



VOLUME IV.

ORCUTT, CALIF.. JUNE, 1895.

WHOLE NO. 78.

THE WEST AMERICAN SCIENTIST.

C. R. ORCUTT, Editor and Publisher,
 Orcutt and San Diego, California, U. S. A.
 Price 10 cents; per year, \$1 00
 Advertisements 50 cents per line nonpareil.

BULBS

	\$ 100:
Allium hamatochiton Watson: fine.....	1 00
Bloomeria aurea: rich yellow flowers.....	1 50
Clevelandia watson: delicate lemon.....	3 00
Brodæa capitata: large heads, lavender...	1 00
capitata alba: charming, pure white.....	2 40
congesta: violet purple, 2 to 3 ft high...	1 50
coccinea: Vegetable fire cracker.....	2 25
grandiflora: dark waxy purple, showy	1 00
ixioides (Caliphoa lutea): yellow, pretty	1 00
lactea: white banded with green.....	1 00
laxa (blue milla, Ithuriel's spear): blue	1 00
minor: fine royal purple umbels.....	2 25
multiflora: umbels of violet flowers.....	1 50
Orcuttii: lavender colored fls.....	5 00
peduncularis: waxy porcelain white...	2 25
stellaris: rich purple, white centers....	1 50
terrestris: royal purple, 2 inches high...	2 25
volubilis: Twining hyacinth, climbing	4 50
mixed varieties \$6 per 1000.....	90
Calochortus albus: Fairy Bell, pearly w.	1 80
Benthonii: open cup shaped flowers.....	2 25
Gunnisoni: light lilac, purple banding	10 00
'Howellii' (apiculatus): white, 2 ft high	6 00
Kennedyi: magnificent dazzling scarlet	10 00
Leichtlinii: much like Nuttallii.....	3 00
longibarbatu: fine purple, a foot high...	6 00
luteus: yellow fls, dotted with brown...	1 50
v. concolor: large bright yellow flowers	7 50
liacinus: lilac shades to purple, fine...	1 50
macrocarpus: large purple flowers.....	4 50
maueanus: white, silky blue hairs, fine	1 50
nitidus: purple and green fls., flexuous	7 50
nudus: dwarfish in habit, purple fls....	4 50
Nuttallii: large white fls, green banded	4 50
Palmeri: a rare and beautiful sort.....	7 50
pulchellus: star tulip, pendant flowers	1 50
splendens: lavender color.....	3 00
v. atroviolacea: purple, with red spots	3 00
venustus oculatus: finely marked fls....	1 50
venustus purpurascens: purple centers	2 25
venustus citrinus: lemon yellow.....	1 50
venustus roseus: creamy inside.....	2 40
Weedii: orange butterfly tulip, fine.....	4 50
Toimlei: very large white pendant fls...	2 25
fl vus (Cyclobothra flav): golden shell	2 00
Plummeræ (Weedii purpurascens).....	7 50
Purdyi Greene: pale lilac fls, new.....	4 50
flexuosus: lilac fls, a fine butterfly tulip	10 00
Bavardianus: drooping purple and yel.	8 00
mixed varieties, choice selections.....	1 20

Camassia 'alba'.....	12 50
Cusickii: purple giant, great novelty...	25 00
esculenta: dark blue fls, edible bulbs...	90
Leichtlinii.....	7 50
Chlorogalum angussifolium, dwarf size...	4 50
parvifolium and pomeridianum, each...	4 50
Erythronium grandiflorum (gsganteum)...	1 50
Hartwegii, large yellow fls, beautiful...	2 25
Hendersonii, pink fls, center blackish...	4 50
montanum, 3 to 4 large pure white fls...	4 50
Howellii, white turning pink, Oregon...	6 00
Smithii, white fls turning purple.....	3 00
grandiflorum minor, yellow flowers.....	6 00
purpurascens, rare and beautiful.....	4 50
Freesia refracta alba: seed \$3 per lb.....	60
Fritillaria atropurpurea.....	4 50
biflora: chocolate lily, wine purple fls...	3 00
coccinea: much like recurva, pretty fls	6 00
lanceolata, curious mottled color nig....	3 00
v. gracilis, nearly black, pretty.....	4 50
liliacea, white, otherwise like biflora...	3 00
parviflora.....	4 50
pubica, charming yellow or orange fls...	4 50
recurva, scarlet bell shaped flowers....	3 00
Hesperocallis undulata, desert lily.....	20 00
Leucocrinum montanum, delicate white...	6 00
Behria tenuiflora.....	7 00
Lilium Bolanderi, Oregon, quite rare yet.	60 00
Columbianum, like dwarf Humboldtii...	7 50
Humboldtii, orange, with black spots....	10 00
maritimum, blood red flowers.....	15 00
pardalinum, red and orange.....	4 50
v. minor, canary yellow, spotted fls....	7 50
v. Bourgæi, lustrous fiery red.....	20 00
Parryi, delicate lemon yellow, fragrant.	15 00
parvum, scarlet spotted with brown....	12 50
rubescens, opens white, very fine.....	20 00
Washingtonianum, white, very fragrant	12 50
Muilla maritima, small whitish flower...	3 00
Trillium sessile californicum.....	3 00
ovatum, white, turning to wine purple..	3 00
Zygadenus Fremontii, creamy white fls...	4 50
paniculatus, stouter and taller.....	4 50
Amaryllis formosissima.....	—
Richardia africana, calla.....	4 00

THE WEST AMERICAN SCIENTIST, Orcutt, California, pleases botanists, horticulturists, & naturalists every where. \$1 a year, 10c. a copy.

CATALOGUES

Sorgo machinery and fruit evaporators, the Blymyer iron works. Cincinnati, Ohio.

BOOKS on natural history, botany and horticulture. Write this office:

SHELLS C. R. ORCUTT, Orcutt, Calif.

KINDERGARTEN MAGAZINE

\$2.00 PER YEAR.

A monthly for parents and teachers. Edited by Andrea Hofer and Amalie Hofer, Chicago.

Devoted to kindergarten theory and practice. Keeps its readers in touch with the best demonstrations in the entire kindergarten field. New kindergarten songs. Nature studies and investigation. Typical work with gifts and materials. Discussions by live educators on best methods. Psychology made practical by the study of the child. Typical stories by active kindergartners. How to study Froebel's Mother-play Book.

