

caused addicted to grassy fields, "never in the woods," and the first to yield to cult. Com single in a wild state, in cult forming large clusters. Raised in large quantities in Europe, Japan, China and the United States.

Baja! Var: alba is the com form in America, and as observed in the streets of San Diego and in Southern California in general!

Endothia Parryi.

Orcutt 4902: on leaves of Agave Shawii, initial boundary monument south of San Diego!

Anthurus borealis.

Lysurus borealis Burt.

Orcutt 4880: Balboa Park, San Diego.

Receptacle borne on stalk, hollow, attenuate at base, divided above into arms which do not join at apices, which bear spore-mass in their inner surfaces and sides, inclosing spore-mass when young, later diverging.

Phalloid-st w, hollow, attenuated downward; arms nar, lance-shape, with pale flesh-colored backs, traversed entire length by a shallow furrow. Plants found at Akron, Ohio, are figured in Hard's "Mushrooms, Edible and Otherwise." The egg-like volva and strong fetid odor are characteristics of this plant.

Advertising Rates:

10 cents a line each time.

OIL PAINTINGS.

- A 1. "A MEXICAN GENTLEMAN." Canvas 26½x33 inches, unsigned, "over 100 years old," the portrait of a typical man of affairs of Mexican Colonial life. Price \$100.
- A 2. "THE CRUCIFIXION." Canvas 28 x39 inches, unsigned, "over 100 years old," depicting the Savior as surrounded on the cross by four sorrowing companions, fairly typical of Mexican art in Colonial days. Price \$150.
- A 3. "THE DOVE DESCENDING." Canvas 33x45 inches, portraying four figures in sacred history, in rich coloring that is characteristic of the famous Mexican artist, Cabrera, of a past century, whose work it is believed to be, according to a well-known critic in Mexico City. Price \$500.
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Price \$75.

For sale by
ORCUTT'S REAL ESTATE AGENCY
C. R. Orcutt, Manager.
SAN DIEGO, CALIFORNIA.

REAL ESTATE.

The following real estate is owned, and offered for sale at the affixed prices, by the undersigned. Prices subject to change without notice. Terms can be given.

As we wish to sell, reasonable offers will be entertained for any piece that remains unsold:

CALIFORNIA: Ramona.

O 642. West two-thirds of lot 16, Valle de los Amigos, about 11½ acres, 5 room house, well, spring, live oak trees, fine view, 1 mile east of Ramona on Julian stage road, San Diego County, \$1400.

CALIFORNIA: San Francisco.

O 676. Lot 39, blk 5, Belle Air Park, San Mateo County, 25x100 ft. \$600.

C 659. **MANCHESTER**, Montana, lot 10, block 28, 50x125 feet, near Co-operative woolen Mill. \$1000.

C 681. **GUTHRIE**, Oklahoma: Ball & Ferguson's subdivision of N ½ of N W ¼ of section 20, T 16 N R 2 W of the Indian Meridian, lot or block 9, containing 2 acres. \$1000.

J 641. **EAST KLAMATH FALLS**, Oregon, Block 6, First Addition. \$600.

C 671. **SPEARFISH**, S. D.: Lot 23, block 3, Golden Belt addition, 25x100 feet, near business center of this prosperous town. \$500.

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C 474. **JAMUL**, San Diego County, California: N E ¼ of N W ¼, section 2, T 17, S R 2 E, S B M, 40.45 acres. "Running water, perennial springs and oak trees."

C 504. **NEW RIVERSIDE**, adjoining the city of San Diego, lot 5, containing 10 acres, and lot 6, containing 10 acres, each \$2000.

ORCUTT'S REAL ESTATE AGENCY
San Diego, California.

6 JAN 1914





The West American Scientist.

No. 2605 Broadway, San Diego, California

VOLUME XVIII. WHOLE NO. 138.

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Single copy, 10 cents.

Charles Russell Orcutt, Editor and Publisher.

FLORA OF BAJA CALIFORNIA.

