picture of the great diversity which exists in nature, than if we allow ourselves to be guided chiefly by anatomical data; and my object at present is mainly to urge the necessity of studies in these different directions, with a view of improving our classification, and to insist upon the necessity of keeping in view, at the same time, all these facts, whenever we attempt to form a correct idea of the manifested relations which exist throughout the creation, as to all their different types, from the earliest period of the existence of animals up to the present day.

3. *Observations on the Blind Fish of the Mammoth Cave;* by L. Agassiz. (In reply to a letter of enquiry from the Senior Editor.)—The blind fish of the Mammoth Cave, was for the first time described in 1842, in the Zoology of New York, by Dr. Dekay, Part 3d, page 187, under the name of "Amblyopsis spelæus," and referred, with doubt, to the family of "Siluridæ," on account of a remote resemblance to my genus Cetopsis. Dr. J. Wyman has published a more minute description of it, with very interesting anatomical details, in vol. xlv, of the American Journal of Science and Arts, 1843, page 94.

In 1844, Dr. Tellkampf published a more extended description, with figures, in "Müller's Archiv," for 1844, and mentioned several other animals, found also in the cave, among which the most interesting is—a Crustacean, which he calls, "Astacus pellucidus," already mentioned, but not described by Mr. Thompson, President of the Natural History Society of Belfast. Both Thompson and Tellkampf speak of eyes, in this species; but they are mistaken. I have examined several specimens, and satisfied myself, that the peduncle of the eye only, exists, but there are no visible facets at its extremity, as in other crawfish.

Mr. Thompson mentions farther crickets, allied to "Phalangopsis longipes," of which Tellkampf says that it occurs throughout the cave. Of Spiders, Dr. Tellkampf, found two eyeless small, white species, which he calls "Phalangodes armata" and "Anthrobia monmouthia"—flies, of the genus "Anthomyia"—a minute shrimp, called by him "Triura cavernicola," and two blind beetles—"Anophthalmus Tellkampfii," of Erichson, and "Adelops hirtus;" of most of which Dr. Tellkampf has published a full description and figures, in a subsequent paper, inserted in Erichson's Archiv, 1844, page 318.

The infusoria observed in the cave resemble "Monas kolpoda," "Monas socialis" and "Bodo intestinalis"—a new Chilomonas, which he calls "Ch. emarginata," and a species, allied to "Kolpoda cucullus."

As already mentioned, Dekay has referred the blind fish, with doubt, to the family of Siluridæ. Dr. Tellkampf however establishes for it a distinct family. Dr. Storer, in his Synopsis of the fishes of North America, published in 1846, in the Memoirs of the American Academy of Arts and Sciences, is also of opinion that it should constitute a distinct family, to which he gives the new name of "Hypsæidæ," page 435. From the circumstance of its being viviparous, from the character of its scales, and from the form and structure of its head, I am inclined to consider this fish rather as an aberrant type of my family of Cyprinodonts.

You ask me to give my opinion, respecting the primitive state of the eyeless animals of the Mammoth Cave. This is one of the most important questions to settle in Natural History, and I have several years

portant questions to settle in Natural History, and I have several years ago, proposed a plan for its investigation, which, if well conducted, would lead to as important results, as any series of investigations, which can be conceived, for it might settle, once for ever, the question, in what condition and where the animals now living on the earth, were first called into existence. But the investigation would involve such long and laborious researches, that I doubt whether it will ever be undertaken. It has occurred to me, that the final step would be a thorough anatomical study of the species found in the cave, with extensive comparison of allied species, found elsewhere—next, an investigation of the embryology of all of them, and when fully prepared by such researches, an attempt to raise embryos, of the species found in the cave, under various circumstances, different from those, in which they are naturally found at present.

If physical circumstances ever modified organized beings, it should be easily ascertained here. For my own part, however, I think that the blind animals of the cave would only show organs of vision during their embryonic state, in conformity with the normal development of the respective types to which they belong, and that even when placed under a moderate influence of light, incapable of injuring them, but sufficient to favor the growth of their eyes in the allied species provided with them, the young of those species peculiar to the cave would gradually grow blind, while the others would acquire perfect eyes; for I am convinced, from all I know of the geographical distribution of animals, that they were created under the circumstances in which they now live, within the limits over which they range, and with the structural peculiarities which characterize them, at the present day. But this is a mere inference, and whoever would settle the question by direct experiment, might be sure to earn the everlasting gratitude of men of science. And here is a great aim for the young American naturalist who would not shrink from the idea of devoting his life to the solution of one great question.

4. *On the Carcinological Collections of the United States;* by Prof. Lewis R. Gibbes, (Proc. Amer. Assoc., 3d meeting held at Charleston, S. C., March, 1850.)—This catalogue of the species of Crustacea in the principal collections in this country (exclusive of that of the Exploring Expedition at Washington) is enriched with many valuable notes, by the author, and descriptions of several new species. The names of the new species are as follows:—*Hayas aculeata*, from Key West, *Cryptopodia granulata*, from Charleston Harbor, *Carpilius lividus*, from the Sandwich Islands, *Carpilius prætermissus*, E. Indies, *Chlorodius Floridanus*, from Key West, *Panopæus Wurdemannii*, from Enterprise, Florida, *Lupa Sayi*, (Lupa pelagica of *Say*,) *Grapsus transversus*, from Key West, *Hepatus decorus*, Charleston Harbor, *Ilia armata*, *Porcellana ocellata*, coast of S. Carolina, *P. armata*, from Florida, *P. sexspinosa*, from Key West, *P. magnifica*, from Vera Cruz, *P. macrocheles*, coast of S. Carolina, *Ibacus novemdentatus*, *Callianassa grandimana*, from Key West, *Alpheus formosus*, from Key West, *Pontonia domestica*, coast of S. Carolina, *Hippolyte Wurdemanni*, from Key West, *H. paludosa*, fresh-water ponds, S. Carolina, *Squilla neglecta*, Charleston Harbor.