VOLUME VII. AUGUST, 1890. WHOLE No. 52.

THE

West ✦ American ✦ Scientist.

A popular monthly review and record for the Pacific Coast.

Official Organ of the San Diego Society of Natural History.

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C. R. ORCUTT, EDITOR AND PUBLISHER

ORCUTT, CALIF. AND No. 1134 FIFTH STREET, SAN DIEGO, CALI.

SAN DIEGO COLLEGE OF LETTERS, PACIFIC BEACH, CALIF.

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*MATTHEW COOKE.**

The scientist anticipates no great reward, other than the elevating thought, that by individual effort, he may draw forth some of the great secrets of nature, and shape them so as to be of use to his fellow man. The subject of this sketch was content with the consciousness that he labored for humanity, and that his efforts were appreciated by his associates.

Matthew Cooke was born at Bushnille, County Antrim, Ireland, February 16, 1829. He attended the common schools until fifteen years of age, always standing well in everything but English grammar. From early childhood he was a great reader, especially of works on natural history and the practical sciences. He emigrated to the United States in 1850, residing in New York city, where he was married, November 8, 1855, to Miss Anne McIntyre. He was engaged in mechanical pursuits until 1862, when he removed to California, where he has since resided, until his death at his home in Sacramento, on the 25th of August, 1887.

In California Mr. Cooke became engaged in manufacturing, devoting at the same time some attention to useful inventions. In 1875 he became interested in the manufacture of fruit boxes with Mrs. Mary E. Gregory, a wealthy lady of Sacramento, the firm

* The accompanying portrait is presented through the courtesy of the Sacramento *Record-Union.*

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being known as Cooke & Gregory, but later as Cooke & Sons. They soon built up the largest establishment of the kind on the Pacific coast. He soon realized that a decided improvement in the style of packages for shipping fruits was needed, and he invented new boxes and crates which at once met the wants of shippers.

About this time the Codlin moth(Carpocapsa pomonella) threatened to destroy the fruit-growing industry, and Mr Cooke, becoming interested in the subject, commenced a thorough investigation of the subject of insect pests, first ascertaining all that was then known, and then working night and day in orchard and vineyard to learn the life histories of the pests. These investigations he continued for three years in various parts of the State, accumulating a vast fund of entomological data, which he communicated to the press of the State, and which attracted great attention.

January 6, 1879, he issued an address to the fruit-growers of the State, in which he gave the results of his studies, and suggested remedies for existing evils. This he furnished free to all applicants until it became too great a tax on his purse, when he supplied the work at cost. In November of the same year he issued a larger pamphlet, giving the latest information on the insect pests then troublesome in the State, distributing 10,000 copies gratis. Mr. Cooke continued to agitate the subject through the press until the state legislature, in March, 1881, passed laws for the protection of horticulture and made appropriations for the investigation of insect pests. Under these laws Matthew Cooke was elected Chief Executive Horticultural and Health Officer of California, a position corresponding to the office of State Entomologist in other States.

In October, 1881, he issued a 'Treatise on Insects Injurious to Fruit and Fruit Trees in California,' of which 10,000 copies were distributed by the State. Professor Joly, an eminent French naturalist, gave this work his endorsement, and recommended the French government to embody it in a similar work for its people, because of its simplicity and clearness.

Mr. Cooke was re-elected in 1881 and continued in office until 1883, when the State Board of Horticulture was established and the former office was discontinued. He effected an organization of the fruit-growers in 1881, and established the Agassiz Institute of Sacramento, a society whose object was the diffusion of scientific knowledge among boys.

In 1883 he published his large work on 'Injurious Insects of the Orchard,' which is one of the most complete treatises on the subject that has ever appeared in any country. In this work he was greatly assisted by Mr. D. W. Coquillett, a talented young naturalist of Los Angeles, Cal., who wrote some of the chapters and edited the entire volume. Mr. Coquillett also assisted in preparing 'Insects Injurious and Beneficial,' which Mr. Cooke had published for the use of the schools of the State.

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In 1884 Mr. Cooke became horticultural and entomological editor on the *Record-Union.* Over three hundred and fifty communications have appeared in this paper, in the *Pacific Rural Press* and other journals, from his pen.

In 1880 the *Record-Union* remarked editorially: 'Mr. Cooke is neither an agriculturist nor a scientific man; yet he has developed into a self-made naturalist, and he has already been enabled to confer great and permanent benefit upon the fruit-growers of California. * * * It is by such unselfish and persistent inquiry and experiment that the most important discoveries are often made, and such self-taught naturalists as Mr. Cooke have frequently conferred more benefits upon their generation than more fully equipped scientists.'

Mr. Cooke enjoyed the confidence of leading entomologists, Comstock, Riley, Dwinelle and others, and of his official associates. He was a plain, genial and generous-hearted man, of heavy frame and features. He was possessed of much native wit and the most sociable spirit imaginable, but with enough firmness and determination to conquer success in the face of apparently insurmountable obstacles.

His name will be revered so long as the commonwealth of California exists. *F. W. Goding.*

CLIMATE OF PACIFIC BEACH AND ITS EFFECTS.

In the Chautauqua talks on the relations of weather to animal and plant life, Charles Barnard observes, that plants which in New England will not grow two feet high, will in California climb over the tops of houses, and give thousands of flowers, where, about Boston, they rarely produce two dozen in one summer. Now this difference in the growth of the plants in the two climates and its exuberance in California is not due as might be imagined to any such cause as that which produces the luxuriant vegetation of the tropics—great heat and moisture combined—but to an equable temperature with an atmospheric humidity that at times reaches as low a percentage as 5 per cent., and a temperature medium that is constantly low, with cool nights and the greatest possible amount of warm and bright sunshine whose heat is tempered by continuous cool breezes. Rose trees and grape vines have reached the greatest dimensions on the shores of the sea. This beneficent effect of the climate in stimulating a healthy growth is not restricted to the vegetable kingdom, as the animals of California attain to a larger growth much earlier than they do in the Eastern or the Western States. In the horse, for instance, a two-year-old attains to the size, strength and endurance of a three-year-old of the States east of the Rockies; the wonderful development, physique, endurance, and speed of the California bred horse were revelations totally unexpected to the habitues of the eastern racing courses, and the climatic results

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obtained in this line of physical development on the farms of Senator Stanford, and others, have fully established this gift of the climate. In man, the results are fully as wonderful; as nowhere does man reach that amount of physical perfection that is reached in this part of California. In no other clime does he reach the same old age or enjoy such an uninterrupted long existence of health and physical well-being with an absolute freedom from all diseases; nowhere else does childhood go through the diseases that beset it from the day of birth with such safety to life or to the subsequent health. The usual diseases of childhood here lose their virulence and fatality; diseases like scarlatina are never followed by those sequelae that are elsewhere so fatal or crippling to the future health. There being here no seasons, there is likewise an absence of all diseases that are peculiar to season or to seasonal changes; neither the annoying abdominal affections of the summer which leave the foundation for future organic disease of the abdominal organs, or the acute or insidious chest diseases, which elsewhere pave the way for phthisis are to be met with in Southern California.

One great advantage that the youth enjoys with benefit to the physique is the free and constant ventilation which is here possible; so that while at school—be it in dormitory, class-room or recreation hall—the fresh air is always accessible. There are never any high winds, nor is there ever what might be called a perfect calm, so that the air is always in motion, and there is never such a thing as a still air. There are never present those dark gloomy days so trying to the eyes and spirits of students. The constant possibility to out-door exercise is something of great importance, as it can be said that there are hardly six days in the year on which the sun does not shine for some part of the day. The character of the soil, by its hardness makes drainage a thing of the greatest facility, so that soon after the hardest of showers there is no mud, and even rubbers can well be dispensed with.

The lack of seasons and the continuous varieties of fruits and vegetables that the climate here makes possible, prevents any of those gastric or intestinal diseases, that are so common in the East. Fresh fish, vegetables, fruits and the best of meats are always in the market, and the youths are in no danger from any tuberculous infection from either meat or milk, as during an eighteen years' residence I have neither heard of nor seen a tuberculous cow or animal.