DEPARTMENT FOR PARENTS.—Correspondence with mothers, discussing all practical and vexing questions. Typical chats with the children on natural history, domestic life, stories, songs, and plays. Hints of how to keep active fingers employed. Hand work and busy ways for children in the home, adapted to the needs of busy mothers. How and why to answer children's questions. Lullabys, home songs, and nursery rhymes. A pure home magazine, with a high standard of family life as its objective point, and sound purposes in early education. Thinking mothers are most practically supported in their efforts to give children rational training. Send 15 one-cent stamps for sample, and ask for plans for introducing the KINDERGARTEN into your neighborhood. KINDERGARTEN LITERATURE CO., CHICAGO.

\$100.00 Given Away Every Month

to the person submitting the most meritorious invention during the preceding month.

WE SECURE PATENTS FOR INVENTORS, and the object of this offer is to encourage persons of an inventive turn of mind. At the same time we wish to impress the fact that :: :: ::

It's the Simple, Trivial Inventions That Yield Fortunes

—such as De Long's Hook and Eye, "See that Hump," "Safety Pin," "Pigs in Clover," "Air Brake," etc.

Almost every one conceives a bright idea at some time or other. Why not put it in practical use? YOUR talents may lie in this direction. May make your fortune. Why not try? :: :: :: ::

Write for further information and mention this paper.

THE PRESS CLAIMS GO.

618 F Street, Northwest,
WASHINGTON, D. C.

The responsibility of this company may be judged by the fact that its stock is held by over one thousand of the leading newspapers in the United States.

CHILD-GARDEN

\$1.00 PER YEAR.

A monthly kindergarten magazine for children. Edited by Andrea Hofer and Amalie Hofer.

The only magazine for children, gathering up the pure literature of the current kindergartens. No other children's magazine discriminates so scientifically in its choice of contents, having a deep purpose behind all that it brings to the child. Full of helps to kindergartners and mothers. Written entirely by kindergartners from their daily experience. Beautiful illustrations, myth stories, science stories, trade stories, games, songs, talks, Sunday lessons, busy work, letters of travel, blackboard lessons, drawing, kindergarten occupations, etc. Send ten one-cent stamps for a sample. Anyone desiring to get up a club for the purpose of popularizing the kindergarten in any community write for rates and suggestions to the KINDERGARTEN LITERATURE CO., Chicago.

LITERARY NOTES

The Open Court Pub. Co., of Chicago, have just issued a second edition of their authorized translation of Th. Ribot's 'Diseases of personality,' the first having been exhausted in 3 years. No other author displays such originality in placing under lucid points of view the disordered mass of data gathered by the psychological specialists. (Pp. 164, cloth 75c; paper, 25c.)

THE DELINEATOR, woman's favorite magazine, issued by the Butterick Pub. Co., 7 W. 13th st., N. Y., at \$1 a year, is a marvel of freshness beauty and utility, the great cater to domestic needs.

A CHECK-LIST OF CACTI.

A preliminary list of all known species, and their authors, habitat, value, etc.

No.	Name and author:	Habitat:	Price
	ANHALONIUM Lemaire.		
1	areolosum Lem.	Mexico.....	100
2	elongatum Salm—see pulvilligerum.		
3	Engelmanni Lem.	Texas.....	*\$30
4	fissipedum Monv.—see sulcatum.		
5	fissuratum Eng.—see Engelmanni.		
6	furcaceum (Watson) Coulter.		
7	heteromorpha Eng.—see Eng'm'ni.		
8	Jouradanium hort.		
9	Kotschubei Lem.—see sulcatum.		
10	Kotschubeyanum Lem.—see sul'um.		
11	Lewinii Hennings—see Lophophora.		
12	prismaticum Lem.	San Luis Potosi.	*25
13	pulvilligerum Lem.....		
14	retusum Salm—see prismaticum.		
15	Rungei Hildm.	Mexico.....	
16	sulcatum S.	".....	
17	turbiforme W.—see Echinocactus.		
18	Williamsii Web.—see Lophophora W.		

ASTROPHYTUM Lemaire.

19	asterias Lem.—see Echinocactus a.	
20	capricornis hort.—see E. c.	
21	myriostigma } } Lem.—see E. myriostigma.	
22	prismaticum } }	

CEREUS Linnaeus.

(Including Echinocereus Engelmann, Echinopsis Zucc. and Pilocereus Lemaire.)

23 abnormis Sweet—see peruvianus.

THE QUICKSILVER MINES OF OREGON.

The quicksilver mines that have been worked in Oregon, are situated in the northeastern part of Douglass county, on the head waters of the Umpqua river.

There are three that have been worked, the Nonpareil, Bonanza, and Elk Head. The former is situated on Calapooia creek, eight miles northeast of Oakland. The main lead, or deposit, is at the juncture of the sandstone on the west and basalt on the east, which is of a hard quality, and in some places partakes of the columnar structure so common in other parts of the state. There are, however, a few places where sedimentary rocks are on both sides of the lead, yet they seem to be only in spots, forming, perhaps, only cap rocks of no great depth. The veins of ore are much distorted, running a little east of north and west of south, of uneven widths, composed of volcanic tufous rock intersected by veins or ribs of jaspery iron ore formed by infiltration through crevices of water containing iron protoxide and silicic acid. The dip of the ledge is from west to east, though it is difficult to follow on account of its sinuosity and its swelling and pinching.

The walls are both volcanic rock. The sandstone on the west not reaching quite to the vein proper, neither does the hard basalt, as a rule, reach the vein on the east, there being a softer tufous rock, of varying character and hardness, composing the walls, gradually emerging into the other rock as they recede farther from the vein, which is from a few inches to many feet in thickness. The cinabar being in spots, specks and streaks throughout the entire vein, which is richer in some places than others.

A small body of limestone has been found within a few yards of the vein in the sandstone. There is in a few places what appears to be a cap rock of sandstone and conglomerate overlying the basalt to the eastward near this mine, as also the Bonanza. This, however, is not without doubt as to its extent in depth. The trap appears to have pushed the sedimentary rocks out of their original position.