(Continued from last issue.)

tessellated, with a terete curved appendage (radicle?) scarcely lg'er than diam of globular portion; albumen apparently O, Ubi, SEnrique, SMaria. This very remarkable sp grows on Veatchia discolor, & in the interior, where the tree is taller, frequently covers the whole top with a mass of y. As the parasite was oft 6-8 ft from the ground, with no intermediate growth, it did not seem that it had germinated in the usual way on the earth. Perhaps the very unusual formation of the sd may be intended to furnish support to the infant plant in beginning its growth in a crotch of the tree or a fold of the cracking bark. The specimens were just coming into fl, & the description of sd is drawn from such as could be obtained from a dried & persisting tangle of the previous year's growth."—Br 2:189.

STEMODIA POLYSTACHYA Br 2:191.

"Suffrutescent, minutely & sparsely glandular-pubescent, dividing near base into num slender, angled sts about 1 ft hl, & branching above: lvs opp, triangular-ovate in outline, pinnately parted or incised in the manner of Conobea multifida, & decurrent into petioles of about the same length: fls 1-2 in axils, on slender pedicels of about their own length; cx-lobes acuminate, nearly equal, bracts 0; cor p, with y'ish throat 8-10 mm lg; upper lip emarginate, lobes of the lower denticulate; tube hairy below insertion of sta: anth-cells disjointed & pedicellate; rudiment of the posterior sta somewhat capitate: ova ovate-acuminate, a little exceeding cx-lobes, septidial: valves entire; placentar column 2-cleft: sds spiral striate. SGregorio,

Comodu. This plant & Conobea intermedia, in which the rudiment of the 5th sta is also present, tho very minute, appear to break down all distinctions between the two genera."—Br. 2:191.

HERPESTIA EXILIS Br 2:191.

"Mercadonia, Ann, glab, erect, 3-6 in hi, seldom branching: lvs penninerved, ovate or oblg-lanceolate, 10-15 mm lg, serrate above the middle & tapering at base into a margined petiole of less than its own length: fls axy on slender pedicels 2-4 times as lg as lvs: cx 5 mm lg, the posterior oblg-lanceolate sep of same form & but little lg'er than the 2 anterior: cor y, twice as lg as cx, upper lip entire, pubescent in throat with glandular hairs: anth-cells divergent, the rudiment of posterior one oft present as a minute capitate appendage to tube: sty dilated, barely 2-lobed at apex: cap-valves sh'ly 2-cleft; sds oblg with a minutely reticulated coat. S Jorge."—Br 2:191.

BELOPERONE HIANIS Br 2:194.

"Suffrutescent, woody at base, with num slender branches, pubescent or glabrate: lvs ovate, oval or oblg, acute or obtuse, sh'ly petiolate: fls solitary & sessile in axils: bracts & braceoles linear, acute, sh'er than cx, which is deeply 5-parted, 7 mm lg, the linear lobes acute: cor r, 23-35 mm lg; tube funnel-form not appendaged, much sh'er than the deeply bilabiate limb; upper lip barely emarginate, the lower cleft for more than a third its length into oblg, widely spreading lobes: fil adnate to the whole length of tube; upper cell of anth a third the larger, both very minutely calcarate & widely spreading at base: sty filliform; stig not enlarged; ova 4-ovuled: cap clavate-oblg, about 15 mm lg, the sterile base no lg'er than upper part & exceeded by cx-lobes: sds flattened, glab, coarsely rugose; cotyledons reniform with the sh radicle incurved towards sinus. Comodu. This sp might as well & perhaps better be put into Justicia, but it so strongly resembles Beloperone Californica as to be taken for a slight variation of it in the first hasty examination of this collection. From the character of its sds it may even be that a fr'g fragment of it furnished Dr. Gray with the description which was alluded to under B: Califor-



nica. The order is much in need of a careful revision."—Br 2:194.

LIPPIA BARBATA Br 2:196.