The regularity of the food supplies, the proper admixture of the quality, and the evenness of the seasons never requiring any change as to the nature of the diet, all tend to a moderation and temperance both in the matter of food and drink that tells wonderfully on the physique and promotes perfect health, and in the end, the most vigorous of old age. The researches of Bowditch, of the Massachusetts State Board of Health, into the question of the use of intoxicants—an enquiry so extended that it covered the whole of the civilized globe—fully established the fact that the

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habit was something that was fully controlled by climatic causes, as it was found on tabulating the results, that the habit followed certain isothermal lines with as much regularity as certain species of the vegetable kingdom follow the isotherms or are influenced by the snow line. It is an established fact that for sobriety no lands excel the mild and even temperatured shores of the Mediterranean, where in the classic language of Bell, 'the populace of the cities and of the country are to be seen quaffing their lemonade or simply acidulated water with a gusto at the time, and an hilarity of expression afterwards that to the northern races is something simply inconceivable.' In this regard the shores of Southern California are justly entitled to the name of being the Mediterranean shores of the United States, this being the term that suggested itself to Charles Dudley Warner, who was astonished at the close resemblance that existed between the two seacoasts, of Italy and California, as to climate, production and general tendencies. This purely climatic feature should not be overlooked in choosing an educational locality for the forming man, as it is the constitutional habits and needs that are formed in youth, that afterwards follow man through life to stamp his actions and career. In this favored climate there are no diseases to ward off, nor is there any inclemency of the weather to withstand that ever suggests the use of spirits in any sense; neither is the system ever enervated or the mind depressed by any atmospheric cause—so as to even insinuate a suggestion of stimulants. I feel that in consideration of the proverbial dangers that beset the young of the land in this regard, that this climatic feature is one, which parents who have their children to educate, cannot dwell upon too strongly; and I feel equally assured, that when this feature is fully recognized, Southern California will become the favored educational Elysium of the land. From the above tendency to temperance in the physical requirements of the system, in the matter of foods and the possibility of constant out-of-door recreation, it follows that the blood is never charged with those products of over-feeding that tend to plethoric diseases, or are the intestines filled with undigested materials —two conditions that tend to develop a beefy state of the mind and of the faculties generally. The general tendency of this climate on the mind is analogous to that of the climate of that Grecian Archipelago, which produced the wonders of that Greek mind that furnish the foundation for our present systems of medicine, poetry, drama, arts and sciences. It was just under such skies and with such climatic conditions that astronomy and mathematics, medicine and philosophy first saw the light of day in ancient Egypt; it was under a like condition of climate that the Mosaic creed, the precursor of Christianity, was developed—all tending to prove that this is the climate, wherein not only the body reaches its greatest perfections, but that it is as well the favored clime of the development of the mind. If the climate develops the physique to its best, and the qualities of the mind

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to its highest perfections, it must not be imagined that it does so at the expense of the loss of animal spirits or of physical courage; as the exploits of ancient Sparta and of Alexander and his Greeks, or of the Saracenic hosts and of the Spanish cavaliers on the causeways of Mexico, are sufficient witnessess to the physical endurance and courage of races nurtured in such a clime.

One great promoter of health and longevity that exists in this climate, and whose importance is generally overlooked. is the relation that it bears to clothing; the same kind of clothing is here worn at all seasons alike, neither winter nor summer clothing are ever required, but flannels and clothing of woolen-fabrics are worn for the whole year throughout. so that the dangers incurred elsewhere from improper dressing, as to seasons, are here entirely avoided and escaped.

The following meteorological summaries will convey an intelligent idea of the general climatic conditions. In relation to the data as to temperature it must be borne in mind, that the changes are gradual, and one might say almost imperceptible, and the changes that take place in the twenty-four hours do so with such regularity as to their degree, and as to the time of their occurrence, that the mean may here be taken as the actual regularly existing temperature at the hours given. The minima and maxima both follow this rule as to the time of their occurrence—the minimum being reached after midnight and the maximum just prior to the advent of the sea-breeze:

MEAN OF MONTHLY TEMPERATURE AT SAN DIEGO, CAL., 1887.

	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
Taken from 16 years' average mean for each month.	53.5	54.7	56.0	58.2	60.2	64.6	67.1	69.0	66.7	62.9	58.1	56.0
Mean at 7 A.M. for '87 for each month.	47.5	47.1	51.7	54.5	57.6	60.5	63.4	63.5	62.6	59.3	53.8	48.9
Mean at 3 P.M. for '87 for each month.	60.9	57.7	62.4	63.3	66.3	68.5	69.6	69.6	69.5	69.6	64.4	60.5
Mean at 10P.M for '87 for each month.	54.6	53.9	57.5	59.1	62.3	64.9	65.5	65.4	65.0	64 6	59.3	54 5
Maximum for month —1887—	74	76	82	80	79	78	79	77	79	85	82	74
Minimum for month —1887—	38	38	44	44	48	54	60	54	58	50	44	36
Mean relative humidity for 1887.	70	75	79	76	74	80	81	80	84	72	77	71

It must also be observed that besides the main difference taking place at night that the range between the mean of July at 3 P. M., and of January at the same hour is only 9°. The maximum temperature recorded for the two months by the self-registering thermometer being 74° for January and 79° for July, a difference of 5°, this being in day-time; while the minimum recorded at night was for January 38°, and 60° for July—the lowest tempera-

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ture being coincident with the sea-breeze being replaced by the land-breeze during the first hours of the twenty-four, and is influenced by the presence of snow on the mountains. The fifth line, in which the maximum temperature registered by the month is given, explains why there is no cholera infantum, or hepatic, and intestinal diseases on the coast. With these maxima records it should be added that these temperatures are only reached momentarily, and that only during the very warmest days, so that there is not a protracted heat to undergo at any time; nor is the change or variation sudden—a warm day being never followed by an extra cold night—which, being cool enough to allow of perfect rest, is not so cold as to produce any disturbances. All transitions in change of temperature are slow and gradual, and if the table for the 3 P. M. temperature is observed for July, August, September and October, it will be observed that for four months the days have hardly a shade of difference at that hour.

The following temperatures of the sea-water at Pacific Beach, tend to exhibit one of the factors, and at the same time the wonderful equability of its climate, and the comparisons with that of the sea-water at other places will be of interest:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Pacific Beach, California	60	61	61	61	61	62	64	65	66	63	61	60
Santa Cruz, California	52	58	52	57	57	58	60	60	60	56	55	53
Newport, Rhode Island	32	32	34	43	52	62	66	70	65	56	44	36
New York, New York	34	34	38		59	67	70		69	52	47	39
Charleston, South Carolina	54	52	60	67	75	79	85	84	79	72	64	54

Sunstroke, heat diseases or accident, and hydrophobia are here unknown, and the highest temperature of the foot hills, or even of the desert—the latter reaching at times the enormous or excessive heat of 140° F, is remarkably well borne, as workmen in the New Liverpool salt works, in the sink of the Colorado Desert, 300 feet below sea-level, in this county, labor in its summer heat with less annoyance or discomfort than that experienced by ordinary harvest hands in the fields of the Mississippi Valley. Here, the heat from some reason, has neither the enervating or the morbific effect of the same element in the East, as a degree of temperature that in New York would be prostrating and followed by accident, and a great mortality among the young and the aged—will on this coast hardly cause a feeling of discomfort.

No land is as free from barometrical perturbations or from the effects of storms as this—there are no local storms or causes that produce them—the rain or storm centre which originates our rain storms being at the north of the Columbia or of Puget Sound, causes no barometrical or atmospheric disturbance at this great distance, Southern California being simply on the outer edge of the storm causes.

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In the northwesternmost corner of the United States coast on Puget Sound at Neah Bay, the average rainfall is 111 inches, the maximum reaching 132 inches, the record for one single day being 6.90 inches. In January of 1880, the fall was 25.70; in November of 1865, 27.60; and in December of 1863 ,27.30 inches for the month How gradually the rain diminishes in quantity may be better described by the mean annual fall at coast stations from Neah Bay on the north to San Diego on the south: Neah Bay 111 inches, Astoria 77.12, Port Orford 70.50, Humboldt Light House 33.02, Point Arenas 30.53, Point Reyes 28.09, Santa Cruz 25:24, Monterey 14 42, Point Conception 12.21, San Diego 11.01. This shows the relation that Southern California bears to the storm centre.

RAINFALL AND RAINY SEASONS.

The winter is in California the season during which the rain falls, but it is not necessarily a wet season. During seventeen years observations the U. S. Signal Service gives four seasons with less than seven inches of rain—these are the dry winters; six seasons with over ten and less than seventeen inches which are good seasons; six with over seven and less than ten inches of rain, constituting a medium season; and one season nearly twenty-six inches, being an extremely wet season. These observations were at San Diego.

The following table gives the mean for each month per annum for the seventeen years, at San Diego on the coast:

AT SAN DIEGO ON THE COAST—MONTHLY INCHES OF RAIN.

