

THE
West • American • Scientist.

*A popular monthly review and record for the Pacific Coast.
 Official Organ of the San Diego Society of Natural History.*

C. R. ORCUTT, - - EDITOR.

CONTENTS:

	PAGE
Notes from the San Diego Biological Laboratory II.....	
.....C. H. & R. S. Eigenmann	147
Obsidian Cliff.....	151
Fauna and Flora of Colorado—III.....	153
.....T. D. A. Cockerell	
Preliminary Notes on the Geology of the Anacapas.....	155
Briefer Articles—Earliest Americans; Communism in Ohio; Salt Mountains of the Colorado; The Cable Circuit of Africa; Modern Cave Dwellers in Germany; A Wonderful Lake; An Electric Plant.....	156
Proceedings of Scientific Societies.....	160
Bibliography.....	160
Editorial.....	162
Notes and News.....	162

SAMUEL CARSON & CO.,
 PUBLISHERS.

No. 208 POST STREET, - SAN FRANCISCO, CALIF
 No. 1134 Fifth Street, San Diego, Calif.

PRICE 10 CENTS.

PER YEAR, \$1.00.

[Entered at the Post Office at San Francisco as second-class matter.]

V—GYMNOSPERMÆ.

1. *Juniperus communis* L., abundant at 8,200 feet and upwards. The berries form part of the food of robins (*merula migratoria*).

2. *Picea engelmanni* (Parry) Eng., Short creek and Willow creek.

3. *Picea pungens*, Eng., Short Creek and Willow Creek.

4. *Pinus ponderosa* var. *scopulorum*, Eng., abundant, Short Creek, Willow Creek, etc. *T. D. A. Cockerell.*

WEST CLIFF, October 7, 1889.

PRELIMINARY NOTES ON THE GEOLOGY OF
THE ANACAPAS.

(Read before the Santa Barbara Society of Natural History, August, 1889.)

The group of islands known as the Anacapas are more exclusively of volcanic origin than any other of the Channel Islands, the base from the exposure above the level of the ocean being composed of black vesicular basalt, capped in many places by a trachytic rock of a more recent lava flow, and at some points on the most elevated portions of the islands covered by a drift formation, among which are found jasper, chalcedony, and other fragmentary metamorphic rocks.

Where these metamorphic rocks are found there is abundant evidence that the aborigines, who inhabited the islands, frequented the place of deposit for the purpose of selecting rocks suitable for the manufacture of their arrow and spear points.

An unimportant deposit of limestone exists on the middle island, and a vein of chalcedonic quartz was found near the eastern end of the larger island; this was also used for the manufacture of weapons and knives.

Amygdaloides of chalcedony are very abundant, filling the almond-shaped cavities in the basalt.

An article on the geology of the Channel Islands, including the Anacapas, with geological sections, the result of the studies of the islands during the past twelve years, is being prepared, and will be presented to this society at its next meeting.

There are many things connected with the fauna and flora of these islands which are of much interest to students of natural history, and the scenery equals in variety and grandeur many of the most noted localities of other countries, a fact which our local artists are making known.

The land shells of the islands are peculiar; the only helicoid land shell found on the Anacapas, *Helix Ayresiana*, heretofore noted from San Miguel, Santa Rosa and Santa Cruz, is found but sparingly on the Anacapas, but the writer brought a few living specimens and planted a colony in the foothills of the Santa Ynez Range, back of El Montecito, where it is hoped they may

increase and furnish specimens of this beautiful snail for future generations of conchologists.

Owing to the steep and rugged shores, and a lack of suitable conditions, marine mollusks are not plentiful, except a few littoral species, which attach themselves to the rugged surface of the basalt rocks.

A list of the known mollusca of the islands is also in preparation.

We did not find any ferns upon the Anacapas, but, as adverse circumstances prevented our landing upon the western extremity of the group, where the conditions seem the most favorable for their growth, we cannot state positively that no ferns grow there. An article on the ferns of the Channel Island will shortly be published.

Lorenzo G. Yates.

BRIEFER ARTICLES.

(From *Demorest's Monthly Magazine*.)

EARLIEST AMERICANS.—The knowledge that America was inhabited by a highly civilized people many centuries before its occupancy by the race of red men which the earliest European settlers found here, is not new. Yet it was not until lately that actual records of information concerning this people were found, and for more than four hundred years all that we have known of them was gathered from a careful study of the relics of their greatness,—the ruins of their edifices, which have been found scattered over the entire western hemisphere. But the earthen tablets found in Peru, Central America, and Mexico, engraved on plastic clay in perfect Phœnician characters, and afterwards burned to render them imperishable, extend back nearly two thousand years before Christ. According to these records, these people, the Toltecs, came from some remote country and settled in South America. They were an eminently civilized and religious people, vesting the laws of their government and their theology in the same persons, and believing in one God, the creator and ruler of all, and in a mediator (Tzuma) who was to come to guide and teach them aright. Two distinct classes existed among them, the "Olptecs," or workers, and the "Orptecs," or thinkers, the latter including not only their priests and rulers, but their architects, artisans, engineers, and nobility. The "Olptecs" were serfs with no voice at all in the government or public affairs. These people rapidly increased, and by the year 400 B. C. had settled nearly the entire South American continent and spread over Mexico, where they found an aboriginal race dwelling on the banks of the streams and living upon the natural produce of the soil and upon fish and game. For over a thousand years the Toltecs occupied the land, until in the last century before Christ, the Aztec invaders sailed up the Amazon, claiming to have come from an Oriental country which they called "Aztlan." The Aztecs soon overruled the Toltec government, and in the course of two or three centuries the Aztecs were the dominant people.