"Zapana. Shrubby: lvs pinnate-veined, crenate, round-ovate, obtuse or a little decurrent upon the sh petiole, 15-25 mm lg & broad, rugose-veined, soft pubescent beneath, rough-strigose above; ped solitary in axils, stout, sh, much exceeded by oblg hds: bracts silky pubescent, broadly ovate, all distinct, a little sh'er than the w(?) cor: cx not half as lg as bracts, formed of 2, lateral, navicular, acute seg covered with lg w hairs, closing over the cohering nutlets & decid with them: cor 7-8 mm lg, bilabiate, upper lip erect, entire; lower spreading, 3-lobed; sta sessile, nearly equally attached hi in the throat: sty sh: stig somewhat 2-lobed. Described from fragments brought for culinary purposes by a Mexican of Comondu from 'La Giganta,' a neighboring mountain."—Br 2:196.

LIPPIA FASTIGIATA Br 2:196.

"Shrubby about a ft hi, with num slender, fascicled, w-tomentose branches: lvs densely tomentose, sessile, cuneate-lanceolate, & broadly crenate above middle, com opp, but sometimes ternate, 10-20 mm lg, 4-6 wide: ped solitary, stout, 2-4 times as lg as lvs; hds hemispherical to oblg, few-flid; bracts ovate, distinct, cx much exceeding bracts; densely covered with sh w wool, lobes 2, united nearly to top & truncate: cor w(?), 5 mm lg, a third lg'er than cx; tube cylindrical; limb bilabiate, upper lip 2-lobed, lower 3-cleft, lobes all crenate; sta unequally inserted on fil lg'er than anth; cells somewhat separated & oblique on a dilated connective: pistil very sh the sty only 0.5 mm lg, disk-like stig attached to the front of upper half, ovules 1 in each cell. Given to me at SBenito by a Mexican who collected it from some point nearer the Pacific & used it as a tea under the name Damiana."—Br 2:196.

SALVIA CALIFORNICA Br 2:197.

"Heterospace. Shrubby, 2-3 ft hi, densely w-tomentose, with branching wool: lvs sessile, oblg, 15-25 mm lg, irr coarsely dentate or lobed, lobes somewhat acutely pungent: fr'g spike elongated, interrupted; verticils remote, 4-8 flid; bracts ovate-acuminate: cx campanulate, 6 mm lg, scarcely bilabiate, sh'ly, acutely & nearly equally 5-toothed, the posterior a little lg'er: cor light blue, 12 mm lg; tube slender, cylindrical; posterior lip 2-cleft, anterior as lg as tube, lateral lobes much sh'er than the triangular-ovate, fimbriate, middle one; connectives free, lg-exserted; the lower fork 1-third as lg as upper, & terminated by a sm antheriferous cell: sty filiform, exceeding sta, sh'ly & unequally 2-lobed. Calmalli, Cardon Grande."—Br 2:197.

BOERHAAVIA ELONGATA Br 2:199.

Per (?). Sts slender, 6 ft lg or more, much branched, prostrate on the ground or supported by bushes, nearly glab, except some spreading hairs on the younger branches, somewhat glau: lvs thin, cordate-ovate, acuminate, minutely pubes-

cent above, glab below, 20-50 mm on petioles ¼th as lg: infl pubescent, axy and terminal, of imperfect simple or forked umbels, 3-6 fld, on ped com much exceeding lvs: pedicels very unequal, 3-20 mm lg; perianth w, spreading, 15 mm wide: fr clavate-oblg, 5-6 mm lg, 2½ wide, nearly bk, with broad mucilaginous glands in 3 or 4 horizontal rows, or sometimes crowded towards the top. SPablo, Jesus Maria."—Br 2:199.

ATRIPLEX MAGDALENAE Br 2:200.