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Tot'l.
Av'g per month for 16 years.	0.03	0.19	0.04	0.44	0.73	2.09	2.05	2.33	1.55	0.93	0.41	0.06	10.95
1876-77..	.03	.06	.03	.08	04	0.15	1.05	0.18	1.44	0.26	.43	.00	3.75
1883-84..	.00	.00	.00	2.01	0.20	1.82	1.34	9.05	6.23	2.84	2.17	.31	25.97
1888-89..	.01	.00	.04	0.26	1.83	2.84	1.72	1.80	2.20	.19	0.03	.10	11.02

There are never any high winds in this locality, the U. S. Signal Service station having returned all its cautionary signals to the department some eight years ago—as an occasion to use them had never occurred—the average velocity of the wind is about seven miles per hour.

The atmosphere is one of remarkable clearness, its diaphaneity being such, that often a small house or any other like article is clearly distinguishable at the distance of sixteen miles, the Point Loma light is plainly visible at night from the mountains at a distance of fifty or more miles.

P. C. Remondino.

Another biographical notice of the late Dr. C. C. Parry has appeared, by Dr. Lorenzo G. Yates.

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THE COLORATION OF FISHES.

The coloration of fishes has never received the attention it merits. There is no other group of vertebrates in which there is such a similarity of color as in widely separated fishes inhabiting similar localities, nor are there any other vertebrates changing color in such a remarkable manner with the different locality. There are certain tide pools about San Diego which are lined with various species of coralline sea-weed. These pools are inhabited by Clinus evides J. & G., Oligocottus analis, Grd., and Cremnobates integripinnis R. Smith, which all resemble the mottled sea-weed to such an extent that they can not be distinguished except when moving. Oligocottus analis is also found in pools with green sea-weeds only, in which case the fish again assumes the exact color of the sea-weed. Clinus evides also assumes various markings in different surroundings. One of the rock cods, Sebastichthys vexillaris J. & G., varies from flesh color to the brightest scarlet and olive color. A local fisherman explains the color of this fish by the fact discovered by him that fishes in shallow water are likely to be blacker, those in deep water lighter, and those on hard, rocky bottom of moderate depth bright red. One other fish, Scorpaena guttata, deserves special mention. It is found both in the bay and outside, on the rock-cod banks. Those found in the bay are dull colored, chiefly brown, variously mottled, while those from the outside have the brown replaced by the brightest scarlet. The color is so strikingly different that I have repeatedly thought the two fishes to be distinct. Then, there is the variation of color from the young to the adult, as in the case of Pomacentrus rubicundus Grd., which is bright blue marked with orange when young, and uniform flame scarlet in the adult stage. It would certainly amply repay some one to study in detail the color variation of the fishes of some limited region.

C. H. Eigenmann.

CONTRIBUTIONS TOWARD A LIST OF THE FAUNA AND FLORA OF WET MOUNTAIN VALLEY, COLORADO.—VI.

(Compiled for the Colorado Biological Association.)

VIII. COLEOPTERA.

The beetles of the valley are exceedingly numerous, and, thanks to Dr. John Hamilton, Dr. Geo. H. Horn, Dr. C. V. Riley and Mr. L. O. Howard, we have obtained identifications of most of the species.

1. Creophilus villosus Grav.
2. Philonthus furvus.
3. Philonthus æneus (Rossi) Nordm. West Cliff and near Swift Creek.

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4. Philonthus puberulus Horn. West Cliff and near Ula.
5. Philonthus ferreipennis. Male and female specimens of what are probably this species were found at West Cliff, 1889.
6. Xantholinus obscurus Er.
7. Xantholinus emmesus Grav.
8. Pæderus littorarius Grav. This pretty beetle is very common, being gregarious under logs, etc.
9. Stenus colon Say. An example of stenus is doubtfully referred to this species.
10. Quedius prostrans.
11. Tachyporus chrysomelinus L. West Cliff and near Ula.
12. Heterothops fumigatus Lec. West Cliff.
13. Falagria dissecta Erichs. West Cliff.
14. Oxytelus nitidulus Grav.
15. Oxytelus pennsylvanicus Erichs. West Cliff.
16. Platystethus americanus Erichs. West Cliff.
17. Laccophilus decipiens Lec West Cliff.
18. Gyrinus n. sp.? West Cliff. A specimen is in the collection of Dr. Hamilton.
19. Hydrobius subcupreus Say. West Cliff.
20. Agabus morosus Lec. West Cliff.
21. Agabus lecontei.
22. Agabus parallelus Lec.
23. Agabus intersectus Lec.
24. Agabus Obliteratus Lec. Near Ula.
25. Rhantus binotatus.
26. Philhydrus diffusus. West Cliff.
27. Haliplus ruficollis DeG. West Cliff.
28. Bidessus affinis.
29. Laccobius agilis Randall.

Future installments of Coleoptera will be given at intervals, until the list is completed. *T. D. A. Cockerell.*

LAND MAMMALS OF SAN DIEGO COUNTY, CALIFORNIA.

1. CARIACUS MACROTIS CALIFORNICUS. California Mule Deer. Generally, but sparingly distributed, in nearly all brush and timbered localities. Not as common as formerly, but not likely to be exterminated for a long time, as plenty of favorable cover is found in the rough foothills and mountains. The Black-tail Deer, C. columbianus, may occur in limited numbers, but I have identified none I have no record of the occurrence of the Elk, Cervus canadensis, in this county.

2. ANTILOCAPRA AMERICANA. American Antelope. Nearly exterminated. A few yet live along the borders of the Colorado Desert. In August, 1877, I saw a band of a dozen or more young of the year near the site of the present town of Perris. At that time Antelope were not rare in that locality, but I believe none are left there now.

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3. OVIS MONTANA. Bighorn. 'Mountain Sheep.' Rare now. A few live in the rough foothills on the borders of the Colorado Desert and on the low, isolated mountains in the Desert. The Indians tell me that the Bighorns eat cactuses as a substitute for water in the dry season.

4. TAMIAS LATERALIS. Say's Chipmunk. Rather common in the upper pine region at from 6,000 to 10,000 ft. altitude in the San Bernardino Mountains. and probably on Mt. San Jacinto at the same elevation.

5. TAMIAS ASIATICUS MERRIAMI. Merriam's Chipmunk. Lower part of the pine belt. I have taken specimens near Santa Ysabel as low as 2,500 ft. altitude.

6. TAMIAS ASIATICUS SPECIOSA (Merriam). I have not seen the description of this new race, but Dr Allen identifies certain of my specimens as belonging to it. I may approximate its range as the upper pine region, though I have obtained specimens on the Cuyamaca Mountains as low as 5,000 ft. altitude.

7. TAMIAS LEUCURUS. White-tailed Chipmunk. Colorado Desert and foothills of the eastern side of the mountains.

8. SPERMOPHILUS GRAMMURUS BEECHEYI. California Ground Squirrel. Abundant everywhere.

9. SPERMOPHILUS TERETICAUDUS. Round-tailed Squirrel. Colorado Desert. The Mojave Ground Squirrel, S. Mojavensis may occur in the north eastern part of the county.

10. SCIURUS FOSSOR. California Gray Squirrel. Common in the pine region. This species is at least as large as any other American squirrel.

11. SCIUROPTERUS VOLUCELLA. Flying Squirrel. I have reliable information of the occurrence of this species in the pine region, but it must be quite rare.

12. CASTOR FIBER. Beaver. Said to be not uncommon in the Colorado River.

13. FIBER ZIBETHICUS PALLIDUS. Pale Muskrat. Dr. Mearns states that this race occurs in the Colorado and Gila rivers.

14. ARVICOLA RIPARIUS, var.? Meadow Mouse. Abundant in moist localities where there is a heavy growth of grass.

15. HESPEROMYS LEUCOPUS EREMICUS.

16. H. LEUCOPUS SONORENSIS.

17. H. LEUCOPUS ANTHONYI.

18. H. LEUCOPUS DESERTICOLUS.

19. H. LEUCOPUS, var.? The White-footed or Deer Mice are abundant and generally distributed. The standing of the several varieties is in dispute, and there is at least one undescribed variety here (large, tail longer than head and body together). The introduced House Mouse, Mus musculus, is replacing the Deer Mice in the towns and thicker settlements.

20. HESPEROMYS CALIFORNICUS. Parasitic Mouse. I have taken this species just north of the county line, and have no doubt that it occurs in this county. I know no reason why it should be called a parasite.

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21. OCHETODON LONGICAUDA. Long-tailed Harvest Mouse. Found in the same localities as the Meadow Mouse. Builds a spherical nest in grass, sometimes a foot or more from the ground.

22. NEOTOMA FLORIDANA. Wood Rat. Generally distributed in the northwest part of the county.

23. NEOTOMA FLORIDANA MEXICANA. Mexican Wood Rat, Colorado Desert.

24. NEOTOMA FUSCIPES. Dusk-footed Wood Rat. Common in the southern part of the county. These Wood Rats pile large quantities of sticks in brush, and even in trees that slope a little so that they can climb them. Their burrows are under these 'nests.' These Wood Rats are sometimes a nuisance about camp as they will carry off anything they can lift.