The Bonanza mines are situated some three miles southwest of the Nonpareil. The walls of the Bonanza are the footwalls of the sandstone on the west, but on the east it is usually slate. However, this slate is most likely only a cap on the basalt, which evidently underlies the slate at no great depth. The mountain being several hundred feet high, it has been worked mostly by tunnels instead of shafts. There are many small veins of very rich ore running in various directions through the main vein or lode, which is in places two or three hundred feet wide. Many fine specimens of the sulphides of mercury have been taken from this mine. It contains the mettacinnabarite, found only in this mine and the St. John's mine in California, which ore is more of a mechanical mixture than a chemical compound; but is, however, more or less mixed with the red sulphuret, as its streak is often quite red.

This mine also contains a considerable amount of native mercury, usually in fine particles disseminated throughout the various rocks.

The Elk Head mines are situated thirteen miles north from Bonanza, and differ from the others in having the trap, which in this case is amygdaloid, usually containing natrolite crystals and other zeolites on the west, and the sandstone in large areas on the east. The dip is slightly to the east or southeast. A few fine specimens have been taken from this mine, but the ore, though a splendid working ore from its large vein of soft tufa being easily worked, is not noted for fine specimens.

Somewhat to the south of this mine, cinnabar has been found directly in the trap rock without any apparent vein, but no large amount. All three of these mines agree in having large mountains of volcanic tufa or ocherous rock on the north, all of which usually contains a little cinnabar.

A small deposit of cinnabar ore in the southwestern part of Douglass county on the divide between the southern head waters of the Looking Glass creek, and those of Cow creek, eight miles west of Riddle, differs from the foregoing in having a large deposit of serpentine on the east, taking the place of the traps in the other mines.

Deposits of granite in the serpentine are a leading feature of this locality. All the foregoing agree in having the contiguous sandstones much metamorphosed.

The former three are in formations supposed to be not older than Eocene, probably lower Eocene, but the latter is thought to be much older, and not later than lower cretaceous, as some fine fern leaf impressions in the adjacent shale have been on good authority, pronounced carboniferous. I have now a number of these specimens among my collections.

Small deposits of cinnabar have been found in Baker and Josephine counties, but I am not aware of any other deposits of note.

Aurelius Todd.

IMMIGRANT PLANTS IN LOS ANGELES COUNTY, CALIFORNIA.

To the European visiting California it is cheering to find that though 6000 miles from home some of the flowers so familiar to him in the old country still greet him here. Under such varied conditions of soil and climate, these Old World immigrants have considerably changed; some, like the genus homo, have been improved racially and individually, while others, under the same conditions, have shown little increase, or have even depreciated.

Certain immigrant plants are so identified with the invasion of the Anglo Saxon race that their presence may be considered a proof of commencing colonization. 'Twas the constant association of *Plantago major*, the broad-leaved plantain, with the homes of the

early pioneer, that led the Indian to call it the "white man's foot." A farther traveled and more constant companion of civilization is the Shepherd's Purse (*Capsella Bursapastoris*), already abundant in California.

This hardy and prolific weed accompanied the Roman legions in their conquest of Gaul and Britain; and, after the lapse of centuries, followed the Anglo Saxon in the peaceful conquest of the West. The more useful European species have, of course, been primarily introduced for agricultural or domestic purposes. Of these the most valuable and most interesting historically is the *Medicago sativa* Lin., the alfalfa of the Spaniard, and Lucern of the French. This has been so long and so commonly cultivated in Spain that it seems but natural they should have introduced it here in the early days of the conquest. Though cultivated before this time by the Greeks and Romans, it is not indigenous to Italy, having been brought from Media at the time of the Persian war, 470 years before the Christian era. The very name (*Alfalfa*) indicates its origin, being the Arabic derivation of the Persian name. The history of *Alfalfa* is but the history of many of our now supposed indigenous plants; they have by accident, or otherwise, followed the path of civilization westward, till it becomes difficult to discriminate between what is indigenous, or otherwise.

Among the other useful fodder plants, abundant around Los Angeles, are: *Erodium cicutarium* and *Erodium moschatum*, or Filaree, better known in Europe as the Stork's bill and *Melilotus parviflora*, the Melilot. Whether these, like *Alfalfa*, were intentionally introduced, I have no means of knowing, but the probability is their introduction was accidental, and once introduced, and their value recognized, their wide-spread distribution is easily accounted for. Around Los Angeles, it seems to me its introduction, useful though it is, is not altogether an unmitigated blessing, as it has crowded out the natural and more enduring native grasses that otherwise would afford grazing supplies long after the filaree has disappeared.

Of grasses, I have observed *Lolium perenne* (rye grass), *Dactylis glomerata* (cock's-foot), *Phleum pratense* (cat's-tail), *Festuca myurus*, *Phalaris canariensis* and *Poa annua*, in the lawns and waste places within the city. *Eragrostis pœoides* and *Panicum crusgalli* are not infrequently near the river. *Lolium temulentum* exists sparingly at San Pedro; *Bromus racemosus* general, and in many parts common, and seems the only important grass that tends to naturalize and increase.

Of the clovers, *Medicago deficulata*, the Burr clover alone is common, the nature of its fruit ensuring its maintenance and continued extension; *Medicago lupulina* and *Trifolium arvese*, or Dutch clover, are merely casuals, and rare at that.

First cultivated, as useful plants, *Brassica nigra* (wild mustard),

B. campestris, *Mentha piperita* or peppermint, *Marrubium vulgare*, (Hoarhound) and *Nasturtium officinale*, (common watercress), have passed control and become firmly naturalized. The peppermint and watercress, from the lack of water or marshy ground, are not very abundant, but the others have multiplied to such an extent as to become the commonest and most injurious of weeds, covering acres of ground, to the entire exclusion of more useful species.

Malva borealis, the common mallow of the district, like *Brassica nigra*, grows so rank here as to be scarce recognizable as the European species, and springs up annually in most cultivated localities.

Around town, in some of the drier, localities, the field *Convolvulus* (*Convolvulus arvensis*), has secured a foothold. Its creeping habits and extensive rootlets make it one of the most noxious and ineradicable of weeds, and should it secure itself in the cultivated districts the farmer's life will be no sinecure.

The Caryophyllaceæ order has three representatives:

Silene gallica, not uncommon in waste ground.

Stellaria meadia, around yards, and *Cerastium triviale*, found occasionally in the lawns.

Anthemis cotula, the May weed, is not uncommon on railway banks. *Silybum Marianum*, the milk thistle, grows along the San Gabriel. *Centaurea meletensis*, *Sonchus oleracea* and *Sonchus asper* are common in the city, the latter, contrary to the usual experience, is as common here as *S. oleracea*.