"Per, dioe (?) herbaceous, w-furfuraceous, prostrate with branches 1-2 ft lg: lvs thin, all alt, obovate, apiculate, entire, 1-nerved, 10-20 mm lg, tapering into a sh petiole: stam fls not seen: pist fls sessile in clusters, in upper lf'y axils: frg bracts rhomboid, somewhat compressed, nearly 4 mm lg, tips herbaceous, spreading, edges below lateral angles not margined or toothed, sides not appendiculate: sty nearly equalling bracts: sd flattened, about 1 mm lg; radicle nearly superior. Magdalena Island."—Br 2:200.

ATRIPLEX LURIDA Br 2:200.

"Mon. woody at base, 1-2 ft. hi, with num very slender, r'ish branches: lvs sparingly w scurfy, com opp or sub-opp, oval to lanceolate, acute, sharply denticulate or the upper entire, 15-20 mm, tapering into a petiole 1 to 2-3ds as lg: stam fls in globose clusters on sh, axy spikes either on different branches or above and sometimes mixed with the pist; cx deeply 5-parted, 2 mm broad: pist fl clusters somewhat scattered in naked panicles, frg bracts sh'ly pedicellate, triangular, rounded above, 2-3 mm lg, very unequal in width, com much exceeding the length, upper half margined by a double row of herbaceous teeth; sides 3-nerved, somewhat muricate: sty a little exserted: sd brown, 3-4th mm lg; radicle nearly superior. SGregorio."—Br 2:200.

ATRIPLEX CURVIDENS Br 2:201.

"Shrubby, 4-6 ft hi, forming rounded clumps; branches slender, divaricately spreading: lvs linear-spatulate, cuneate, nearly sessile, 15-22 mm lg, 3-5 wide: pist fls panicled; bracts thin, compressed, nearly sessile, triangular, cuneate below, truncate above, about 3 mm lg and oft nearly twice as broad; upper margin cleft into num linear, somewhat curved seg; sides somewhat appendaged with 1 or more similar processes: sds light-brown, flattened, somewhat triangular, nearly 1 mm lg, exceeding width; radicle superior. Comondu. Described from fr of previous year."—Br 2:201.

ERIOGONUM IRRITITUM Br 2:202.

"Per, glau and nearly glab, 1-2 ft hi, woody at base and rough, with remains of the clasping petioles; branches num, slender, drooping, oft fascicled in axils, divaricate and entangled: lvs all near base, ovate, acute, 15-20 mm lg, tapering into petioles broadly dilated and clasping at base and 2-3 times their length; both lvs and petioles sparingly hirsute and ciliate, the latter somewhat scabrous: bracts linear-acuminate, sparingly ciliate: inv glab, 1½ mm lg, solitary, on slender ped

3-10 mm lg, in axils or along branchlets, clavate, cleft half-way into 3-5 acuminate, somewhat pungent lobes, 3-5-fid; bractlets in a single sr, ovate, hyaline, ciliate, much sh'er than inv; fls r, as lg as inv, developed successively, exserted; perianth-seg obtuse, pubescent externally, the outer thick, the inner dilated and petaloid on margins: sta exserted; anth oolg; ova (immature) gla. Agua Dulce. This is another of the intermediate sp which lessens the distance between *Eriogonum* & *Oxytheca*.—Br 2:202.

CHORIZANTHE FLAVA Br 2:202.

"Branching from near base, 2-18 in. lg, floccose-tomentose or glabrate; the sh plants erect, the longer prostrate; sts y'ish-r: lvs all radicle, tomentose on both sides, oblg-lanceolate, tapering into a lg'er petiole: bracts linear-acuminate & pungent: inv scattered, spreading; tube nearly cylindrical, tomentose, 4-5 mm lg, at length much surpassed by 3 broad, somewhat recurved, subequal, straight-awned lobes, tomentose above, near the base; the intermediate ones nearly obsolete: perianth y, glab, sh'ly stipitate, exserted 1-third its length; seg ovate-acuminate, entire or crenate on margins, less than 1-third as lg as tube; sta 9, attached near base of tube; fil glab, exserted; anth oblg; ova nearly as lg as tube; embryo straight, linear; radicle 1-third as lg as cotyledons. Calmali."—Br 2:202.