25. THOMOMYS TALPOIDES BULBIVORUS. Pacific Pocket Gopher.

26. T. TALPOIDES UMBRINUS. Southern Pocket Gopher. Abundant everywhere. These two varieties run together here, so that is difficult to assign an individual to either variety.

27. T. PERPALLIDUS. Pale Pocket Gopher. Mojave and Colorado Deserts. Common in few places.

28. PEROGNATHUS LONGIMEMBRIS. Little Pocket Mouse. Irregularly distributed. At times abundant in the larger valleys.

29. PEROGNATHUS FALLAX. Gray Pocket Mouse. Mountain region. Not common. I have a pet of this species that has drank no water in the six months or more it has been in my possession. It will not touch it, and does not seem to know what water is. What is more inexplicable to me, is that it will not eat green food when offered it. Mr. W. G. Wright has one of the next species which is in fine condition, that has had no drink and no food save dry grain for over two years Both these animals are kept in boxes, where they possibly cannot get water from any source except in the food given them. Many other species of animals do not drink for long periods, but such animals eat moist food.

30. PEROGNATHUS PENCILLATUS. Tuft-tailed Pocket Mouse. Common in a few places in the Colorado Desert. Probably two more of the genus occur on the Colorado River.

31. DIPODOMYS PHILLIPSI. Phillips' Pocket Rat. Colorado Desert. Not common.

32. DIPODOMYS AGILIS. Pocket Rat. 'Kangaroo Rat.' Abundant in the coast region.

33. DIPODOMYS DESERTI. Desert Pocket Rat. Mojave and Colorado deserts.

34. LEPUS SYLVATICUS AUDUBONI. Audubon's Hare. 'Cottontail.' Abundant.

35. LEPUS TROWBRIDGEI. Trowbridge's Hare. 'Bush Rabbit.' Rather common in the mountains in thick brush.

36. LEPUS CALIFORNICUS. California Hare. 'Jack Rabbit.' Common in open ground. (The only true Rabbit we have is the domesticated English Rabbit.)

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UNIVERSITY OF CALIFORNIA

37. ANTHROZOUS PALLIDUS.(?) Pale Bat. Saw one at Santa Ysabel that I supposed to be of this species.

38. VESPERUGO HESPERUS. Western Bat. Abundant,

39. VESPERTILIO NITIDUS. California Bat. Not common.

40. VESPERTILIO EVOTIS. Long-eared Bat. Not common.

41. VESPERTILIO CAROLI. Brown Bat. Abundant everywhere.

42. VESPERTILIO SUBULATUS. Little Brown Bat. Not common.

43. NYCTINIMOUS FEMOROSACUS. Free-tailed Bat. Colorado Desert.

44. NYCTINIMOUS MOJAVENSIS. Mojave Bat. Mojave and Colorado deserts.

45. MACROTIS WATERHOUSEI. Leaf-nosed Bat. Rare.

46. ATALAPHA CINEREUS. Hoary Bat. Not common.

47. ATALAPHA NOVEBORECENSIS. Red Bat. Rare.

48. SOREX sp.(?) Shrew. I have three specimens of Shrews taken here at Santa Ysabel that I cannot identify specifically.

49. SCAPANUS TOWNSENDI. Oregon Mole. Common in many places in damp land, especially in the mountains.

50. URSUS AMERICANUS CINNAMONEUS. Cinnamon Bear.

51. URSUS HORRIBILIS. Grizzly Bear. I belive bears are entirely extinct in this county now. Formerly both of the above species were common in the mountains.

52. PROCYON LOTOR. Raccoon. Common in timber along watercourses.

53. BASSARIS ASTUTA. 'Civit Cat.' I know of one having been killed in the San Bernardino Mountains, near the county line, about five years ago.

54. MEPHITIS MEPHITICA. Skunk. Common and generally distributed.

55. SPILOGALE PUTORIUS. Little Striped Skunk. More abundant than the preceding.

56. TAXIDEA AMERICANA. American Badger. Rather common, but rarely seen.

57. PUTORIUS BRASILIENSIS FRENATUS. Bridled Weasel. Rather common. Kills many gophers and squirrels, and should be protected.

58. UROCYON VIRGINIANUS. Gray Fox. Common in the mountains.

59. VULPES MACROTIS. Big-eared Fox. Colorado Desert.

60. CANIS LATRANS. Coyote. Common.

61. FELIS CONCOLOR. Panther. Puma. 'California Lion.' Not common.

62. LYNX RUFUS. Rather common in all timber.

I give above a list of all land mammals known to me to occur in this county, with a few that I have good reason to believe are, or have been, found here. I would be glad to receive information of any additional species positively known to occur in the county. *F. Stephens.*

SANTA YSABEL, Cal., June 18, 1890.

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BOTANY AND AGRICULTURAL SCIENCE.

ABOUT HERBARIUMS.—As the present number is likely to be read by a great number of young students of botany, a few directions about forming an herbarium may be useful.

Each specimen of a plant should be made as complete in itself as possible, showing the root, stem, leaf, flower and fruit. When too large the root has to be dispensed with, but never when possible to preserve. Grasses should always have the root, and be preserved entire by so folding as to fit your paper. Where both flower and fruit cannot be had in one specimen, they should be obtained separately, first a flowering specimen and later a fruiting specimen, from the same tree or bush, if practicable, at least from the same locality. Where the fruit is too large for the herbarium, like nuts and acorns, they may be kept in a separate cabinet, like shells and minerals. Such a collection I consider as necessary to an herbarium as the dried plants themselves, and should also contain specimens showing the wood and bark of trees, shrubs or woody plants, together with large, tuberous roots, bulbs and numerous other things, which are rarely properly represented in herbariums. Usually a quarter section five inches in length is the most convenient and useful size for wood specimens, but I generally aim to secure a full section several feet long, so as to have material to exchange with others.

Do not be afraid of too many specimens. It is always best to get at least five—not less than three—herbarium specimens of each plant, so that in case you cannot identify the plant yourself you can send one to a botanist for naming. This is always a good plan when in doubt, and few botanists will object to naming a plant for a nice specimen—the smallest return you can make for his courtesy.

It is very important to label your plants properly. As soon as you get a plant put it to press (do not place in a tin case, nor wait until you get home). Write on the sheet of paper in which you place it the date collected, the locality, as exactly as practicable, the character of the ground where it is found—whether in a cultivated field, on a rocky hillside, in clefts, in a swamp, or elsewhere. It is well to note the color of the flower, the size of the largest plant of the kind seen, and the average size; note whether useful or a nuisance, give its common name, if you know or can learn of any belonging to it, and any other facts you may be able to observe in the fields.

Do not leave any point to memory. The color will fade or change its hue; when you return home you may not be able to recall every fact relating to each of your plants—the exact spot where found, or the character of the ground—unless you have noted it down.

It is well for each collector to get a blank book and make a catalogue of his herbarium, preserving therein every note he has made on the plants, and numbering each specimen or set of spec-

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mens of each plant Never duplicate a number. Let each number apply only to specimens of one plant collected together on a certain date—not to specimens of what may appear to be the same plant collected in different localities at different times.

Collect freely. Many plants look alike, but are different. Do not fail to collect everything—weeds and all. *C. R. Orcutt.*

EDITORIAL.

We present our readers this month with a new feature—an educational supplement, devoted to literary and educational matters. This supplement is practically the successor to *The Sphynx*, ately published in the interest of the students of the San Diego College of Letters, and is virtually intended to take the place of the usual college journal issued by an educational institution.

THE WEST AMERICAN SCIENTIST becomes, in a measure, the representative of the scientific department of the San Diego College of Letters, which, we are pleased to say, has recently been placed on a more permanent financial basis. It is, however, more especially the representative of the WEST AMERICAN MUSEUM OF NATURE AND ART, an independent institution under the editor's personal control. This MUSEUM comprising the editor's miscellaneous collections, has its main location in San Diego, but the display collections are being arranged in the Stough Hall at the San Diego College of Letters, Pacific Beach, California, where they will eventually be open to the public and available to the students.

These miscellaneous collections form doubtless the most complete representation of the fauna and flora, the geology and the mineral wealth of Southern and Lower California that is in existence. It also contains large series of plants, shells, minerals, archæological relics, birds and other objects from other parts of North and from South America, from Europe, Asia, Africa and Oceanica. As an educational factor, a public museum ranks high. As a ready means for students to identify their plants, shells and insects or other objects, its utility is unquestionable. To those who are unable to personally consult it, the editor is always ready to identify material to the best of his ability, or to refer to a specialist in case an object is unknown to him.

