any of the British Polar Expedition for 1875–1876. —— Dr. Engler, of Kiel, has published the first part of an essay on the evolution of the vegetable kingdom since the Tertiary period, under the title, "Versuch einer Entwicklungsgeschichte der Pflanzenwelt." It relates to the extra-tropical regions of the Northern hemisphere.——Dr. H. Müller contributes to *Kosmos* an interesting critique of Gaston Bonnier's essay on the nectaries of flowers which was written in opposition to recent doctrines of the evolution of flowers.——Messrs. Sereno Watson and C. S. Sargent are botanizing in Northern California and Western Oregon this summer, while Mr. Vasey, a son of Dr. George Vasey, is studying the trees of Southern California for the Forestry Report of the tenth census. Mr. E. L. Greene is herborizing in Southern California, Arizona, and New Mexico. We have two interesting papers from him which have been crowded out unfortunately for want of space.

ZOÖLOGY.[1]

TARDIGRADES AND EGGS.—Having found several specimens of Tardigrades during the past month, I have been fortunate enough to confirm what has been observed in Europe in regard to their peculiar manner of depositing their eggs. Among them was one which contained within the body, as nearly as I could determine, six spherical masses, which, when examined with higher power, appeared to be collections of eggs. It was in the act of molting, the old skin having slipped back so far as to set free the three

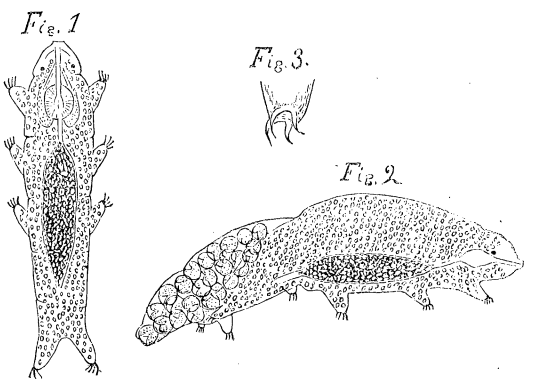


FIG. 1.—Normal individual seen from above. FIG. 2.—Individual with egg sack attached. The embryos can be seen within the eggs. FIG. 3.—Enlarged view of foot.

anterior pairs of limbs, while the posterior pair was plainly seen moving within. The skin was empty with the exception of a

[1] The departments of Ornithology and Mammalogy are conducted by Dr. ELLIOTT COUES, U. S. A.

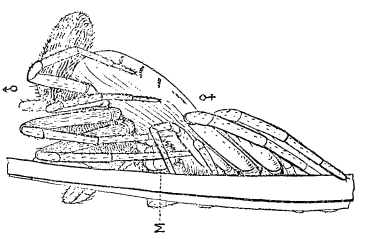
little excrementitious matter. This specimen was lost, but I shortly after found another with the old skin hanging to the body in the same position, but in this case filled with eggs. This one I succeeded in mounting in carbolated water, and so preserved it for future reference. In the normal state these creatures measure about .016 inch in length, but when gravid, or after depositing the eggs in the sack, they are much larger. My specimens were obtained from the sediment in a small aquarium in my sitting room, which contains a few native plants and fishes, and has about an inch of sand in the bottom, which was taken from the river bed last fall. The aquarium swarms with Protozoans, and I have thus far found seventeen Tardigrades, and there are probably many more. The genus I suppose to be Macrobiotus, but do not know that it has a specific name. It is the same that was found by Prof. Bessey in this place several years ago. I send drawings for identification.—*F. E. L. Beal.*

An Abnormal Foot in Amblystoma.—In a specimen of *Amblystoma punctatum* Baird, which I found in Williamstown, Mass., the second or largest toe of the right hind foot presented an unusual abnormality, being bifid at the tip. The osseous skeleton showed the same peculiarity, there being two terminal phalanges articulating with the penultimate one.—*J. S. Kingsley.*

Notes on Myriopods.—I have recently found several species of Myriopoda in Williamstown, which are of interest from the fact that their known localities are very few. Among these are *Pauropus huxleyi* Lubbock, *Eurypauropus spinosus* Ryder, and *Trichopetalum lunatum* Harger. *Pauropus huxleyi*, an English species, has heretofore been only reported from Fairmount Park by Mr. Ryder, which also was the only known locality of *Eurypauropus*. *Trichopetalum* has been found in New Haven and in Philadelphia. The locality where the specimens were found was on "Stone Hill," a limestone elevation, and with them were associated large numbers of *Campodea staphylinus* Westwood. I might also state that I have found here *Helix asteriscus* Morse, it being its first occurrence in Massachusetts.—*J. S. Kingsley.*