CHORIZANTHE MUTABILIS Br 2:203.

"Branching at base, erect or procumbent, 3-12 in. lg: sts stramineous, r'ish or pale; lvs all near base, lanceolate, tapering into petiole: bracts linear-acerose, soft: inv solitary or in sh spikes in axils; tube slightly pubescent, ribbed, divided above into 3, broad, spreading, somewhat corrugated, sh'ly awn-tipped lobes, at length flattened & much exceeding tube, & 3 intermediate, very much sm'er & sh'er, sometimes almost obsolete ones: perianth sh'ly pedicellate, 6-7 mm lg; tube & throat y; seg half as lg as tube, w or rose-color, lg-hairy on back, oblg, obtuse, crenate or entire, undulate: sta 9, attached near base, about as lg as tube; fil giab; anth oblg; ak as lg as tube; embryo linear, cotyledons nearly twice as lg as radicle. SENRIQUE."—Br 2:203.

(To be continued.)

—o—
LOWER CALIFORNIA.

"If thou seekest a beautiful peninsula, behold it here."

In 1867 Thomas Sprague wrote that "the peninsula of Lower California can be made the garden-spot of the world." The climate was spoken of as "undoubtedly one of the healthiest in the world, and for persons of consumptive habit, without a parallel."

Lower California begins at the north three miles south of San Diego bay, in Alta or New California, ending at the south in Cape San Lucas. The Pacific ocean on the west, and the Gulf of California on the east, form its remaining

limitations. It possesses about seven hundred miles of ocean shores, and six hundred miles of gulf coast, its north-eastern boundary commencing at a point on the Rio Colorado a few miles south of Fort Yuma.

That portion of the peninsula nearest to San Diego bay, extending south for a full 150 miles, and inland to the confines of the Colorado Desert, is one of the choicest sections for health, climate and fertility, in no wise inferior to the most favored portion of the state of California, the climate, like that at San Diego, being one of the most uniform and delightful yet known.

GULF OF CALIFORNIA.

This great arm of the Pacific, which penetrates the American continent deeper than any other, runs from near the twenty-third degree north latitude to the thirty-first degree thirty minutes, a length of near six hundred geographical miles, to where it receives the waters of the Rio Colorado of the West. It acquired its name of the Golfo de Cortez (Gulf of Cortes), or Mar de Cortez (Sea of Cortes), from the great captain, who visited it in 1537. After the explorations of Ulloa and Alarcon, from 1537 to 1540, it received the name of the Red Sea (Mar Vermiglion, Mar Rojo, and Mar Vermijo), from the reddish color of the waters, and the accounts given of its shores by Nuno de Guzman and his officers, the first conquerors of Sinaloa.

After the discovery of Kino, in 1700, it became known as Mar Laurentano, from the Virgin of Loretto, patroness of the Californian missions, Seno California, Mar California, and in the Jesuit maps from 1730 to 1772 it is set down as Golfo de California (Gulf of California), by which name it is best known today. It forms the western boundaries of the states of Sonora and Sinaloa.

In its northern parts it is full of sand bars, shoals, hidden rocks, shallow soundings, and dangerous currents, while its southern portions contain the finest harbors, bays, and anchorages, with the safest navigation for the major part of the year. In width it ranges from 20 miles at its head to 250 miles between Cape San Lucas and the port of Mazatlan.

ISLANDS OFF THE PACIFIC COAST.

The islands off the west coast of Baja California are about fifteen in number, briefly described as follows, chiefly from published notes by Captain C. M. Scammon.

LOS CORONADOS: merely two rocky islets, of trap formation, situated in 32 degrees, 24 minutes to 32 degrees, 26 minutes, north latitude, six miles from the coast line; several smaller rocks are scattered between the two largest; anchorage can be found on the southeast side of the most southern one, the largest, a mile in extent. A fine quarry of

reddish brown sandstone is said to exist on one of these islands. The vegetation has been briefly noted by Edward Lee Greene, in the West American Scientist.