PUBLICATIONS RECEIVED.

*Only publications not elsewhere noticed are here acknowledged.

Instruction in Drawing in Primary and Intermediate Schools in Europe and America. By Dr. Arnold Dodel, with an introduction by Louis Prang. The Prang Educational Co., Boston.

Agricultural Experiment Station; University of Wisconsin. Annual Reports ii., iii., iv., v., vi. Bulletins 3, 5, 8, 11, 12, 14 to 21 inclusive, and 23.

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Demorest's Family Magazine, xxvi. 6 (April, 1890), and 8 (June, 1890). This is one of the best magazines which reaches our hands. The monthly summary of the world's progress is always worth perusal, while in text and illustration it maintains a high standard of excellence.

The Century Magazine, xl 3 (July, 1890) Edward Atkinson opens in this number the long-expected discussion of the 'Single Tax,' followed by Henry George. 'A Taste of Kentucky Bluegrass' is an out-door paper by John Burroughs. 'A Yankee in Andersonville' gives a thrilling account of prison life.

St. Nicholas, xvii. 9 (July, 1890). H. W. Henshaw contributes to this number an instructive and finely-illustrated article on 'Hawks and Their Uses.' 'Six Years in the Wilds of Central Africa,' by E. J. Glave, one of Stanley's pioneer officers, is an entertaining series, of which the fourth installment is given. "Crowded Out o 'Crofield" a serial now appearing in this magazine, by William O. Stoddard, is one of the most delightful stories that we have seen for a long time. Both old and young cannot fail to enjoy it.

NOTES AND NEWS.

A handsome brittania medal has been issued by M. H. de Young, as a souvenir of the twenty-fifth anniversary of the *San Francisco Chronicle.*

F. V. Szczcepanski, of St. Petersburg, Russia, is soon to issue an annual directory of technical literature,

Mrs. Laura A. Spencer Russell, the widow of John Russell, died at the home of her son, at Bluffdale, Ill., January 30, 1890. She was born at Vergennes, Vermont, in 1797, married October 25, 1818, and was a resident of Bluffdale, Ill., sixty-two years. What Mrs. L. A. S. Russell was to that locality in pioneer days can not be expressed in a few words. She was a Christian and everyway worthy of the name. Her husband was the author of the "Venemous Worm," an essay that has probably exerted as great an influence for temperance as did Mrs. Stowe's great work for anti-slavery.

The new piano invented by Dr. Eisemann of Berlin can, by the aid of electro-magnetism, sustain, increase or diminish sound; another and valuable novelty in its construction is that by moving the electro-magnets the timbre of the tone is changed, as, for example, from that of a violoncello to piccolo.

The noiseless powder is not a new invention. In the third volume of Benvenuto Cellini's autobiography the author relates that when suffering from fever in Ferrara he cured himself by eating peacocks, and that he procured himself the birds surreptitiously by shooting them with powder 'invented by him, that made no noise.'

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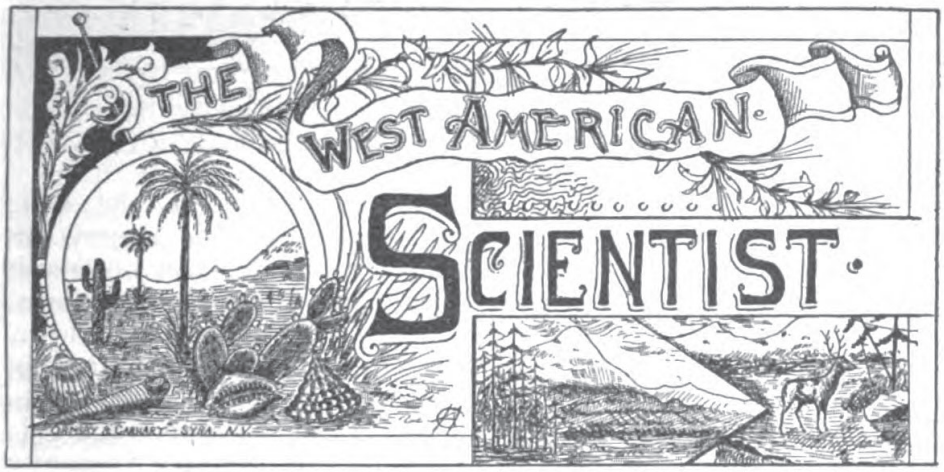

LITERARY AND EDUCATIONAL SUPPLEMENT, No. 1.

(*Edited by the Students and Faculty of the San Diego College of Letters.*)

Poets' Corner.

LIFE.

Creation's morn beheld a new world swung
Out into space. The mighty deed was done;
But stagnant lay the rivers in the sun,
And leafless stood the trees, like etchings hung
Against a pulseless sky. No life was there,
In man's stark, rigid limbs, or anywhere.

Then bent Jehovah's awful face, and through
His parted lips the throbbing life-stream ran:
Filling all space with vapors faintly blue;
Pulsating nature's heart and heart of man.
Then rivers leapt their course along, and birds
Thrilled all creation's morn with sweetest words,
And man sucked in eternity. God's breath,
Soul of himself, can never suffer death.

Rose Hartwick Thorpe.

A POEM POSTPONED.

I want to tell you about my kitten—
The prettiest kitten that ever purred;
But I've looked my speller through and through,
And I can't discover a single word
That rhymes with kitten,
Excepting mitten,—
And that is old and too absurd,
So the only thing for me to do
Is just to send you what I've written,
And wait till she grows to be a cat,—
There are ever so many to rhyme with that!

—Helen C. Walden, in St. Nicholas.

DAWNINGS.

A cotton-tail went for recreation,
To take a walk in the early morn—
At a hobby-horse gait, with a variation—
And to breakfast on the peas that grew with the corn,
That stood in regular order
In the patch on the campus border.

The mocking bird's medley, that all night long,
Like the moonlight's flood had wasted been,
Was succeeded by the lark's first matin song;
While chanticleer's harsh, ungracious din,
Woke sleeper from park to beach,
With his ceaseless, impudent screech.

And a road-runner came bobbing along
With his erratic, unmanageable, see-saw tail,
As the sun looked up over the peaks that throng
The back country north of San Miguel.
And the world's vacation of night,
Became the opening session of light.

Eulalie Powers Woods.

Soyez comme l'oiseau
Sur un arbre perche,
Qui sent trembler la branche
Mais qui chant encore.
Sachant qu'il a des ailes!

—Victor Hugo.

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Our Story Teller.

THE CHILD OF THE ALAMO.

One glorious night in February, 1836, the little settlement of San Antonio was strangely disturbed, at a time when it should have been wrapped in its usual quiet slumber. It was midnight, and all lovers of the history of the "Lone Star State," as Texas is often called, will remember the evil cause of this disturbance. A messenger had ridden, an hour before, into the plaza, and straight to the little fort of which Colonel Travis was commander, with the news that Santa Ana, the hated and dreaded leader of the Mexican troops, was marching down upon them, and was now only a few miles distant.

These plazas or squares, of which there are several, are made in a peculiar manner. The settlers coming to the new country, and finding that they were fated to be almost constantly at war with their neighbors, the Mexicans, made the walls of their homes serve as fortifcations, by building them around and facing a large square, which usually had a fort on one side where they could gather for additional safety. The streets leading from these plazas never ran straight out, but were all placed at angles. The object in this was that no cannon could be placed in a position to sweep the plaza.

Fort Alamo was the name of the post of which Travis, Bowie and David Crocket, men all celebrated in history, were the brave commanders.

After the messenger had held a short conference with Travis, the shrill blast of the trumpet and the solemn rolling of the drum, called: "Danger! Danger!" to the people sleeping in their homes. Then might be heard the sounds of preparation for battle; might be seen by the starlight, dusky forms hurrying to the Alamo from all directions, seeking safety within its dark walls. At last all was ready, and then came the waiting in suspense for the advancing of Santa Ana and his men; of listening with strained ears for the tramping of cavalry over the plain. All was silent.

Suddenly one of the watchers called out that the enemy was at hand and might now be seen in the faint light of the early dawn. A soldier happening to look down into the deserted plaza, from one of the iron-barred windows, saw two dark figures running toward the old fort. One appeared to be a woman, while the other, a man, seemed to carry something white in his arms. The soldier was waiting at the door when they came up, and immediately, the pass word having been given, admitted them. The great doors swung to, not a moment too soon, for at that instant the enemy galloped into the plaza.

When Jack Brown, the soldier who had opened the doors for them, turned to see who the new comers might be, he saw an old black "Mammy" vigorously fanning herself with her huge apron, and ejaculating at regular intervals, the words: "O, Lawsy!" The man was nowhere to be seen, he had probably gone from the room into the main building, for he was one of the soldiers.