Second Flight of Dragon-flies.—I have now to report that last evening (May 24th), on the top of West Hill, in Melrose, I witnessed what to all appearance was a movement precisely like that of last year (see this journal, Vol. xiv, p. 132). The flies were moving over the hill in a business-like fashion, all going in the same direction, from one to six being in sight at once. I watched them for nearly half an hour and they were still passing when I came away. Nobody could see them, I think, without being convinced that they were moved by a common impulse, and for myself, I can hardly doubt that such migrations will be found to be things of regular occurrence. What their occasion and design are I am not entomologist enough even to guess. I should be glad to be enlightened.—*Bradford Torrey.*

BREEDING HABITS OF SPIDERS.—On the afternoon of the fifth of June we were lying on the ground in a dry pasture looking among the short grass, when we noticed a pair of crab spiders, *Xysticus*, under a slanting grass leaf. The female stood head downward holding on by a few threads across the leaf (see figure). Her abdomen was turned a little outward and the male, when we first noticed him was on her left side with his left feet on her abdomen and his right on the grass leaf. He stood there for a few minutes, now and then working his palpi up and down, then ran up over the female several times and settled himself in the position in the figure over the end of her abdomen with his head just behind her epigynum. After a few moments when he appeared to have his palpus in use, we pushed away the surrounding grass and broke off the leaf on which the spiders were, without disturbing them in the least and found the left palpus in the epigynum with the spinal muscle M inflated. The size of this muscle varied continually, swelling out to its full extent in a sausage shape, and then slowly contracting. We watched him for ten minutes during which he removed his palpus once and inserted the same once again. We then put grass and all into a bottle without disturbing the spiders, but when we looked at them again on reaching home they had separated.—*J. H. Emerton.*



NOTES ON NEW AND RARE FISHES OF THE PACIFIC COAST.—It was until recently currently believed that very few additional species would be found upon the Pacific coast of the United States. The publication of descriptions of three new flat-fishes and a scomberoid form, in 1879, threw some little doubt upon this idea, and the discoveries since made, both by Prof. S. Jordan and by the writer, will, when the results are published, prove beyond a doubt that the Pacific icthyological fauna is far richer than it was supposed to be, and probably richer than the Atlantic.

The Pacific is *the* ocean of the world—the main body of its waters are collected in its vast expanse, and it is only natural to suppose that when men of the more advanced civilizations have searched its shores and its depths as thoroughly as they have searched those of the smaller Atlantic, it will be found that its fauna is rich in proportion to its larger dimensions. If we confine our attention solely to the west coast of North America, we shall find that several groups are peculiar to the region, or are at most represented only by scattered species elsewhere; while others that are tolerably well represented in the Atlantic have headquarters here.

The family *Scorpænidæ*, consisting of the genera *Scorpæna*,

Sebastes, and their allies, mailed-cheeked scaly fishes, with perfect ventrals, short anal, and first dorsal more developed than the second, has its headquarters upon this coast.

When Dr. W. O. Ayres, in the early days of the California Academy of Sciences, about eighteen years ago, added four additional species to the already known eight or nine described by himself or by Dr. Girard, the announcement was received with doubt.

The writer, resident in San Francisco during the last six years, quickly identified all the described species but one, nor was it long before he perceived several types which differed somewhat from any of them. As, however, he was dependent for comparison upon isolated examples brought to the local museum, and upon the supply of the market, he was unable to thoroughly convince himself whether the three or four varieties of color, accompanied as they were by only slight differences in the form and prominence of the spines of the head, were really species, or only color varieties. But this question is now fully settled by Prof. D. S. Jordan, who, commencing at San Diego, and working northwards to San Francisco, everywhere with abundant means of comparison, has proved that not only three or four, but eight or nine constant and specifically distinct types of this tribe occur, in addition to those before described; so that more than twenty species are now (March 14, 1880) known, and it is not unlikely that the list may be still further increased when Prof. Jordan and his comrade Mr. Gilbert have searched the coast northward to Puget Sound. The number of flat-fishes (Pleuronectidæ) now known to be found between San Diego and Puget Sound exceeds that known on the Atlantic coast of the United States. In my "Review of the Pleuronectidæ of San Francisco" (Proc. U. S. Nat. Mus., 1879), I enumerate thirteen species, three of them new to science. To these must be added a true sole, the first found upon the coast, discovered by Prof. Jordan at San Diego; a flounder allied to Hippoglossoides, but forming the type of a new genus, found by the same ichthyologist at Wilmington and Santa Barbara, and a species of Platysomatichthys (Bleeker), a stray specimen of which found its way into the market of San Francisco. Add to these the more northern *Pleuronectes franklinii*, and we have a total of seventeen species, without counting two unidentified species described by Pallas, a total which, in the light of recent discoveries, must not be accepted as final, since the coast from San Francisco northward may yield new forms to the hard-working explorers of the United States Fish Commission. The specimens of the Platysomatichthys found were evidently the young of a larger form, and Prof. Jordan confidently expects to find more and larger specimens as he proceeds northward.