ST. MARTIN: situated in 30 degrees, 20 minutes north latitude, and 116 degrees, 121 minutes west longitude; is of moderate height, 12 miles long by 2 wide, with anchorage on its south and southeast sides in 12 to 18 fathoms. A little lagoon is found on its southern side, which is quite low, where seal used to resort in large numbers. It is quite barren, producing only cacti, shrubs and herbage that grow in a scanty soil, among broken rocks in a dry climate.

ST. GERONIMO: called by sea-otter hunters Round Island; of moderate elevation, long, about 2 miles wide, extremely barren, about 3 miles from the mainland. Affords a good shelter, on its northeast side, from northwesterly winds. A reef lies between the island and the shore, where the sea breaks heavily in rough weather.

GUADALUPE ISLAND is a high elevation of land running nearly north and south, in extent about 15 miles. There is no safe anchorage around it, the shores being bold, and its banks generally high and precipitous. The northern extremity is not less than 3,400 feet above the sea, with a growth of pines and cypress, while its deep canyons contain a palm tree peculiar to the island. Vegetation is by no means abundant, but the flora of the island is fairly well known through the collections made by Dr. Edward Palmer, and by Professor E. L. Greene. Fresh water is found here, and goats introduced to the island have increased immensely. Fur seal and the sea elephant once made its shores a favorite resort. Two barren rocky islets lie off its south end.

ELIDE: a naked rock, one mile in circumference, once covered with guano; from 1857 about 28,000 tons were taken off, when the supply became exhausted. The nearest water is 7 miles east, on the mainland.

CHESTER'S ISLAND is an islet lying close to the north side of Point St. Eugenio, named for an American sea captain, who denuded it of guano in early days.

SAN BONITO ISLANDS are three in number, two moderately high, the middle one quite low, 15 miles west of Cedros Island, separated from each other by narrow passages, where boats may pass in safety, but not practical for large vessels. Their united length is not over 10 miles, the largest, the western one, being about 5 miles in extent, the other two about half the size each, all very barren, affording neither wood nor water. Seal and sea-elephants were formerly found on them in large numbers. A species of cactus seems to be peculiar to these islets, but the vegetation is sparse. Anchorage may be had on the southeast side of the middle island in from 10 to 20 fathoms, but the bottom is quite rocky and poor holding-ground.

NATIVIDAD: lies between Cedros and the mainland, rising to 700 feet elevation, 5 miles long, by 1 broad, perfectly barren, the breeding-place of large numbers of seal and sea fowl.

MARIA ISLAND is an islet off the west end of Natividad Island, and has yielded some guano in the past.

ST. ROQUE: in 27 degrees north latitude, less than two miles off the coast, a low rock, covered with some coarse gravel and light sand, intermixed with bird-lime, about 5 square miles in extent. Its shores are the breeding-places of seals, and were once a favorite resort of the sea-elephant; large numbers of a small sea-fowl called mutton-birds burrow in the sandy soil, where they hatch their young. Good shelter can be found for a small vessel between the island and the main.

ASUNCION: in 26 degrees, 50 minutes, north latitude, 114 degrees west longitude, is similar to St. Roque, a little higher in elevation, and affords a good anchorage on its southeastern side in 12 to 15 fathoms, well sheltered from the prevailing northwest winds.

SANTA MARGARITA: a cluster of high rocky peaks and slopes, broken, extremely barren, near Magdalena bay. Veins of coal, copper and gold have been reported as existing in its mountains. Capt. Scammon reports that "two ships' companies once carried on gold-mining (as they supposed) for a few weeks pretty extensively, and large quantities of the virgin metal were taken on board, out, much to the disgust of all concerned, it proved to be nothing but iron pyrites." The extent of the island east and west is 36 miles.

MANGROVE: near Santa Margarita island, is low, composed of sand and mud, covered in places with a thick growth of mangrove-trees.

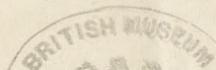
CEDROS ISLAND: see Cerros Island.