Clinging to "Mammy's" skirt, and looking up at him, Jack saw a beautiful child, little Lillian, as she was called by every one who knew her. A fair baby of three summers, or rather springtimes, for she reminded one of the spring with her golden curls like a halo about her sweet little face.

For ten days and nights the battle raged. Often during the starlight nights of that terrible siege, "Mammy" would take her little charge to one of the narrow windows for a breath of fresh air. Little Lillian would sit on the deep sill and clap her bits of white hands. and tell "Mammy tories," (as she said) about "'e pitty tars," and would pick out two of the brightest, those were mamma's eyes, watching her baby. Then she would laugh and talk about the fires of the Mexican camp; but Mammy shook her turbaned head and said:

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"O, Lawsy yo' pore chile, yo' don' know what yo's talkin' 'bout."

For ten days that little band held out against the foe; at the end of that time the six thousand Mexicans that surrounded the fort scaled the walls and poured in upon them in a living stream.

Santa Ana gave orders that no one should be spared, and the slaughter began. Bowie, who was dying of consumption, was killed on his cot. Then Santa Ana himself started up the stairs, with several companions, to see that no one escaped. At the top he stopped suddenly and held up his hand.

"Don't Mammy, don't feel so bad, Dod won't let 'em hurt 'oo." It was the clear voice of little Lillian coming from a small inside room.

The fierce, black eyes of the Mexican flashed. He probably was not familiar with English baby-talk for with an oath he started for the room, doubtless thinking that *he* didn't see what on earth folks brought *babies* to battle for. Just inside the threshold he stopped a great deal more suddenly than at the top of the stairs.

The room had no opening except the low doorway by which he had entered, and was, therefore, dark, yet it seemed quite light, this light radiated from the golden head of little Lillian, standing by poor Mammy who was fairly ashen with fear. The Mexicans crowded into the room, illuminating it with their torches. Mammy was a picture of abject terror as she sat on the floor with her eyes set and her mouth wide open expecting her death blow every minute, too terrified even for her favorite and constant expression "O, Lawsy!"

The most fearless and unconcerned of all that dark-browed band was the little white child. She seemed, among all those rough, dark men like a tiny sun-touched, fleecy cloud, which we sometimes see floating gently across the rolling blackness of the oncoming tempest.

It is often said that "there is something of the angel in every human heart." To look at Santa Ana's face, with its cruel mouth, and eyes still more cruel, one would turn away and say: "There is no hope." And yet little Lillian, seeming by instinct to know that he was the leader, pattered her tiny feet over the stones toward him, and gazing up into his cruel eyes, said:

"Didn't I tell Mammy all true? Oo won't let any fing hurt her, will oo?" Then the sweet child held her dimpled arms up to him to be taken.

What there was about the baby that affected him so greatly no one knows; for he suddenly turned his face from her with an expression of pain as though the light blinded his eyes (perhaps it was the light of a pure soul), and said, with a changed voice, to one of his soldiers:

"Let the child and her nurse go free and see that no harm comes to them."

And to this day Lillian is called "the child of the Alamo."

LULO M. THORPE.

PACIFIC BEACH.

'Tis evening here, the skies so clear
Are vaulted overhead.

The far stars glow and the earth below,
In quiet rests and sleeps.

The calm bay lies and the city's eyes
Do mock with stars below.

The old light-house winks, and cheers and blinks,
At the winds in wild career.

On golden beach, with rippling reach,
The waves creep to and fro.

O'er hill and bay with silent ray
The moon doth reign supreme.

'Tis holy night, God's beacon light
Doth charm the earth to sleep.

Eulalie Powers Woods.

Annie Felton Reynolds, the first woman dentist to graduate in Massachusetts, received her degree of D. D. S. from the Boston Dental College Thursday. She also received first prize for the senior honors.

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At Home.

LOCALS AND PERSONALS.

The students spending their vacations at the Beach are enjoying themselves in divers and sundry ways, swimming in the bay, bathing in the ocean surf, boating, hunting and making merry at delightful little socials, now and then.

One of the most beautiful noonlight evenings of the season was spent at Miss Lulo Thorpe's home, playing games and dancing on the green lawn in the moonlight. At Mrs. Rowe's "cottage by the sea," Misses Mabel and Evangeline doing the honors, an evening was passed pleasantly, (odd as it may seem), in telling ghost stories !

The boys not to be out done in the matter of entertaining, treated the girls to an ice cream social in Stough Hall,—well we are waiting for another.

Still another pleasant evening was later enjoyed at Miss Eulalie Woods's pulling taffy and having a good time generally.

Although not many persons are supposed to enjoy a Row(e) in the surf, Sam seems to.

There are twelve good sized students, not counting the *small* fry (Frey), spending their summer vacation at the Beach.

Some one wants to know how four people can ride home from a party in a one seated carriage—how did you manage it Lal?

Better begin to think of dusting off your old text books, vacation is half gone.

We saw Mr. Frey in a stew the other evening because somebody's papa thought somebody was too young to go with him to a party.

Jimmy has a little kid,
Its fleas are black as jet,
And every where that Jimmy goes
The fleas go too *you bet !!*

Miss Helen Gibbons of Chula Vista is visiting Miss Mary Cogswell.

Miss Mabel Toles, the youngest daughter of Jerry Toles, visited at the Beach last week.

Miss Pearl Flagg visited at Mrs. Fairfields.

Miss May Crippen. of San Diego, has been keeping Pearl from feeling lonesome.

On dit that Mrs. Judge Kinney intends to send her young grand daughter to college. Welcome!

John Ironsides was at the college to bid us good by, as he thinks of going to San Francisco. By-by, Irie, you'll be sorry you left us sometime.

Miss Lulo Thorpe expects a visitor, a Miss Grace Collier, of San Bernardino, soon.

We are glad to hear that our old friends, Anne Harlow and Mabel Phelps, are coming back.

The Towel Brigade has become so attached to its summer resort at the Bay-beach that Prof. Davidson has ordered a wharf and bath-house to be built there for the use of the college boys.

George Alkire, a former student, was lately down from his present home, at Pomona, Cal. George's health is not so good out of school in Pomona, as it used to be in school at Pacific Beach.

Ralph Williams is spending vacation at his old home on the Father of Waters, in the fair region about Memphis and Nashville. It was only because old friends and scenes could not come here that he ventured to the hot low lands of the great valley. Mr. Williams had spent two years at the College of Letters when he had found it impossible to live in any kind of health elsewhere.

Miss Jacqueline Oliver, our songstress, is at her Punta Banda home, but says she is lonesome.

Miss Nettie Pauly is spending her vacation with her uncle in Los Angeles. Miss Pauly's quiet elegant manners will win her friends where ever she is.

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Mrs. Phelps, who with her family spent the winter at Pacific Beach two years ago, found the climate in this particular locality so beneficial to health, the blessing of which she has been deprived since leaving here, that she is about to return to the favored spot where her old friends wait to welcome her.

Miss Fay Trownsell, the daughter of Captain Trownsell, editor of the Escondido *Times*, is spending the vacation with her father at her home in Escondido much improved by her sojourn at the college.

Miss Bess Brown is at her home on Florence Heights during the summer.

Miss Jacoby is rusticating in the interior with her father.

Genial Harvey Styles, formerly a student, is said to be the best informed man in the county on the culture of all kinds of fruit. Some think he will be married soon.

Where are Ralph Conklin, Allan Hawley, Bert Somers and a host of our former students? Let them answer.

The students and authorities of the college are under many obligations to the Thorps, McGregors, Fairfields, Cogswells, Rowes and others, for favors shown in many ways. We are fortunate in having such friends and neighbors.

The genial, whole-souled Mr. Isham, of the great firm of Story & Isham, has just purchased the Hubbell cottage at the ocean front. Mr. I's pluck and push as a business man is proverbial. He has the energy of half a dozen ordinary men, has a warm side for the college and——— an observatory. He has an interesting family. Welcome!

Mrs. Thresher and her bright daughter, Marian, are building them a cottage near the college.

California's favorite "Madge Morris," though frail in health at times, never wearies with the pen. Her new publication will be issued soon.

Our college is fortunate in having for a near neighbor the famous authoress Rose Hartwick Thorpe, whose pure, wholesome literature belongs in every home. She is the true friend of the student.

The Ladies' Annex visited the college while picnicing at Pacific Beach. Father Horton was with them. All were more than pleased with what they saw, and many were astonished at the complete facilities there found for instruction in the sciences, arts, music, etc.

Mrs. Woods, our highly successful instructor in languages, is resting at her home during the summer.

The Pacific Beach Hotel has changed hands. Mr. McKay is the new proprietor. His gentlemanly bearing bespeaks for him popularity.

