia californica Cham.	Papaveraceae	17493	Widespread in California and often weedy
Euphorbia spathulata Lam.	Euphorbiaceae	F1012, 14911	In grasslands.
*Festuca dertonensis (All.) A. & G.	Poaceae	14908	
*Foeniculum vulgare Mill.	Ammiaceae	15488	
Fritillaria liliacea Lindl.	Liliaceae	15031	Rare.
Gilia tricolor Benth.	Polemoniaceae	14915	Fairly common in grasslands.
*Gnaphalium luteo-album L.	Asteraceae	W918	
Hemizonia luzulaefolia DC.	Asteraceae	W886, W923, 15480, F1002	A common summer and fall tarweed, but much reduced in range in California.
*Hordeum hystrix Roth	Poaceae	W881	
*Hordeum vulgare L.	Poaceae	14922	
Juncus phaeocephalus Engelm.	Juncaceae	17494	Widespread in moist places.
*Lactuca saligna L.	Asteraceae	15481, 17486	

*Lactuca serriola L.	Asteraceae	17487	
Lagophylla ramosissima Nutt.	Asteraceae	F1000, 17481	Occasional in grasslands.
Layia platyglossa (F. & M.) Greene	Asteraceae	W884, W993, 14909	Most frequent in this area in serpentine soil.
Lessingia hololeuca Greene	Asteraceae	W871, W924, W998, 15479, 17495	Occasional in grasslands.
Lewisia rediviva Pursh	Portulacaceae	14901	One of the two known localities in the Santa Cruz Mountains.
Linanthus liniflorus (Benth.) Greene	Polemoniaceae	F1009, W880, 14906, 17492	Most common on serpentine soil.
*Lolium multiflorum Lam.	Poaceae	W882	
Lomatium macrocarpum (H. & A.) C. & R.	Ammiaceae	14912, 15033	Not common.
Lonicera hispidula Lindl.	Caprifoliaceae	W861	Shrubby areas.
Lotus humistratus Greene	Fabaceae	W864, 14922C	Fairly common in grasslands.
Lotus subpinnatus Lag.	Fabaceae	F1014, 14922B	Fairly common in grasslands.
Madia sativa Molina	Asteraceae	W926, W994	Occasional in several plant communities.
*Melilotus indicus (L.) All.	Fabaceae	F1013	
*Mentzelia lindleyi T. & G.	Loasaceae	14920	Probably introduced here recently.
Micropus californicus F. & M.	Asteraceae	17489	Common in grasslands.
Microseris douglasii (DC.) Sch.-Bip.	Asteraceae	14903	Fairly common in grasslands.
Mimulus guttatus DC.	Scrophulariaceae	F1015, W995	Common in moist ground along seeps.
Monardella villosa Benth.	Mentaceae	W887, W920	Occasional in brushy areas.
Muilla maritima (Torr.) Wats.	Liliaceae	14910	Not common.