The conclusion arrived at by the writer that the species re-described by himself as *Pleuronichthys cœnosus* is the *Pleuronectes*

quadrituberculatus of Pallas, is endorsed by Prof. Jordan; but as numerous specimens found south of San Francisco are devoid of the tubercles upon the cheeks, the latter suspects that there may be two species.

The form described by me in the paper before mentioned as *Lepidopsetta umbrosa* (Girard) Gill, turns out to be a new species; but as the *Platichthys umbrosus* of Girard is, as stated by Dr. Gill, synonymous with the *Pleuronectes bilineatas* of Dr. Ayres, this does not increase the number of species in the group. For this species the specific name *isolepis* is proposed, on account of the uniform structure of the scales—a character by which it may at once be distinguished from its nearest ally, *Lepidopsetta (Pleuronectes) bilineata*. Other characters are, its regularly oval form, small eyes, and the comparatively low arch formed on the pectoral region by the lateral line. In general appearance it closely resembles small specimens of *Psettichthys melanostictus*, and is confounded with that species by the dealers, who fail to notice its smaller mouth, rougher scales, and more oval form.

The curious family of small mailed fishes, known as Agonidæ, has now so many known representatives here that it becomes probable that its headquarters are on this coast. To the already known *Agonus acipenserinus* and other sub-arctic forms, Dr. Steindachner, in 1878, added the two new species, one of them the singular Siphonagonus, and since that date three additional species have been found and their descriptions forwarded for publication.

These are two species of Agonus, one of which was first noticed by Prof. Jordan, and the other by myself, and the third a species of Dr. Gill's genus Brachyopsis, described by the writer from numerous specimens obtained in Drake's bay, near San Francisco.

The family of viviparous perch (Embiotocidæ) has long been known as one of the peculiar types of our coast, and the already tolerably numerous species included in it have been reinforced by Prof. Jordan by the addition of three more. One of these, a species of Cymatogaster of a roseate tint, with two darker spots below the soft dorsal, was first noticed in the autumn of 1879, when a single specimen was shown me by a dealer who perceived its peculiarities, but would not part with the specimen. A second example was secured for Prof. Jordan, who has since found a third; so that it is evident that at this point the species is rare.

The number of species included in the family Chiridæ, a group of fishes with the suborbital bone united to the pre-operculum, as in the Scorpænidæ and Cottidæ, from which, however, they differ considerably in appearance, is on the increase.

Several species of Chirus and its nearly allied forms, and four or five of more distantly related genera, have long been known; but we can now report three new forms; One of these belongs to Gill's genus Pleurogrammus, distinguished from Chirus by the

continuous dorsal fin and longer gill-rakers; and was described from specimens brought from Alaska by Mr. W. J. Fisher; the second is a true Chirus, not uncommon in the markets of this city, and the third is a very peculiar form, constituting a subfamily.

The species of the genus Chirus are called sea-trout by some dealers in our markets, while others confound them with the Scorpænidæ under the common name of rock-fish or rock-cod. The species found in our markets are very nearly related to each other, so much so that were it not for the unvarying pattern of the coloration, it would be hard to tell them apart. The peculiar form just mentioned does not look like a Chiroid, but closely simulates the sea-perches, such as the Jew-fish. As, however, it has the structure of the cheeks which distinguishes the Chiridæ, Prof. Jordan believes it must be placed along with them. It is certainly intermediate between the Chiridæ and the Scorpænidæ, and must be gathered into one of them. The Chiridæ, like the viviparous perch, are peculiar to the North Pacific, but the large family of the Cottidæ or Sculpins, is much more widely spread.

