

posterior confluent, the cicatrices usually with raised tumid edges; pallial line rather deep in old specimens, rather indistinct posteriorly in young shells; naere opaque, reddish brown, pearly, annual lines imperceptible within, but distinct externally; internal cavity deep, cavity of the umbo deep. Length three and one-tenth inches; breadth one and four-tenths; diameter one and two-tenths.

The habitat of this shell is the Sacramento and San Joaquin Rivers. I have not found it at any point north of the confluence of the Feather with the former stream. The shell is not plentiful, as one only was obtained during three days dredging. It is difficult to obtain good specimens, or even in any considerable number, from the fact that the Indians place a high value on them, their use being the manufacture of ornaments for their persons.

I have some hesitancy in placing this shell with the genus *Anodon*, since there is in some specimens the semblance of a rudimentary tooth. In the majority of shells which have come under my observation, this characteristic is wanting, or at least so obscurely defined as to render it extremely difficult to determine the point with any degree of certainty. I have never seen the animal but once, and that was in such a state of decomposition as to render any diagnosis from this source of no value. I have, from these circumstances, placed this shell in the genus *Anodon* until such time as there are more evidences for its removal than are now in our possession. A specimen of this species is in the cabinet of Col. L. Ransom, from the upper San Joaquin, which measures three and eight-tenths inches in length, and one and seven-tenths in height. It is the largest that has yet been taken in our waters.

*Anodonta triangularis*.—Trask. Shell thin, contour nearly triangular, inequilateral, equivalved, compressed; anterior margin truncated; ventral margin nearly straight for the central half of its length; valves slightly compressed near the ventral margin, producing a flattened elevation on the inner disks; posterior extremity obtusely rounded; dorsal margin elevated into a high connate wing; beaks nearly obsolete; epidermis greenish in young and dark brown or nearly black in old specimens; annual lines somewhat prominent externally, raised on the inner disks; pallial line entire; cavity of the valve shallow; naere white, slightly iridescent; dorsal ligament strong; valves closed. Length three and three-tenths; height two and two-tenths; diameter seven-tenths.

The habitat of this shell is the Sacramento River, and it has not, to my knowledge, been found above the American Fork. It is seldom seen by the fishermen engaged on that stream, notwithstanding high prices had been offered for them; within eighteen months I have procured three specimens only. The outline of this shell alone would separate it from the

lake specimens, which are found in great abundance.

*Anodonta rotundovata*.—Trask. Shell inequilateral, compressed; umbo rather flat; dorsal line straight; projection of the epidermis above the dorsal line arcuate, horny and brittle; anterior margin rounded, ventral margin regularly arched and smooth; dorsal margin elevated into a high connate wing; darkish brown colored line surrounding all the margins; muscular impression rather indistinct; posterior cicatrice confluent; pallial line small, but easily perceptible, conforming to the marginal border; epidermis yellowish brown, polished, finely corrugated near the margins, and becoming darker; substance of shell thin; annual lines transverse, elevated exteriorly, and perceptible on the disk; cavity of the beak shoal; naere bluish white, pearly, at times mottled with yellowish spots. Length three and six-tenths inches, height one and nine-tenths, diameter seven-tenths.

This shell is found in the lagoons of the Sacramento Valley, but has not, to my knowledge, been taken in the river. The plates were drawn from an adult specimen; it differs from the preceding species in its general contour, in being more expanded between the dorsal line and ventral margins, and in the much greater acuteness of that line, with the projection of the epidermis beyond, as delineated in the figure. The arched form of the ventral margin in this specimen, and the roundness of the anterior, compared with those of the *A. triangularis*, will separate it from that shell.

Dr. Winslow exhibited two embryonic specimens of a species of Shark-Ray, inclosed in the egg-case.

Dr. H. Gibbons exhibited specimens of the Redwood and the Mammoth Tree, with the cones of both, showing the analogy between them, and the propriety of placing them in the same genus, viz: *Taxodium*. The genus *Wellingtonia*, which Lindley had framed for the gigantic tree of California, was, at best, named in bad taste. If the name of a hero, unknown to science, were at all appropriate for a genus of plants, an American hero might easily have been found to give a name to the giant of the American forest. But there is not likely to be any difficulty about the name, as Dr. Torrey and other botanists, both at [P. 30] home and abroad, now concur in abolishing the new genus, and placing the so-called *Wellingtonia gigantea* in the old genus *Taxodium*, retaining the specific name *giganteum*.