The common dandelion (*Taraxacum officinale*) may be observed in the lawns among imported grasses, but it does not take kindly to the dry soils.

A few specimens of *Vicia sativa*, the tare of cultivation, *Dipsacus fullonum*, the fuller's teazel, are annually found as escapes from cultivation.

Around the gardens and roadsides *Polygonum aviculare* and *Chenopodium album* are very common. The *Plantago major* may be found in moist ground, near zanjas, while its lesser brother, the *P. lanceolata*, or rib-grass, struggles for a casual existence in the grounds in the city.

Last of all, comes the *Urtica urens*, the lesser nettle, clinging, according to its Old World custom, around the haunts of man.

These, so far as I have observed, comprise all the European immigrants present in and around Los Angeles, but as time rolls on, we shall, no doubt, see the importation of many others.

A. Davidson.

LEUCOCRINUM MONTANUM.

The generic name of this dainty little plant means white lily; translating the entire scientific name it might be called, White Lily of the Mountains. It seems more appropriate, however, to name it White Prairie Lily; for it is the most attractive of the spring flowers of the eastern Colorado plains.

In the vicinity of Denver the plants are quite common during May, and in some localities can be seen for miles; great clumps of snowy flowers nestling in a bed of grass-like leaves. It is not unusual to find many plants in one cluster from which fifty blossoms could be easily gathered.

These six rayed starry lilies spring from ground the surface of which is often as hard as a rock and unfold to the blue sky, breathing forth their adoration in a delicate, exquisite perfume.

They seem to be as hardy and brave as beautiful; for a temperature away below zero does not freeze them, nor do the hot, dry days of summer deprive them of life.

It will be wondered, perhaps, how it is possible for this fragile looking flower to live and bloom in such adverse surroundings. The secret lies buried deep in the ground at its roots. During the spring rains and snows, the warmth and moisture awaken this sleeper from its ten months' repose and soon it shoots up, immediately beginning to form roots for the next year. On one plant can be found three sets of roots. The lowest are ghosts of roots that gave up their life to feed the growth of the previous spring; next are numerous long fleshy roots that are rapidly being exhausted; and uppermost the tender white roots are just beginning to collect the supply for the next year.

Most lilies store their nourishment in bulbs, but this independent prairie flower, has instead a short erect root stock and many long, fleshy roots.

The tube of the perianth extends down among the leaves and bracts for about two inches and its divisions are nearly an inch long, making the expanded flower about two inches in diameter. The seed vessel is at the very bottom of the tube and underground. I know of no other plant that naturally ripens its seeds underground, and have been greatly puzzled to explain this peculiar habit, which would seem to effectually check its distribution.

The only reasonable hypothesis that has occurred to me is this: the plant requires to be some depth below the surface so as to obtain sufficient moisture; it is found where the signs of gophers and prairie dogs abound; so, probably, the underground portions serve as food for these little animals and the seeds are thus properly distributed.

Alice Eastwood.

THE FOREST TREES OF OREGON.—III.

The timber of the following forest trees is specially adapted for cabinet work:

THE OREGON BROAD-LEAVED MAPLE (*Acer Macrophyllum*).—The wood of this tree is dense and handsome, polishing well, with a rich variety of grain. For household furniture it is a valuable material. As a shade tree it is superior. It grows rapidly, transplants easily, and if left to itself forms a handsome head.

ACER CIRCINATUM (the Vine Maple).—As its name indicates, it is too small for anything larger than barrel hoops, for which purpose it is sometimes sent to San Francisco.

OREGON ASH (*Fraxinus Oregona*).—This ash is abundant along the streams of western Oregon, sufficiently so to give it a place as a wood of commerce. Specimens of it may be seen in our cabinet shops that will vindicate this claim. The U. S. custom house at Portland is finished inside with Oregon ash. It loves moist places, and is on this account not suitable for shade or ornament.

OREGON ALDER (*Alnus Oregona*).—The Oregon alder is abundant along stream beds and other damp places. So marked is its love for springs and streams that the presence of a clump of these alders will often reveal to the thirsty explorer a spring of water. Its trunk is often two feet through. Its wood is often used in our cabinet shops, where it is prized for inside work such as drawers.

OREGON MYRTLE or California Laurel (*Oreodaphne Californica*). This handsome, fragrant tree is abundant along the Umpqua river and through Rogue river valley. It is at its best around Coos bay, where it is shipped to San Francisco. As it is so heavy that it will not float in water it is difficult to bring this wood to market. It is durable and susceptible of a fine polish, and in every respect is a wood to be prized in commerce. As an ornamental tree it is highly valued, but is difficult to transplant. Its fruit is fairly abundant and the tree may be raised from the seed.

THE OREGON LAUREL or Madrona (*Arbutus Menziesii*).—The madrona is frequent in Jackson county and occasional in the Willamette valley. For purposes of commerce it is not abundant enough. It is a handsome, dense, close-grained wood that bears a good polish and is durable. As an addition to the lawn or dooryard it is a real ornament, resembling the European laurel.

THE DOGWOOD (*Cornus Nuttallii*).—This tree is ordinarily too small and is too seldom met to be of any importance to commerce. But its wood is a very handsome one for furniture or parts of furniture requiring narrow boards. It often grows to be twelve or fifteen inches through and is capable of a high polish. In all respects it is a fine wood for the turning lathe.

THE COTTONWOOD (*Populus trichocarpa* or *Balsamifera*).—This tree is very abundant along the rivers and smaller streams and often

reaches a large size. Recent experiments in making paper from the fibers of this wood have been so successful that there is but little doubt of its future importance. This wood is soft and its fibers so silky as to insure the best results for paper making.

WILD CHERRY (*Prunus emarginata*, variety *mollis*). In the Willamette valley this tree is often in small groves of slender, straight form, eight to ten inches through; more seldom one finds a single tree twelve to eighteen inches through. Its wood is a handsome smooth material for furniture. In the coast mountains it is often seen in groves of considerable extent of long, straight and slender poles.

Thomas Condon.

PACIFIC COAST WOMAN'S PRESS ASSOCIATION.

This Association formally announced its organization to the public by holding its first semi-annual meeting in San Francisco, on the 16th, 17th and 18th of March. It was organized in September last, and has a membership of about two hundred.