Three additional forms of Cottidæ have lately been described. One of these was characterized by Dr. Steindachner, in 1873, as *Artedius pugettensis*. Before his paper was received here, I had published a notice of it under the name of *Chitonotus megacephalus*. It is probable that the latter genus will stand good, as the fish certainly cannot be placed along with the previously known *Artedius notospilotus*. A second species is tolerably common in our markets, to which it is brought among the heaps of prawns and small fishes. A third occurs in the fresh-water lakes of the Island of Kodiak, Alaska, and belongs to the well-known genus Uranidea.

A fortuitously obtained trio of fishes, said to be from deep water, has enriched our coast with another family of fishes peculiar to it. Blennoid in aspect, with soft and flexible bones, a continuous dorsal without any definite spines, and a long anal, Prof. Jordan believes that its affinities are with the Trachinids. Two species are known, one of them scaleless, but with small prickles upon the fins, and prickly scutellæ along the lateral line; the other scaly, and differing considerably in other respects, so that it is not improbable that several intermediate forms will ultimately be found.

To the fishes before mentioned must be added a singular humpbacked Catostomus from the Gila, said to be tolerably abundant; an Osmerus which has hitherto escaped notice, though sufficiently common in the San Francisco market; a Lycodoid *(Leurynnis paucidens)*, a Scomberoid *(Chriomitra concolor)*, and a Myxine *(Bdellostoma stoutii)* from the same locality; a well characterized species of Hemitripterus from Alaska, and a Sparus from Magda-

lena bay, Lower California; all noticed by the writer; and three rays found south of San Francisco by Prof. Jordan.

The Myxine may possibly prove to be identical with one previously described from the coast of Chili *(Bdellostoma polytrema)*, as it is said that the number of gill openings was not accurately counted in the Chilian type, but there is also a difference in the number of teeth. Of the three rays mentioned, one is a Dasybatis, the second is a form connecting Dasybatis with Raia, while a third is a Raia.

Altogether about forty species of marine fishes have been noted by Prof. Jordan and myself during the past eighteen months, and as the former is only at the commencement of his labors, and has only searched the coast from San Francisco southward, it is probable that he will find several more between the latter point and Puget sound.

From the immense stretch of sea coast included in Alaska, a continental line of more than twice the length of that of the Pacific coast of the United States, we may expect many additional species when the United States Fish Commission gets fairly to work upon it.

Glyptocephalus pacificus and *Glyptocephalus zachirus*.—The reason that these two species escaped description so long is probably to be found in the fact, that those brought to the market are brought from Point Reyes, about thirty miles north of San Francisco, where there was no fishery until about three years ago. Neither of these species is at any time taken in abundance, and both are absent from the market, with rare exceptions, during the winter months, so that it is probable that at that season they resort to deeper water.

Scorpis californiensis.—This species, hitherto believed to be of rare occurrence, has been ascertained by Prof. Jordan to be the most common species in the Santa Barbara channel, constituting the bulk of the catch taken for the Los Angeles market.

Torpedo californica.—This species is, I believe, rare in collections. The only example in our local museum is the small alcoholic specimen which probably formed the type of Ayres' original description. It was therefore with some interest that I observed in our market a large individual, taken in Tomales bay.

I subjoin a few dimensions:

	Feet.	Inches.
Total length	3	½
Greatest width across pectoral fins when first measured	2	
Ditto after lying spread out for about 24 hours	2	2⅛
Width across ventrals	1	1
Longitudinal diameter of eye		½
Front of disk to center of mouth when the latter is closed,		2⅜
Ditto to angle of mouth		3½
Ditto to first dorsal	1	11⅜
Ditto to second dorsal	2	3¼
Ditto to vent	1	9½
Interocular width		3

	Inches.
Distance between the spiracles	2¼
Width across caudal fin	8½
Length of base of 1st dorsal	2⅞
Height of 1st dorsal	4
Length of base of 2d dorsal	1⅛
Height of 2d dorsal	2
Front of disk to eye	$2\frac{13}{16}$
Ditto to anterior edge of spiracles	4
Length of spiracular opening	1

The dealers state that this fish attains still larger dimensions.