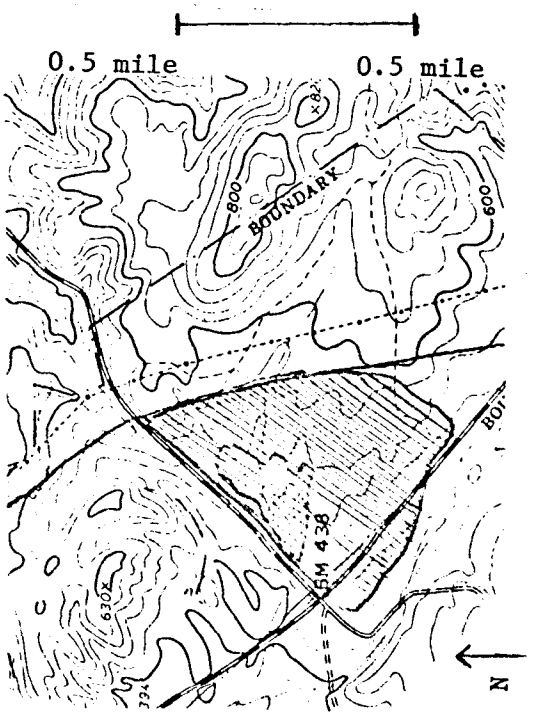
Navarretia heterodoxa (Greene) Greene	Polemoniaceae	W870	Occasional in dry, open ground.
Orthocarpus lithospermoides Benth.	Scrophulariaceae	W875	Fairly common in serpentine grasslands, occasionally elsewhere locally.
Perideridia kelloggii (Gray) Mathias	Ammiaceae	W921, 17485	Grasslands, but not too common.
*Phacelia campanularia Gray	Hydrophyllaceae	14916	Introduced from southern California, probably not persisting for long.
Photinia arbutifolia (Ait.) Lindl.	Rosaceae	W919, 15485	Fairly common in shrubby areas and in chaparral.
Plantago erecta Morris	Plantaginaceae	W874	Most common on serpentine soil.
Platystemon californicus Benth.	Papaveraceae	14904	Not nearly as common as formerly.
*Polygonum aviculare L.	Polygonaceae	17488	
Quercus durata Jeps.	Fagaceae	15482, 15486	Restricted to serpentine.
Ranunculus californicus Benth.	Ranunculaceae	15032	Common in grasslands.
Rhamnus californica Esch.	Rhamnaceae	15484	Fairly common in chaparral and shrubby areas.
Rhamnus crocea Nutt.	Rhamnaceae	17474	Shrubby areas and chaparral.
*Rumex crispus L.	Polygonaceae	W885	
Sidalcea dipsoscypha (T. & G.) Benth.	Malvaceae	W865, W925	Not widespread locally.
Sisyrinchium bellum Wats.	Iridaceae	W969	Fairly common in grasslands.
Stachys rigida Benth. ssp. quercetorum (Hell.) Epl.	Menthaceae	W878, W917	Fairly common in several plant communities.
*Trifolium fucatum Lindl.	Fabaceae	15030	
*Trifolium incarnatum L.	Fabaceae	14921	

*Trifolium pratense L.	Fabaceae	14917	
*Tragopogon porifolius L.	Asteraceae	W888	
Verbena robusta Greene	Verbenaceae	W997	Occasional.


North
Canada College
Farm Hill Drive
David D. Bohannon Org.
State of California Lands
Maintenance Station
Highway 280

THE COLLECTION

I have attempted to collect all the species growing in the area which has been shades in red. The serpentine parent material provides a substrate for many species native to California. There has been no attempt to quantify the numbers of each species present in this area. Although, the labels have specified several of the most prevalent species of the grassland. Other predominant species of the grassland are Hemizonia luzulaefolia, Mimulus guttatus, Plantago erecta, Linanthus ambiguus, Navarretia heterodoxa, Poa scrabella, Bromus mollis, Lolium multiflorum, Avena fatua, Agoseris heterophylla, Microseris douglasii, and Lomatium dasycarpum. The chaparral area which is cross-hatched in blue is composed primarily of Adenostoma fasciculatum, Quercus durata, Quercus agrifolia, Toxicodendron diversilobum, Polypodium californicum, Baccharis pilularis consanguinea, Eriophyllum confertiflorum, Galium nuttallii, and Lonicera hispidula.One should note that all of the specimens with numbers greater than 10,000 have been collected by John Hunter Thomas Phd., curator of the Dudley Herbarium. All of the specimens with numbers less than 1,000 have been collected by Ned Cahill.



DUDLEY HERBARIUM OF STANFORD UNIVERSITY
SAN MATEO COUNTY, CALIFORNIA

Serpentine fields bordered by chaparral near the intersection of Canada and Edgewood roads, about 3 mi westward from Redwood City. Area partly destroyed by road building. Serpentine soil. Grasslands with Layia platyglossa, Orthocarpus densiflorus, Lasthenia glabrata, Chaetopappa bellidiflora, Eschscholzia californica, Delphinium variegatum, Brodiaea pulchella, B. terrestris, Gilia tricolor as the common species.

Ned Cahill

1974