The officers were wisely chosen, and are: President, Mrs. Nellie B. Eyster; first vice-president, Mrs. Jeanne C. Carr; second vice-president, Mrs. Kate Douglas Wiggin; third vice-president, Mrs. Sarah B. Cooper; corresponding secretary, Mrs. E. T. Y. Parkhurst; recording secretary, Mrs. Sam Davis; assistant recording secretary, Mrs. Emily Brown Powell; treasurer, Mrs. Mary O. Stanton; auditor, Mrs. Isabel Raymond; librarian, Mrs. S. E. Reamer.

Only those having cards of admission were allowed to enter the hall where the exercises were held, but of these there were enough to fill the room at each session of the Association. The program was sufficiently varied to give interest to each session, while some of the papers were able and of unusual merit.

Among the notable women participating in its exercises—one of whom has a world-wide fame, and others of more than local honor—were, Mrs. Rose Hartwick Thorpe, Mrs. Charlotte Perkins Stetson—a most worthy descendant of Lyman Beecher and niece of Edward Everett Hale, Mrs. Sarah B. Cooper, Mrs. Wiggin, Mrs. Eyster, the president, Mrs. Parkhurst, the founder of the Association, and others. Madame Modjeska is an honorary member of the Association.

San Diego was represented by three delegates, Mrs. Rose Harwick Thorpe, Mrs. Evelyn M. Ludlum, Mrs. John R. Berry. Mrs. Thorpe's thoughtful poem, "Progress," deserves a careful reading before its beautiful depths are sounded and the poem fully appreciated.

Mrs. Berry read a short paper upon the topic assigned her, "Woman's Work in San Diego."

There were banquets, excursions, and receptions given to the Association by the cordial citizens of the city.

The next, which will be the annual meeting of the Association, will be held during the third week in September, at Hotel Del Coro-

nado, when it will receive from San Diegans as cordial a reception as that accorded to it by dwellers about the Golden Gate.

Mary S. Berry.

CALIFORNIA TREES AND FLOWERS.—III.

LIBOCEDRUS.

L. DECURRENS *Torr.* California White Cedar. A tall tree, conical in shape, in foliage and habit resembling *Thuja gigantea*.

LILIUM.

There are about fifty species of lilies in the world, California possessing eight handsome species, which are widely sought for their showy and often fragrant flowers. They are better known in European than in American gardens, but are worthy of greater attention in their native land.

L. WASHINGTONIANUM *Kellogg.* The Washington Lily is a tall, stately plant, with whorls of dark green leaves and many pure white fragrant flowers. A beautiful species, growing in loose soil on ridges or lightly shaded hillsides.

L. PARRYI *Watson.* This fine and exceedingly rare lily, named in honor of the late Dr. C. C. Parry, produces lovely clusters of large and very fragrant flowers of a clear lemon yellow.

L. RUBESCENS *Watson.* A rare form resembling the Washington Lily, except in the color of its exceedingly fragrant flowers, which change from white to dark ruby red after opening.

L. PARVUM *Kellogg.* A low, slender, graceful plant, bearing from two to fifty or more bell-shaped flowers with light yellow centers dotted with brown, the petals tipped with scarlet or crimson.

L. MARITIMUM *Kellogg.* The Marine Lily resembles the last, small, with dark green foliage, and usually fewer deep crimson or blood-red flowers, dotted with black.

L. PARDALINUM *Kellogg.* Hardy and very handsome, preferring a rich moist soil; bearing large and brilliant crimson flowers, dotted with black and with a yellow center. A favorite.

L. HUMBOLDTII *R. & S.* Large and tall, stout, with orange-red flowers, spotted with brown. Thrives in dry open places. The Humboldt Lily is very stately and handsome.

L. COLUMBIANUM *Hanson.* A graceful miniature of the last.

LOBELIA.

L. SPLENDENS *Willd.* Two or three feet high, growing in moist situations, producing a many-flowered raceme of intense red blossoms.

LOESELIA.

L. TENUIFOLIA *Gray.* A showy plant, a span to a foot high, producing abundantly brilliant poppy-red or carmine flowers. Perennial.

L. EFFUSA Gray. An equally beautiful species of the mountains of Lower California, low in habit with light rose purple flowers. Like Phlox and Gilia, Loeselia is a genus of lovely flowers, well worthy of cultivation.

LUPINUS.

Showy annuals or perennials, a few shrubby, bearing conspicuous flowers in terminal racemes. The great majority are indigenous to West America. Many have long been cultivated and grown popular. The California species best known in cultivation are the following:

L. AFFINIS Agard. A foot or two high, often growing very rank, producing large spikes of brilliant blue flowers.

L. DENSIFLORUS Benth. Less than a foot high, with white flowers arranged in umbel like clusters on the terminal spike. Sometimes light sulphur yellow.

L. MICRANTHUS Dougl. Low in habit, with racemes of small light blue and white flowers. The cultivated form is considered quite pretty.

L. NANUS Dougl. A slender plant, with bluish, purple or white flowers.

L. NANUS ALBUS. The white flowered form.

L. ARBOREUS Sims. The Tree Lupin is a shrub four to ten feet high, with lilac colored flowers.

L. ARBOREUS LUTEUS. With sulphur yellow flowers, perhaps the typical form. A very ornamental shrub.

L. ELEGANS. What its name signifies.

L. GRANDIFLORUS. A perennial form, with blue, white or purple flowers.

L. POLYPHYLLUS Lindl. Perennial, similar to *L. grandiflorus* if the two are not identical or forms of the same species.

L. POLYPHYLLUS ALBIFLORUS. The white variety.

MAMILLARIA.

Very general favorites among the lovers of the odd or the beautiful are these unique little plants, most exquisite in form and finish. The scarlet edible berries, which cluster among the spines of our California cacti of this genus add also to the beauty of these plants, though the blossoms are often inconspicuous.

M. DESERTI Engelm. A little gem, from the Mojave Desert, of which we have as yet seen but a single plant. One of the choicest of the genus and we hope to rediscover the beauty soon.

M. GOODRIDGII Scheer. Sometimes called the Strawberry cactus, from the delicious flavor of its clubshaped fruit, but also called the Fish-hook cactus from the hooked central spines produced from the mamillae. The spines are sometimes of an ivory whiteness, but oftener of a rich brown color.