CERROS ISLAND: also called Cedros, is a mass of high, abrupt peaks, the highest of 2,500 feet elevation, which may be seen in clear weather a distance of 60 miles. It bounds the west side of San Sebastian Viscaïno bay, its south point is 28 degrees, 3 minutes north latitude, 115 degrees, 25 minutes west longitude.

Capt. Scammon says:—"On near approach its sombre and barren appearance is anything but inviting. Many of the southern slopes present a dark-red hue, interspersed with high variegated cliffs that give a little change to the otherwise dull scene. On landing, one is sensible of the extremely dry atmosphere prevailing; there must be, however, occasionally heavy rains producing mountain torrents, which have cut their way through the sand and gravel bottoms that skirt the southern bases, but they are of rare occurrence, those best acquainted, who have been living there or along the coast for nearly the last five years, have never known it to be

(To be continued.)

10 MAR 1914





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LOWER CALIFORNIA.

(Continued from last issue.)

visited by other than light showers, and these at long intervals apart. On the northeast side, about 3 miles from the extreme north end, a low, sandy point makes out; to the south of this there is good anchorage during the prevailing coast-winds. In a gulch near by is a small stream of fresh water, and likewise in several of the valleys leading from the shore to the southward water may be found within a mile or two of the beach. At one of these places it is of excellent quality. The only practical place, however, for a vessel to obtain a supply, is on the southeast side, where is found a spring running through rushes at the foot of a high peak close to the shore. * * * Anchorage may be had off this spring within two cables of the shore in 20 fathoms water, but a much better place for a large vessel to lie is two miles farther south off a low shingle beach, where it is not so deep, and the gusts that come down the mountain when the wind is west are not so heavy as at the other anchorage. A vessel can always find shelter from the northwest winds on the south side of the island, the depth varying from 6 to 20 fathoms, and these winds blow with the regularity of a trade from May to October, and the only precaution to be kept in mind in choosing an anchorage, is to avoid fixed kelp. From October to May, much of the time the winds are light and the weather delightful. Occasionally a strong norther, or a light southeaster or southwest gale blows the first part of the winter, and strong gales from the northwest again set in about the first of May."

Dr. John A. Veatch has reported find-

ing in a few days 114 species of marine shells on this island, and a list of its fauna and flora and mineral resources would alone form a small volume. Edward Lee Greene has published a considerable list of its flora, otherwise chiefly known by the collections of Dr. Veatch, made in 1859, during a stay through the months of June July and August.

CRESCIENTE: a small island north-east of Santa Margarita Island, 2 or 3 miles from the mainland.

CENISAS: a small island near San Quentin bay, 2 or 3 miles in length.

ISLANDS OF THE GULF OF CALIFORNIA.

Only a few of these are known to us, even by name, which must be our excuse for the brief notes accompanying the following list.

CERALBO: 100 miles north of Cape San Lucas, some 12 miles long, also known as "White Hills" to the early American explorers. Stated to contain copper mines of great value.

ESPIRITU SANTO: at the mouth of La Paz bay, 6 miles long, containing rich copper deposits.

SAN JUAN NEPECENO: a small island in Pichilingue bay, near La Paz.

SAN FRANCISCO: small.

SAN JOSE: 12 miles long.

SANTA CATALINA: about 10 miles in circumference.

MONTSERRAT: five or six miles of Santa Catalina.

CARMEN: noted for its most peculiar and most accessible salt-mine, the richest in the world and considered inexhaustible. It is about 25 miles long by 6 broad, within a few hours' sail of the old town of Loretto.

CORONADOS: a few miles in extent, some 6 miles from Carmen Island.

SAN IDELFONSO: 30 miles from Carmen.

SANTA ISABEL: at the mouth of Moleje bay, only a few miles in extent.

GALAPAGOS' 30 miles north of Moleje bay.

TORTUGAS: within sight of Guaymas, Son. An extinct volcano is ascribed to this island.

TRINIDAD: 20 miles in circumference.