Dr. H. Gibbons also presented specimens of *Trillium*, *Asarum*, and other plants, from Alameda County.

Col. R. D. Cutts presented the skin of a acutely pointed Fox.

Messrs. Ellery & Doyle presented an antiquated work on Natural History, published at Edinburgh, in the last century.

FEB. 19th, 1855.

Col. L. Ransom, Vice-President, in the chair.

Col. R. D. Cutts, of the U. S. Coast Survey, was elected a corresponding member.

H. G. Bloomer, Wm. Heffley, and Dr. A. Kellogg, were elected Library Committee.

Donations.—Report of the Smithsonian Institute, for 1854, presented by the Institute.

Dr. Behr presented a species of Nepa.

Dr. J. B. Trask read the following paper on a new species of *Alasmodon*, from the Yuba River. He also presented three specimens of the shell.

*Alasmodon Yubaensis*.—Trask. Shell thick transversely elongate; umbones low, situated rather below the line of the hinge margin. It is much eroded; hinge and ventral margin unequally curved; shell broader before than behind, anterior margin bluntly and regularly rounded, slightly obtuse below, dorsal margin and ligament rather flatly arched (in young shells the dorsal line from the end of the ligament posteriorly is often angulate), posterior margin obtusely rounded in mature specimens, its superior portion, comprising the posterior third, truncated, or but very slightly arched; edge of the valves thick anteriorly and rounded, thin posteriorly and rather sharp, slightly everted; shell gaping at both ends (in young specimens the valves at the posterior end are closed), broader before than behind, considerably inflated from the umbones along its posterior slope; epidermis nearly black, opaque, smooth toward the beaks, rather roughly corrugated from the middle of the disks to the margins, surface undulating with annual lines of growth. Within smooth; color lilac-greenish and iridescent posteriorly; rayed upon the surface beyond the pallial line, and seen by direct or transmitted light; cardinal teeth one in each valve, erect, that in the right valve sub-connate, bluntly rounded at the apex grooved on the upper part, pitted at the posterior base, tooth in the left valve erect, flat sub-triangular, three small oblique groove upon its upper surface, producing small dentations on the edge; five small transverse grooves on the under surface; tooth sul

like specimens, which are found in great abundance.

*Anodonta rotundovata*.—Trask. Shell in-quilateral, compressed; umbo rather flat; dorsal line straight; projection of the epidermis above the dorsal line areolate, horny and brittle; anterior margin rounded, ventral margin regularly arched and smooth; dorsal margin elevated into a high connate wing; lurkish brown colored line surrounding all the margins; muscular impression rather indistinct; posterior cicatrice confluent; pallial line small, but easily perceptible, conforming to the marginal border; epidermis yellowish brown, polished, finely corrugated near the margins, and becoming darker; substance of shell thin; annual lines transverse, elevated exteriorly, and perceptible on the disk; cavity of the beak shoal; nacre bluish white, pearly, at times mottled with yellowish spots. Length three and six-tenths inches, height one and nine-tenths, diameter seven-tenths.

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*Alasmodon Yubaensis*.—Trask. Shell thick transversely elongate; umbones low, situated rather below the line of the hinge margin, and near the middle of the anterior third, very much eroded; hinge and ventral margin unequally curved; shell broader before than behind, anterior margin bluntly and regularly rounded, slightly obtuse below, dorsal margin and ligament rather flatly arched (in young shells the dorsal line from the end of the ligament posteriorly is often angulate), posterior margin obtusely rounded in mature specimens, its superior portion, comprising the posterior third, truncated, or but very slightly arched; edge of the valves thick anteriorly and rounded, thin posteriorly and rather sharp, slightly everted; shell gaping at both ends (in young specimens the valves at the posterior end are closed), broader before than behind, considerably inflated from the umbones along its posterior slope; epidermis nearly black, opaque, smooth toward the beaks, rather roughly corrugated from the middle of the disks to the margins, surface undulating with annual lines of growth. Within smooth; color lilac-greenish and iridescent posteriorly; rayed upon the surface beyond the pallial line, and seen by direct or transmitted light; cardinal teeth one in each valve, erect, that in the right valve sub-connate, bluntly rounded at the apex, grooved on the upper part, pitted at the posterior base, tooth in the left valve erect, flat, sub-triangular, three small oblique grooves upon its upper surface, producing small denticulations on the edge; five small transverse grooves on the under surface; tooth sub-

acutely pointed; pallial line impressed anteriorly, obsolete posteriorly; anterior cicatrices distinct, deep, posterior confluent shoal; nacre not extending to the margins, leaving a narrow border surrounding the latter; a somewhat tumid elevation of the shell between the pallial line and margin anteriorly. Length, four and five-twentieths inches; height, one and six-tenths; breadth, one.