Cephaloscyllium laticeps.—This species is one of the most singular additions to the fauna of our coast hitherto made. It was previously known only from two examples and a skull, all from New Zealand. Below Point Conception, Prof. Jordan found this curious shark, which has the power of inflating itself after the fashion of a balloon fish (Diodon tetrodon) to be the most common of its tribe, so common, indeed, that it is largely taken for the sake of the oil that can be procured from it. It attains a length of rather more than three feet, and has a very broad head, equal in width to one-fourth the total length of the fish. It does not inflate its skin, but its stomach, as was experimentally proved, and when inflated, floats away upon its back.—*W. N. Lockington.*

Case of Protective Mimicry in a Moth.—On June 6th, my son called my attention to what I without hesitation supposed to be a *Polistes fuscus* resting on the ground. Fearing to handle it, I attempted to hold it down with a stick, when on getting nearer to it I saw that it was a harmless Egerian moth, *Trochilium polistiformis.* Though a little shorter it closely resembles in size, color and peculiar markings our common Polistes wasp. The antennæ are very similar, with the brown thorax and fore-wings, and the two yellow rings on the basal half of the abdomen are also closely similar to the markings of the wasp. Now if I was deceived, why should not a bird be "taken in" and pass by the harmless moth, thinking it a well armed wasp? I regard this Spilomyia as an admirable instance of protective resemblance. A similar example I recorded several years since when I extended my net to catch what I supposed to be a white-faced wasp, and just before capturing it, found that it was a Syrphus fly (Spilomyia).—*A. S. Packard, Jr.*

Male eels in Holland.—An article on the reproductive organs of male eels and the differences between the sexes, is contributed to Zoologischer Anzeiger for June 7, by S. T. Cattie, of Arnheim, Holland. He says, "that it is not to be wondered at that male eels are so seldom found, since the young eel finds its way into deep water; there the reproductive organs rapidly develop (6–8 weeks); they then lay eggs, and the old eels, both female and male, die after reproduction. Hence the spermatozoa are wanting and in most cases even the mother-cells of the testes, so

that the study of the histological structure of the organs of Syrski can bring us somewhat nearer to the truth of the matter." He then describes the lobulated organ of Syrski, found also in American males by Packard and Kingsley. Cattie also describes what he regards as the seminal duct, previously studied histologically and so considered by Freud.[1] Its structure is like that of the immature testes of fishes. In the largest of the eel with the organs of Syrski (lappenorgan), which was 445 centimeters in length, Cattie found a tube-like cord, which extends from the base to the end of the bow-shaped indentation of the streak which extends along the testes, and which is filled with cells. This string of cells shows the most undoubted similarity to the sperm mother-cells of the testes. He observed no spermatozoa in his eels.

Cattie then quotes the sexual differences in the eel given by Jacoby.[2] These are differences in the head; which is broader in the females, than the narrower and more pointed snout of the eels with the lobulated organs of Syrski; all the females moreover have a higher, broader dorsal fin than the males, while the latter are said to be darker green, more metallic on the sides, and blacker on the back of the body; and eels with the organs of Syrski have larger eyes, though Jacoby states that large-eyed females also occur. Cattie's measurements confirm Jacoby's statement that the females have a higher dorsal fin; he thinks that the females on the whole have larger eyes, while the best external sexual difference is the smaller and more pointed, less flattened, more convex head of the males; but he found no permanent differences of coloration.

It will thus be seen that there appears to be slight external differences between the male and female eel, while the internal differences between the reproductive organs are well marked and obvious. No one in Europe has yet found spermatozoa, while in this country Packard and Kingsley in their joint paper in this journal (Vol. XIII, p. 319, 1879) claim to have seen the spermatozoa; viz.: Mr. Kingsley is confident he saw them, Dr. Packard not however being present when they were discovered and not seeing them. It is of course most desirable that others should observe these bodies before the matter can be regarded as finally settled.

NOTES ON THE WINTERING OF THE ROBIN.—I see that in the last NATURALIST, the appearance of robins at Evanston, Ill., is made the text for a theory of bird migrations. In Western Iowa, at about the same latitude, robins remain in wooded valleys throughout the winter. Last December I observed them in flocks in the underbrush along the Missouri river, opposite Plattsmouth, Neb. On the uplands, which are about three hundred feet higher and

[1] Litzungsberichte der Kais. Akad. der Wissenschaften. Wien, 1877, Märzheft.

[2] Dr. L. Jacoby, Der Fischfang in der Lagune von Commachio.

more open, they are not frequently observed during the winter months.

C. J. Maynard records the robin as a resident of Eastern Massachusetts, although they sometimes do not remain all winter. *Chrysomitris tristis* is also found here abundantly during the winter. *Lophophanes bicolor*, *Sitta carolinensis* and *Centurus carolinus* have been noticed more rarely.