M. PHELLOSPERMA Engelm. A handsome plant, worthy of a place in any lady's parlor.

MIMULUS.

M. CARDINALIS Dougl. A showy perennial species, with brilliant large scarlet flowers.

M. GLUTINOSUS Wendl. A low shrub, with bright evergreen foliage and a profusion of buff or salmon colored showy flowers.

M. MOSCHATUS Dougl. Musk. A low, musk-scented plant, bearing large lemon yellow flowers.

MONARDELLA.

A genus of many beautiful flowers, well worth extended cultivation, showy, often sweet scented, either perennial or annual.

M. MACRANTHA Gray. An evergreen species with dark glossy foliage, a span high, producing showy heads of orange-red flowers.

M. NANA Gray. Almost identical in habit and general aspect with the last, the flowers pure white, sometimes suffused with rose. Very beautiful but less showy than the last.

M. LANCEOLATA Gray. A showy annual, producing masses of bright phlox purple flowers, six to eight inches or a foot high, branching, with a strong but pleasant pennyroyal perfume, similar in aspect with numerous related forms, like *M. Pringlei* and many others, all of which are well worthy of a place in any garden.

NEMOPHILA.

Very pretty annuals, mostly Californian, with tender herbage and lovely flowers of delicate blue, violet or white colors.

N. AURITA Lindl. Large violet flowers, one of the finest species introduced into cultivation.

N. AURITA ALBA Dougl. A beautiful white form.

N. INSIGNIS Dougl. Bright blue flowers an inch in diameter.

N. MACULATA Benth. White, with a strong violet blotch at the top of each lobe of the corolla. 'Love Grove.'

NICOTIANA.

N. GLAUCA Graham. A slender shrub, a native of South America, very light green foliage and yellow flowers, considered very striking and ornamental among the sub-tropical foliage plants. Naturalized in Southern California.

NOLINA.

Perennial liliaceous plants, with a thick woody trunk, in aspect somewhat resembling the *Yucca*. The stout flowering stem bears a panicle of numerous small creamy white flowers.

N. BIGELOVII Watson. The flowering stem six to ten feet high, bearing a dense panicle. The plant sometimes grows ten or more feet high.

N. PALMERI Watson. A cluster of these plants will cover a considerable area, and with the coarse, grass-like foliage may well be mistaken for a patch of some coarse species of grass at a distance. Less ornamental than the preceding.

GENOFIERA.

An almost exclusively American genus of over one hundred species, many with showy flowers, and some long in cultivation as ornamental.

Æ. BIENNIS *L.* The Evening primrose, with its large showy flowers, is too well known to need description.

Æ. BISTORTA *Nutt.* Showy yellow flowers, usually with a dark brown spot at base of each petal. A low decumbent annual, the variety *Veitchiana* being the form commonly seen in cultivation.

Æ. CALIFORNICA *Watson.* Low flowers, large white, becoming pinkish, fragrant. One of the loveliest and most delicate of flowers, often two or three inches across.

ORTHOCARPUS.

A large genus of low, branching annuals, nearly related to *Castilleia*.

O. PURPURASCEUS *Benth.* An erect, diffusely branched annual, a span to a foot high, producing numerous dense and thick terminal oblong or cylindrical spikes of flowers. Corolla yellowish, tipped with crimson or red and the whole encircled by the brilliantly colored crimson-purple or rose-purple floral bracts. Hundreds of acres are often transformed into brilliant fields of purple by the abundance of this, one of the handsomest of the spring annuals of California.

PAPAVER.

P. CALIFORNICA *Gray.* While one of the latest discoveries, this plant ranks among the prettiest of our annuals, the fine bushy plant, a foot or more high, bearing large showy flowers of an average of two inches in diameter. The color is a bright saturn red to orange chrome, with a center of delicate sulphur yellow.

PENTACHAETA.

P. AUREA *Nutt.* This small hardy annual, with its large golden yellow heads of almost double flowers, introduced into cultivation in 1884, is a pretty dwarf composite that may be readily grown.

PENTSTEMON.

Hardy perennial plants with showy panicles of brilliantly colored flowers. Several of the numerous California species have long been in cultivation.

P. CENTRANTHIFOLIUS *Benth.* A showy species, two or three feet high, bearing long slender spikes of bright carmine-colored flowers, an inch long. Acres in extent of our mountain lands are sometimes a solid mass of carmine during the summer, when this handsome plant is in bloom. It was introduced in 1858.

P. CLEVELANDI Gray. One to three feet high, with dark green foliage and bearing a spike of lovely bright solferino-colored flowers, each an inch long.

P. PALMERI Gray. A tall growing species, with a long panicle of large white flowers delicately veined with purple.

P. SPECTABILIS Thurber. Corolla an inch long, broad, bluish-purple. Plant two or three feet high, glabrous. Flowers in a loose elongated panicle. A very showy species. This genus contains nearly a hundred species, nearly all worthy of cultivation, and many native to California.

PHACELIA.

P. CAMPANULARIA Gray. One of the finest species in the genus yet known in cultivation. Has received a first-class certificate in England, where it was introduced a few years ago.

P. CONGESTA. A useful plant in bee-gardens, like the rest of the genus, and one of the best known species in cultivation.

P. TANACETIFOLIA Benth. The Tansy-leaf Phacelia has long been in favor in cultivation for its beautiful foliage. An erect hardy annual, one to three feet high, bearing cymosely clustered spikes of light bluish flowers.

P. TANACETIFOLIA ALBA. A fine cultivated variety, with white flowers.

P. ORCUTTIANA Gray. One to three feet high, branching, bearing a profusion of small white flowers with brilliant yellow centers.

P. PARRYI Torr. One of the loveliest and most desirable of the many pretty annuals of Southern California for cultivation, second only in value to *P. campanularia*. The plant delights in warm sunny exposures, and produces large brilliant royal purple flowers with an open rotate corolla. Everyone admires this modest flower, whose bright face looks out at one with something akin to a human expression.

P. WHITLAVIA Gray. Large bell-shaped blue flowers.

PICEA.

P. SITCHENSIS Carr. Probably the tallest spruce known, growing 150 to 200 feet high, and of pyramidal form. An excellent timber tree.

PLATYSTEMON.