The habitat of this shell is the Yuba River, and the specimens on which this description is based were taken from that stream about forty miles above its confluence with the Feather, by Hon. C. E. Lippincott, from whom they were procured. The shells are somewhat abundant, and have often been found at considerable depths, imbedded in the gravel drift of that stream. There are shells of this genus in many of the running streams of this country, but thus far there seems but little diversity in the species, with the exception perhaps of the more northern rivers.

This shell represents *A. arcuata*, of the Atlantic coast, but differs from that shell as described by Dr. Gould, and also from the description of Dr. DeKay. The particulars which separate it from the Atlantic species are the following: *A. arcuata* has two cardinal teeth in the left valve; our species has but one, or even a denticulation on that valve that could be considered even rudimentary. The form in the one is pyramidal and has from three to five grooves, while the California shell is flat and sub-triangular, having scarcely three distinct grooves upon its surface, which is a constant character. The tooth in the right valve is erect and has no twist as that described in the Atlantic species.

The beaks in our species are situated near the middle of the anterior third, and their summits are below the line of the hinge margin, and it is much broader before than behind; the color of the inner disks being so distinct from that of the Atlantic species, and the rays visible on the inner surface beyond the pallial line, are sufficient with the above to separate our shell from those east of the Rocky Mountains.

The difference of climate and the space of a broad continent between, would have the effect to produce wide differences in specific character of allied genera. I therefore consider this species as undescribed, and have selected the name of the stream from which it was taken, for its specification.

The Corresponding Secretary read a letter from Dr. D. W. Hatch of Sacramento, in which he promises a copy of his Meteorological Journal, and one from Prof. Nooney, dated at Washington, recommending the Society to send copies of the Bulletin to the Smithsonian Institute for exchange with foreign scientific bodies.

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FEB. 26th, 1855.

Dr. Kellogg in the chair.

Dr. Andrews presented for the Library two volumes of Congressional Documents relating to California, of the dates of 1849 and 1850.

Dr. Kellogg exhibited a drawing and specimens of a variety of *Lonicera Californica* or California Yellow Honeysuckle.

The specimens were found at the Mission of San Antonio, by Dr. Andrews.

Vine twining, all parts glabrous, leaves ovate mucronate, distinct, upper ones not connate-perfoliate; one inch to an inch and a half long, petioles about an eighth of an inch, without stipuliform appendages; petiole and rachis neither hispid nor glandular, tube of the corolla ascending, conspicuously gibbous at the base on the lower side, about the length of the deeply 2-lipped limb; ovaries not glandular; in all other respects the same as *L. Californica*.

The Yellow Woodbine or Honeysuckle above described, and the Red or Rose colored, *L. hispidula*, are both found in this State. They furnish very desirable rural ornaments at only the cost or comfort of a pleasant walk. Why not associate with a happy home another delightful object to thrill and refine the heart of humanity?

Mr. Bloomer presented a plant, having the aspect of a *Fritillaria*, which was referred to Dr. Kellogg and Dr. Andrews for examination.

Dr. Wm. O. Ayres presented a specimen representing a new generic type among fishes, with the following description:

*Anarrhichthys ocellatus*.—Ayres. Form much elongated, anguiform, compressed; the greatest depth (at the origin of the dorsal fin) contained nineteen times in the length; the thickness, at the same point, a trifle greater than half the depth; the depth becoming constantly less and less, until the body terminates in a point at the caudal extremity.

Head compressed, with the dorsal outline evenly arched. Eyes distant their own diameter from the snout; their length contained five times in the length of the head. Gape of the mouth free, the tip of the maxillary reaching the plane of the posterior border of the orbit.