May it not be that a few warm days in spring call out the earlier birds from neighboring wooded valleys rather than from the south? Yet I see no serious objection to the idea that the migration of birds is largely due to the prevailing winds.—*J. E. Todd, Tabor, Iowa.*

The Eyes and Brain of Cermatia forceps.—Mr. Norman N. Mason has made preparations of the eyes of this myriopod, which, contrary to the statement in this journal last year, is not uncommon in Providence, R. I., in dark places, and which is useful as a spider-destroyer. The eye of this myriopod appears to be constructed on the same plan as that of other species of the subclass, but differing in important respects. Though Cermatia is said to have compound eyes in contradistinction from the so-called "ocelli" of other myriopods, the latter are likewise truly aggregated or compound, the "ocelli" being composed of contiguous facets, the nerve-fibres supplying them arising in the same general manner from the optic nerve as in Cermatia, where the facets are much more numerous. The eye of the Cermatia is composed of a hemispherical, many-facetted cornea, the lenses of which are shallow, doubly convex, being quite regularly lenticular, the chitinous substance being laminated as usual. Each corneal lens is underlaid by a retina about as thick as the cornea, the inner surface of each retinal mass being convex. Corresponding to each lens is a separate mass of connective tissue which increases in thickness from the end of the optic nerve outward towards the cornea; though the entire retina of the eye extends back to the *ganglion opticum*. Within the broad stratum of connective tissue, forming the entire retina of the eye, lies next to the corneal lens a layer of "vitreous cells" or "lens-epithelium" of Graber. This layer is succeeded by the series of rather large visual rods, one in each mass corresponding to each corneal lens; these rods are long and sharp, conical at the end, which extends nearly to the inner edge of the retinal mass; they each possess a nucleus, and the connective tissue enveloping the rods is nucleated, while there is an irregular layer of nucleated cells near or around the ends of the rods. There are no cones; these not being yet detected in the eye of myriopods.

This layer of cells is succeeded by a thin, slightly curvilinear, transverse strip of connective tissue passing through the entire eye, and behind it are the loose, nucleated spherical cells forming the *ganglion opticum*.

The brain of *Cermatia forceps*, as shown by several sections, is

developed on the same plan as in Bothropolys, and so far as we see, the myriopodan brain corresponds more closely in its general form and histology with that of the insects than the Crustacea. The large, thick optic nerve arises from the upper side of each hemisphere. The median furrow above is deep, and on each side is a mass of small ganglion cells; also a mass in the deep fissure below the origin of the optic nerve, and another mass on the inferior lobe extending down each side of the œsophagus, probably near or at the origin of the posterior commissure. These masses, *i.e.*, those on the upper and under side of the brain, connect on each side of the median line, and in this respect the brain is as in Bothropolys. There are no large ganglion cells as in Crustacea, including Limulus.

There is then, no very close resemblance in form or histology, between the eye and brain of Limulus and the myriopods, the two types of eye being essentially different.—*A. S. Packard, Jr.*

Zoological Notes.—A communication by Dr. W. J. Hoffman, on a supposed hybrid between the lynx and domestic cat, was lately read before the Zoölogical Society of London.——The second example of Archæopteryx, with the head, is now on deposit in the Geological Museum of Berlin. It was bought, according to *Nature*, for about $5000, by Herr Siemens, of Berlin, in order to save it from importation to the United States.——M. Viallanes finds that the heart of insects is at first a simple tube open only at its two ends. So long as it has no lateral orifice it is completely arterial.——Undoubted alligators have been discovered in the Yang-tse-Kiang, the first of this genus to occur in the Old World. In the same river occurs the Polyodon, the only other existing species of this ganoid living in the Mississippi.——Prof. E. Van Beneden has discovered the existence of a double circulatory apparatus and two kinds of blood in parasitic Copepoda (Clavella, Congricola and Lernanthropus). The leaf-like lamellæ growing from the end of the body of Lernanthropus are true gills, like those of Annelids. There is no true heart; the circulation of the two fluids being caused by the contraction of the body. In certain worms, the closed vessels contain a red blood without corpuscles, while the connected lacunæ of the body (not true vessels) contain colorless blood with white corpuscles.——The use of the swimming bladder of fishes is to regulate the migration of fishes, according to M. Marangoni. They have to counteract its action by their fins. It produces a double instability, one of level, the other of position.

ANTHROPOLOGY.[1]

Pueblo Indians.—The Pueblos of New Mexico and Arizona are towns or villages inhabited by Indians of various races and speaking different languages. When we omit the Indians inhab-

[1] Edited by Prof. Otis T. Mason, Columbian College, Washington, D. C.