P. CALIFORNICUS Benth. A low annual, a span high, with delicate sulphur-yellow flowers, called Cream-cups by the children. Belongs to the Poppy family.

PROSOPIS.

P. JULIFLORA D C. The Mesquit tree of the desert regions, sometimes planted for hedges. The bean-like pods of this tree are useful for forage, and form an important article of food among some Indian tribes. Very sweet and nutritious.

P. PUBESCENS *Benth.* The Screw-bean. A smaller tree than the Mesquit, with curiously twisted pods.

PRUNUS.

P. ILICIFOLIA *Walp.* The Holly-leaf cherry. A beautiful dark evergreen shrub, yielding a pleasant edible fruit. Useful for hedges or ornamental planting.

PSEUDOTSUGA.

P. DOUGLASII *Carr.* The magnificent Douglas spruce, better known commercially, perhaps, as the Oregon pine. A gigantic tree, 200 to over 300 feet in height, and very beautiful.

Var. *macrocarpa* *Engelm.* A small form.

RHUS.

R. OVATA *Watson.* A handsome evergreen shrub, noted for its glossy foliage and graceful form. The small dark red berries make a cooling drink, pleasantly flavored, resembling lemonade, and the Indians formerly gathered sugar from this species. Thus it may be appropriately termed a Lemonade and Sugar Tree.

R. INTEGRIFOLIA *Nutt.* The dark evergreen foliage of this shrub or small tree, locally known as the Mahogany, is very handsome, while the larger bright red berries, coated with a white waxy substance also make a refreshing and cooling drink. The Californians formerly gathered and dried the berries for this purpose.

ROMNEYA.

This large white-flowering perennial poppy, named in honor of Dr. T. Romney Robinson, a noted astronomer, is one of the stateliest of California's contributions to horticulture. It is quite a hardy shrub with us, requiring only a sheltered position to protect its flowers; in England it is classified as half-hardy. A rich loamy soil is most suitable to its needs. In early spring vigorous shoots start from the dormant roots, growing from six to fifteen feet high, which do not die down but need to be pruned well back in the fall. A single species.

R. COULTERI *Harvey.* This magnificent wax-like flower has become very popular wherever known. The large hairy buds open at daylight, the crimped petals slowly unfolding from over the huge bunch of bright yellow stamens (as large as a walnut), until they spread out from six to nine inches. The flowers last several days and the buds open well in water. The foliage is very effective and makes with the flower an artistic study. Grown from either seed or cuttings with difficulty, but a well established root will well repay the attention bestowed upon it.

ROSA.

R. CALIFORNICA *C. & S.* The wild rose of California, with its

large, single, lovely pink flowers, is as pretty as its more showy cultivated sisters, and equally admired by those who love the beauties of nature.

R. MINUTIFOLA *Engelm.* Parry's wild Mexican rose, with its small, finely incised foliage, and small pink or white flowers that closely nestled among the leaves, met with a warm welcome when discovered in Lower California in 1882, but has steadily repulsed the kind advances of the gardener and refuses to long survive away from its native sky.

SALVIA.

S. CARDUACEA *Benth.* The Thistle-leaved sage, known to the Mexicans as *Chia*, is densely white-woolly, with prickly foliage, and showy lavender colored flowers, an inch long, in many-storied head-like whorls on a stem a foot or two high. Cultivated in Europe since 1854.

S. COLUMBARIÆ *Benth.* Smaller and less conspicuous. Also known as *Chia*. The seeds of either species infused in water form a pleasant mucilaginous drink; used largely by the aborigines medicinally as a beverage.

SAMBUCUS.

S. GLAUCA *Nutt.* The California Elder forms a large bush or small tree and bears prolifically of its edible berries, prized by some for making pies or sauce.

SCHINUS.

S. MOLLE *L.* A graceful evergreen tree, a native of Mexico and South America, with glossy light green drooping leaves in twenty or more pairs of slender leaflets. The small white flowers in large panicles followed by lovely clusters of small red berries. The Pepper tree, as it is called, is very ornamental, and planted extensively for shade or avenues.

SEQUOIA.

A remarkable California genus, including the noted Redwood and Big-tree for which California is famous.

S. GIGANTEA *Decasne.* This giant of the California woods, is the largest and tallest tree known to exist on the American continent, attaining a height exceeding 300 feet, only exceeded in size by some of the gums of Australia.

S. SEMPERVIRENS *Endl.* The California Redwood is the most valuable timber tree on the Pacific Coast, attaining a height of 200 to 300 feet, with light but strong and durable wood, susceptible to a handsome finish, of a walnut brown color.

SIMMONDSIA.

S. CALIFORNICA *Nuttall.* A low diffusely branched shrub, forming oval bushes one to five (rarely ten or fifteen) feet high with pale,

rigid evergreen foliage, producing a pleasant edible nut. An ornamental shrub, growing in rich valleys or on arid hills from the Pacific Ocean to the borders of the Colorado Desert.

SISYRINCHIUM.

S. BELLUM *Watson*. The Blue-eyed grass bears umbel-like clusters of small rotate flowers of a delicate shade of mauve, with canary yellow centers. A profuse bloomer. Grows from a few inches to two feet high. A very pretty Iris-like plant.

TORREYA.

T. CALIFORNICA *Torr*. The Californian Nutmeg is a tree fifty to seventy-five feet high, with slender drooping branches often grown for ornamental planting.

UMBELLULARIA.

U. CALIFORNICA *Nutt*. The California Laurel is a handsome shrub or tree, ten to seventy feet high, with thick evergreen leaves, better known in cultivation as *Oreodaphne Californica*.

WASHINGTONIA.

W. FILIFERA *Wendland*. The Californian or Washington fan palm is too well-known to need description. It has become one of the most characteristic trees in Southern California and is a worthy memorial to the fame of the great Washington whose name it bears.

W. ROBUSTA *Wendland*. A robust variety (not specifically distinct?) said to be more easily grown. None of the characters which are said to distinguish these two palms appear to be constant.

YUCCA.

An American genus of a few species of handsome and conspicuous ornamental plants, well known in cultivation.

Y. BACCATA *Torrey*. The Wild Date, or Spanish Bayonet, is a stately plant, sometimes growing ten or more feet high, and producing a pyramidal panicle of fragrant waxy, pure white flowers, or often marked with purple. The large, sweet edible fruit is sometimes called wild bananas.