Teeth strongly developed. In the upper jaw four (in one specimen only three) stout, canine teeth; behind these a transverse row consisting of three or four, smaller but of similar form; and on each side an imperfect row of three or four small ones extending

back; all of these are on the intermaxillaries. The entire anterior portion of the vomer covered with a mass of large, close-set, rounded, grinding teeth. Each palatine bone provided with a firm row of teeth, like those on the vomer, but smaller. In the lower jaw, four or five strong canine teeth in front, similar to those above and interlocking with them as the mouth closes; all the jaw posterior to these filled with strong molar teeth. Pharyngeals with small, rounded teeth.

Lips loose and fleshy. Nostrils nearer to the eye than to the snout.

Opercular apparatus without spines or processes of any kind; operculum very thin, almost membranous. Isthmus broad; branchial aperture equalling in extent the distance from the snout to the posterior border of the orbit.

Skin smooth, with a somewhat copious mucous secretion. Scales minute, rounded, oblong, imbedded in the skin, not imbricate, scarcely visible without close examination, becoming less abundant anteriorly, and entirely disappearing before reaching the pectoral fins; all anterior to this being scaleless.

No trace of a lateral line.

Dorsal, anal, and caudal fins entirely continuous.

The dorsal fin, arising almost at the back of the head, continues to increase for nearly a fourth of its length, attaining thus a height equal to the depth of the head of the fish. A little posterior to this the elevation becomes less, and the fin gradually decreases in height, until near the caudal extremity it has only one-third of its greatest elevation.

The anal fin, arising at a distance from the snout a little greater than one-fifth of the total length, is similar to the dorsal in form, having, in most parts, about two-thirds the height of that fin. The rays of the extremity of the body, which represent of course the caudal fin, are about equal to the longest rays of the anal. The rays of the anal and caudal are articulated, little branched. Those of the dorsal are single, not articulated, flexible; the point at which these simple rays join the articulated rays of the caudal is not marked by any depression in the outline of the fin. The junction of the anal and caudal cannot so readily be determined, as the rays of both are articulated.

The pectoral fins are rounded, scolloped on the margin by the projection of the rays, their height a little greater than the depth of the head.

No ventral fins.

Dorsal rays about 250; anal and caudal, about 233; P. 19. All the rays are enveloped in a somewhat thickened membrane.

In color perhaps no more beautiful fish than this has yet been found in our waters. It is elegantly mottled with light ashy grey and dark olive green, disposed in irregular rings, lines and blotches, which cover the

head and body. They extend also upon the dorsal fin, which in addition bears a remarkable row of large, brilliant, sharply defined ocellations; these are of such size as [P. 32] to occupy about half the height of the fin, each consisting of a light ring enclosing a much darker space. At about the middle of the length, these rings (in one specimen) become blended, forming thence a black band with a light line above and below it which extends to the caudal. The anal is dark brown, (black near the tail), with a border almost white in its whole length.

These notes of the coloring are taken from a young specimen only twenty-two inches long. In another, fifty-two inches in length, the colors, though not essentially different, were less brilliant.

We find here grouped the arched head, the mouth, the remarkable dentition, the branchial aperture, the surface, the scales, the structure of the fins, belonging to *Anarrhichthys*. But they are associated with an eel-like elongation of body and a corresponding complete union of the vertical fins, which must remove it from that genus. The fish has in fact, at the first glance, (excepting the head), much the aspect of a *Muraena*. Its generic features may be thus stated:

*ANARRHICHTHYS*, Ayres.—Head smooth, arched, obtuse. Body very much elongated. Scales small. Dorsal, anal, and caudal fins united. Canine teeth in the front of the jaws, blunt, rounded teeth on the vomer and petioles and in the lower jaw; none on the superior maxillaries. No ventral fins.

*A. ocellatus* is apparently rare. Only two specimens have yet been seen, which by a singular coincidence were brought into the market within two days of the same time. None of the fishermen had seen the species previously. The stomach of the larger specimen contained fragments of a Sea-Urchin, apparently a *Cidaris*; so that their habits appear to be like those of the species of *Anarrhichthys*. Both specimens were taken in the Bay of San Francisco.

MARCH 5th, 1855.

Dr. H. Gibbons in the chair.

A valuable collection of fossil shells was presented in the name of Dr. Antisell, fr Santa Margarita. The thanks of the Academy were voted for the donation.

A letter from Mr. Philip P. Carpenter, London, to the Rev. Mr. Cutler, of this city was read, asking for authentic information exchange of specimens in illustration of Mollusca of California.

Dr. Wm. O. Ayres presented specimen the following fishes: *Ophiodon elongatus*,