Harr Wagner and C. S. Sprecher will hereafter give their entire attention to the editing of the *Golden Era Magazine*, the oldest and most popular journal on the Coast. Prof. Wagner is candidate for County Superintendent of Public Schools. He would make an excellent officer.

We miss Rev. R. Dodd and his pleasant family. They are comfortably located at Glendale, near Los Angeles.

Misses Hattie and Lottie Keyes were in their mountain home when last heard from.

Dr. G. A. Sprecher of Colton, and his estimable wife are spending their vacation with their relatives at the College.

The College community is under obligation to Messrs. Frey, Sprecher and Barbours, who under the direction of Mr. Thorpe, have erected commodious dressing rooms, wharf, etc., at the foot of Tenth street on the bay.

Miss Laura G. Gearn, distinguished for her devotion to study and her scholarly attainments made a visit to the College recently.

Miss Kate Woodford will likely return to College next year.

Oliver Reed has taken refuge in the mountains for the summer.

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School and College.

OUR DEPORTMENT.

True etiquette may be defined as genuine unselfishness, for real politeness, under all circumstances and conditions of life, demands consideration for others even to the 'setting aside' of one's own desires. Kindheartedness and culture are closely allied, as are, also, ignorance and rudeness, for culture is robbed of its most essential element when a kindly consideration for others' thoughts and sentiments is lacking. Etiquette may be acquired by education and observation followed by constant practice; but true etiquette is born in the heart, not in the head, and often reveals itself in the lowly walks of life. 'Civilty, refinement and gentleness are passports to hearts and homes, while awkwardness, coarseness and gruffness meet with locked doors and barred hearts.' Emerson says: 'Give a boy address and accomplishments, and you give him the mastery of palaces and fortunes wherever he goes; he has not the trouble of earning or owning them; they solicit him to enter and possess.' Calvert says: 'Ladyhood is an emanation from the heart subtilized by culture.'

A rude person may be well meaning but scarcely kindhearted, for genuine heart kindness is seldom rude. The face is the mirror of the heart reflecting its sunshine and its shadows, so one's manners are doors ajar affording glimpses into the inner chamber of one's self, revealing the true gentleman and lady.

Education is incomplete which does not bring good manners into prominence. True courtesy is the golden rule expressed. It is no trifling matter, but one of the greatest importance, that this Christian element become a firmly established part of every student's education. The expression of kindheartedness will create a kindly feeling which, in time, will become the genuine article that can only influence our lives for the greatest good.

NOTES AND NEWS.

The Peabody institute at Danvers, Mass., has been destroyed, with a $75,000 loss.

Cornell etiquette requires that no lady recognize a gentleman acquaintance on the university grounds.

Miss Eleanor L. Fleury, of the London school of medicine for women, has a record in three colleges of the highest honors that a female medical student can obtain.

Four college dailies are now in circulation. Princeton, Harvard, Yale and Cornell each publish one.

Miss Joanna Baker, who was a tutor of Greek in an Iowa college at the age of sixteen, now occupies the chair her father filed seventeen years ago.

The fair freshman at Bryn Mawr is hazed by being made to walk up an inclined board with a pile of books on her shoulders. When she reaches the top, she is given a lamp, with the injunction to keep it well trimmed and not to be a "foolish virgin."—*University News*.

During the past year Lake Forest University leads the list of colleges as having received the largest endowment, $400,000. Syracuse follows next with $365 000, then Yale with $275,000, Cornell with $265,000, Vassar $222,000, Pennsylvania $225,000.—*Ex.*

Vassar College owes its existence to a woman, Miss Lydia Booth, a cousin of the founder, Matthew Vassar. Mr. Vassar was planning a hospital on the plan of Guy's hospital, in London, as his bequest to the community, when his kinswoman suggested the founding of a college for women which should be to them what Yale and Harvard were to men. Immediate application was made for a charter, and in 1861 there came into being Vassar College.

The display of American students' periodicals at the Paris Exposition was of great interest. It is said, no such showing is possible among

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European colleges and schools. The interest and literary value of these college magazines cannot be felt by one who does not habitually compare a large number. The stories, poems and humors of the college paper are frequently in no wise inferior to those of the average magazine.— *Ex.*

Columbia College is the richest in the land, but its library consists of only 90,000 volumes, while Harvard's numbers 365,000 and Yale's 200,000.

Work on the Nicarauga Canal is progressing, though retarded at this period of the Central American year, by the rainy season.

The 450th anniversary of the discovery of the art of printing was celebrated at Mayence, recently.

Steps are being taken for organization of a College Boating Club. The boats will come, boys !

A FABLE.

Felis sedit by a hole,
Intenta she cum omni soul,
Prendere rats;
Mice cucurrerunt over the floor,
In numero duo, tres or more,
Obliti cats.

The felis saw them oculis;
"I'll have them" inquit she, "I guess,
Dum ludunt."
Tunc illa crept toward the group;
"Habeam" dixit, "a good rat soup,—
Pingues sunt."

Mice continued all gaudere—
Intenti they in ludum vere,
Gaudenter.
Tunc rushed the felis into them,
And tore them omnes limb for limb,
Violenter.

MORAL—Mures omnes, nunc be shy,
Et aurem praebete mihi:
Benigne:
Si hoc facitis, "verbum sat"—
Avoid a devilish big Tom cat
Studiose.

—*Latin School Register.*

THE SAN DIEGO COLLEGE OF LETTERS.

As the literary and educational supplement of THE WEST AMERICAN SCIENTIST is edited by the students and faculty of the San Diego College of Letters, and takes the place of the former college journal, *The Sphynx*, a few words in regard to this institution are in order.

Incorporated in 1887, it is now entering on its third year under most auspicious circumstances. The next term opens on the 4th of September. The attention of parents is especially directed to the climatic advantages enjoyed by this institution. Students unable to attend schools in more rigorous climates, or too delicate in health to study, may here regain full strength and compete in scholarship with their stronger associates. The truth of this is shown by Dr. P. C. Remondino, member of the International Medical College, in this number, and those interested should read his article with care.

Full information regarding this institution will be sent on application. It is for both sexes a boarding and day school, giving instruction in all branches of literature, science and art. Another word about this monthly supplement to THE WEST AMERICAN SCIENTIST which will be published by this institution during the coming year. This is believed by all to be a long step upward in our history. In addition to such interesting matter as may be found in the College department, the reader has the advantage of what comes from the pen of C. R. Orcutt and his correspondents. The college cannot afford to allow its department to become inferior. It must be well sustained. Only sensibly written and well-selected articles will receive room in these columns. It is to be hoped that each student will feel himself personally responsible for the success of our department and will do all in his power to assist, in every way possible, in making this journal second to none.

The Editors.

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LITERATURE IN SCHOOLS.

The notion that literature can be taken up as a branch of education, and learned at the proper time and when other studies permit, is one of the most farcical in our scheme of education. It is only matched in absurdity by the other current idea, that literature is something separate and apart from general knowledge. Here is the whole body of accumulated thought and experience of all the ages, which indeed forms our present life and explains it, existing partly in tradition and training, but more largely in books; and most teachers think, and most people are led to believe, that this most important former of the mind, maker of character, and guide to action, can be acquired in a certain number of lessons out of a text-book! Because this is so, young men and young women come up to college almost absolutely ignorant of the history of their race, and of the ideas that have made our civilization. Some of them have never read a book, except the text-books, on the specialties in which they have prepared themselves for examination. We have a saying concerning people whose minds appear to be made up of dry, isolated facts, that they have no atmosphere. Well, literature is the atmosphere. In it we live and move, and have our being, intellectually. The first lesson read to or read by the child, should begin to put him in relations with the world and the thought of the world.—*Charles Dudley Warner.*

The novelette in the August number of *The Chatauquan,* is by J. Rankin Towse. The title, 'A Lucky Accident,' promises a happy *denouement,* but just what it is to be the reader is not sure of until he reaches the closing chapter. It abounds in picturesque descriptions of the places where the events occurred, the actual names being given. An account of one of the University boat races on the Cam is among the pleasant features.

ON LACK OF CONSCIENCE AS A MEANS OF SUCCESS.

The following closes an editorial in the *Century* with the above title: 'The fact is that there is altogether too much reverence for rascals, and for rascally methods, on the part of tolerably decent people. Rascality is picturesque, doubtless, and in fiction it has even its moral uses; but in real life it should have no toleration; and it is, as a matter of fact, seldom accompanied by the ability that it brags.