Y. BREVIFOLIA *Engelm*. The Tree Yucca of the Mojave Desert.

Y. WHIPPLEI *Torrey*. The flowers borne in a large panicle on a scape five to twelve feet high. The rigid serrulate leaves surround the base of the stem in a dense cluster. The flowers are waxy-white or purple tinged. The plant dies after blooming, while the preceding species live year after year.

ZAUSCHNERIA.

Z. CALIFORNICA *Presl*. The flowers of this plant are one to two inches long and three-quarters of an inch across, scarlet to scarlet

vermilion, very showy, forty to fifty flowers on a stem. Plant two to five feet high, growing in large masses on dry hillsides, but more luxuriant near water, where it becomes a very conspicuous flower. A half shrubby perennial, sometimes called wild fuchsia.

ZIZYPHUS.

Z. PARRYI *Torrey*. A spiny shrub, with small flowers, producing an edible fruit of a dull brownish cadmium yellow color, said to make excellent jelly like its near relative, the cultivated jujube.

ZYGADENUS.

Z. FREMONTI *Torrey*. A pretty plant, belonging to the lily family, with paniculate racemes of cream-colored flowers.

C. R. Orcutt.

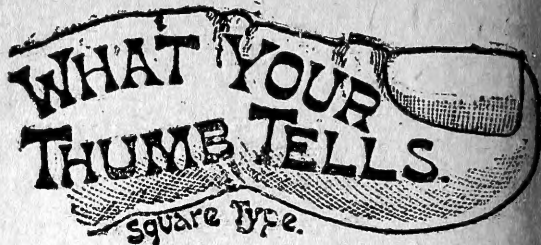
JOSEPH GILLOTT'S Steel Pens.

FOR ARTISTIC USE in fine drawings,
Nos. 659 (Crow-quill), 290 and 291.
FOR FINE WRITING,
No. 303, and Ladies', 170.
FOR BROAD WRITING,
Nos. 204, 389 and Stub Point, 849.
FOR GENERAL WRITING,
Nos. 404, 332, 390 and 604.

THE MOST PERFECT OF PENS.

Gold Medal Paris Exposition.

Joseph Gillott & Sons, 91 John St., New York.



The thumb is an unfailing index of character. The Square Type indicates a strong will, great energy and firmness. Closely allied is the Spatulated Type, the thumb of those of advanced ideas and business ability. Both of these types belong to the busy man or woman; and Demorest's Family Magazine prepares especially for such persons whole volume of new ideas, condensed in a small space, so that the record of the whole world's work for a month may be read in half an hour. The Conical Type indicates refinement, culture, and a love of music, poetry, and fiction. A person with this type of thumb will thoroughly enjoy the literary attractions of Demorest's Magazine. The Artistic Type indicates a love of beauty and art, which will find rare pleasure in the magnificent oil-picture of roses, 16 1/4 x 24 inches, reproduced from the original painting by De Longpré, the most celebrated of living flower-painters, which will be given to every subscriber to Demorest's Magazine for 1895. The cost of this superb work of art was \$350.00; and the reproduction cannot be distinguished from the original. Besides this, an exquisite oil or water-color picture is published in each number of the Magazine, and the articles are so profusely and superbly illustrated that the Magazine is, in reality, a portfolio of art works of the highest order. The Philosophic Type is the thumb of the thinker and inventor of ideas, who will be deeply interested in those developed monthly in Demorest's Magazine, in every one of its numerous departments, which cover the entire artistic and scientific field, chronicling every fact, fancy, and fad of the day. Demorest's is simply a perfect Family Magazine, and was long ago crowned Queen of the Monthlies. Send in your subscription; it will cost only \$2.00, and you will have a dozen Magazines in one. Address W. JENNINGS DEMOREST, Publisher, 15 East 14th Street, New York. Though not a fashion magazine, its perfect fashion pages, and its articles on family and domestic matters, will be of superlative interest to those possessing the Feminine Type of Thumb, which indicates in its small size, slenderness, soft nail, and smooth, rounded tip, those traits which belong essentially to the gentler sex, every one of whom should subscribe to Demorest's Magazine. If you are unacquainted with its merits, send for a specimen copy (free), and you will admit that seeing these THUMBS has put you in the way of saving money by finding in one Magazine everything to satisfy the literary wants of the whole family.

American Agriculturist—weekly.

To extend its usefulness and make it a practical necessity to every progressive farmer & his family, the American Agriculturist is now published weekly (instead of monthly), at only \$1 a year. All the leading features that have made the monthly so popular are retained, and many new features added, such as general and local market prices, crop reports in their season, condensed farm news, and letters among the farmers.

Its farm features, such as live stock, dairying, horticulture, poultry, market gardening, and other topics, written by practical and successful farmers, supplemented with illustrations by able artists, combine to make it invaluable to those who "farm it for a living."

The latest markets and commercial agriculture are leading features, in which the Agriculturist is not excelled.

Five Editions.—To better adapt the Agriculturist to the special interests of each section, 5 editions are issued, for 5 different sections of the country. They are known as the eastern, middle, central, western, southern. Each edition contains special local features characteristic of its section, perfectly adapting it to the wants of the farmers of the different states in that section. Thus each edition becomes to the farmers as much their home agricultural paper as though published at their own state capital.

The family features, short stories, latest fashions, fancy work, the good cook (by Mrs. Lincoln), talks with the doctor, puzzle contests, library corner and young folks' page, combine to make this department of as much value and interest as most of the special family papers.

Questions answered on law, medicine, veterinary and other topics free of charge.

The magazine form—each issue comes out in a neat cover, the number of pages varying from 28 to 36. An ideal farm and family weekly.

Free sample copy sent on request.
American Agriculturist, 78 Columbian Bldg.
San Francisco, Calif.

AN EXTRA DIVIDEND can be declared by every florist who uses the right sort of "warming" apparatus. Send for free sample copy of Heating and Ventilation, 146 World b'ld'g, N. Y.

PALM SEEDS

Eryther armata (Brahea glauca).....	per lb	\$ 2 00
edulis, Guadalupe Island palm.....	"	2 00
Washingtonia filifera.....	"	1 00
robusta.....	"	2 50
Sonora, a new Mexican palm.....	"	4 00
Phoenix canariensis.....	per 100 seeds:	50

Correspondence invited about other sorts.