'One proof that the smart rogue is not so smart as he thinks, and as others think, is that he so often comes to grief. He arrives at his successes through his knowlege of the evil in men; he comes to grief through his ignorance of the good in men. He thinks he knows 'human nature,' but he only half knows it. Therefore, he is constantly in danger of making a fatal mistake. For instance, his excuse to himself for lying and trickery is that lying and trickery are indulged in by others—even by some men who make a loud boast of virtue before the world. A little more or less of lying and trickery seems to make no difference, he assumes,—especially so long as there is no public display of lies and tricks,—for he understands that there must always be a certain outward propriety in order to insure even the inferior kind of success he is aiming at. But having no usable conscience to guide him, he underrates the sensitiveness of other consciences,—and especially the sensitiveness of that vague sentiment called 'public opinion,'—and he makes a miscalculation, which, if it does not land him in the penitentiary, at least makes him of no use to his respectable allies; therefore, of no use to his semi-criminal associates; therefore, a surprised, miserable, and vindictive failure."

Margaret Fuller says 'A house is no home unless it contains food and fire for the mind as well as for the body.'

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The Museum.

THE WEST AMERICAN MUSEUM OF NATURE AND ART.

More than two years have passed since the prospectus of this institution was published. These two years have not been idle ones in its growth, though little external evidence has been given. A brief review of the object and scope of the institution may not come amiss at the present time.

THE OBJECT.

The ostensible aim of a museum is the accumulation and preservation of material of whatever character that may offer. But the work of this institution is not intended to consist merely in the forming of vast, unassimilative collections. A museum should contain the results of researches. should be a custodian of public and private records, and pre-eminently it should be a factor in the education of the public. It should be its aim to increase and diffuse knowledge, to secure and make known every fact relative to each object in its possession, to preserve as complete and full data as possible concerning each. A new fact should be more highly prized than simple addition to the cabinet without corresponding contributions to science. The forming of collections is of inestimable value in facilitating the study of nature, science and history, and cannot well be over-estimated; but that work need not and should not interfere with or preclude the operation of the higher functions of a museum.

Indispensable adjuncts to a museum are libraries, laboratories for the prosecution of original and special investigations, schools for the training of its own workers in the best methods of study known, and of still greater importance, the publication of the results of its work. It is no longer the height of ambition with great institutions to secure the greatest accumulation of material; but that institution stands highest that makes the best use of what it has, and presents the most thorough contributions to knowledge through its mediums of communication with the world.

THE SCOPE.

As its name implies, The West American Museum of Nature and Art, possesses as its immediate field of operation the western half of the American continent — from Alaska to Cape Horn. But it is not proposed to limit the scope of the museum even to this broad field. It is hoped that large and exhaustive collections representing both fauna and flora, mineral wealth and prehistoric remains of the two Americas and of the isles of the great Pacific may ultimately be brought together; and then, Africa, Asia and Europe would be called upon to contribute freely of their natural objects and works of art. Thus early, they have contributed a no small number to the nucleus of our museum, so that it is folly to think of restricting such an institution in any line, except as its immediate finances may render necessary.

THE NUCLEUS.

It is not desirable to here enter into details regarding the C. R. Orcutt Miscellaneous Collections which now constitute the nucleus around which the museum is rapidly growing. Suffice it to say that these very miscellaneous collections include shells from every clime, thousands of minerals and fossils, archæological remains (principally American), birds, eggs, insects and numberless other classes of objects needless now to enumerate.

THE DIVISION OF BOTANY.

The museum is already, necessarily, divided into various sections, of which the Division of Botany is especially important. The herbarium like the other collections, is particularly representative of Southern and Lower California. A fine series of wood sections of California, Eastern and West Indian trees and shrubs, with fruit and seeds, is an important

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feature; while another economic feature is the collection of native grasses and other economic plants.

It is our policy to first develop as fully as possible the local resources, gradually widening out as our means and experience will justify. Great things require time, and not in one generation may we hope to accomplish what it has taken ages for others to do.

THE BOTANIC GARDEN.

A very important feature, which we hope soon to see established, is a botanic garden and experimental grounds in connection with the museum. This will prove a most valuable adjunct to our work, and the introduction and distribution of seeds and plants will doubtless render this a popular attraction.

THE LIBRARY.

West America is virtually without any great library of science. Our students are now compelled, in their prosecutions of original investigations, to consult eastern, and in many cases, European libraries, before they can safely present to the world the results of their studies, without danger of duplication and needless confusion. What an artizan's tools are to a workman, are books to the naturalist. Without them he is centuries behind his age. Can we hope to supply this vacancy in West America?

A feature too often overlooked, one that should be prominent in every library, is the preservation of local history. No library is nearly complete without complete files of all the newspapers, magazines, posters and circulars as it is possible to secure especially those which may at some time in the future throw light on the past. Every book or other publication, containing even the slightest reference to the region, should be preserved, and especially all government reports and scientific papers—often fugitive essays in foreign papers or magazines or in the proceedings of some society far removed. These papers are often indispensable to the historical or biological student, to enable him to avoid error, incompleteness and injustice to others, who, unknown to him, are engaged in the same lines of thought.

IN CONCLUSION.

It is hoped that these few lines may interest many in our work. The display collections are being arranged and will in due time be available to the public at Stough Hall, San Diego College of Letters, Pacific Beach, Calif., where friends will always be welcome. Any one who so desires can aid us in the vast work before us. No contribution, however small, to either the museum or library but that will be of value.

It is our policy to conduct the museum as an independent institution. Yet, the college and museum may be of mutual assistance. The little collections, originally displayed on a tea plate, have grown to too large proportions for one pair of hands. Their usefulness will be increased by the two institutes working harmoniously together. The work calls for many hands and greater means to render the greatest results, in benefits to mankind, attainable. *C. R. Orcutt.*

Miss Hoft and Miss Lyons have again distinguished themselves in Prof. Hill's musical contest.

An old Quaker lady tells in her quaint way this story of Emerson: "Thee knows that when Mr. Emerson was abroad he went to Egypt, and while there he stood one morning in front of the Sphinx and gazed long and earnestly at the silent figure. There they stood, Emerson gazing at the Sphinx and the Sphinx at Emerson. The silence was heavy. Suddenly the lips of the stone figure trembled, and the mystic words, 'You're another!' fell from them."

Town Topics speaks of the suspension of a comic paper as "another burst of mirth."

The sheriff is a reading man; he will take a paper when nobody else will.

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Among the Wits.

IN LIGHTER VEIN.

Isn't this p. q. liar?

A light head goes with a dark mind.

As a dentist, Dr. C—, is always equal toothe acheasion.

Song of the baker—Little Annie Rooney Is My Sweet Tart.—*Washington Hatchet.*

Any one who disturbs the atmosphere of study, is in danger of raising a breeze.

"Learn to say no to thyself." It is also well to learn to say it aloud.

Professor: "Does the question embarrass you?" Student: "No, sir, the question is quite clear; it is the answer that bothers me."—*Ex.*

Rare compound of oddity, frolic and fun,
To relish a joke, and rejoice in a dun!
—*Goldsmith.*

The high school girl graduate, says *Chatter*, wanted to see a famous man:

"So this is your editorial room, is it?

"Yes."

"And are all these gentlemen editors?

"Yes."

"Which one of them is We?"

"Here's a question," said the Information Editor, "that I can't answer. The man wants to know 'how long girls should be courted?'"

"Just the same as short girls," returned the Obituary Editor.

"Mr. Francis Galton is authority for the statement that, among the masses of the population, the brain usually ceases to grow after the age of nineteen."

Perfectly natural. By the time one is nineteen, he has as much "big head" as nature can stand.

"John," said his solicitous mother, on his return home for vacation—"What makes you so lazy and listless?" "Too much commencement exercise," answered the hopeful.

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The July number of the AMERICAN NATURALIST will be made especially noteworthy and valuable by an illustrated article by Prof. Cope, on The Cetacea. The illustrations for this article have largely been made from specimens obtained by Prof. Cope himself, and many of which are now in his possession. The article will be a masterly resume of the present state of the most advanced scientific knowledge in this highly interesting department of zoological investigation.

*** The December number and index for the year 1889 are now ready, and will be sent to any address on receipt of the regular price. 40 cts. This is the last of the back numbers to be furnished, and the magazine will hereafter be published strictly in the month whose date it bears. 40 cents a number; $4 00 a year FERRIS BROS., PUBLISHERS, S. W. Cor. Sixth and Arch Sts., Philadelphia, Pa.

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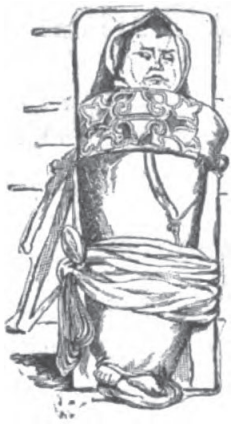

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