Great interest was aroused at the time, chiefly by reason of the then regarded anomalousness of its habitat, but also by reason of certain other features more or less peculiar, such as the apparent absence of female medusæ, and yet the occurrence of young apparently arising directly from eggs.

It has since been observed in several other localities and under a similar set of conditions, namely, in artificial tanks, or aquaria used for the cultivation of the large water lily, *Victoria regia,* a native of South America. Records of such occurrence have been made at Lyons and at Munich, in 1901 and 1905 respectively. In all these cases it has appeared and behaved in very much the same way as in London, and the same anomalous disparity of sex has been noted.

The discovery of the medusa, apparently the same species, though on this point I am not yet prepared to state definitely, in this country is naturally, therefore, a matter of some interest to students of animal distribution, and it is the hope of the writer that additional facts bearing upon several of the problems as yet unsolved may be secured. It was a matter of pleasure, therefore, to undertake, with the cooperation of the Bureau of Fisheries, to secure all the data and material which could be had. Thus far only a beginning has been made, and this preliminary notice is only intended to announce the general facts, reserving for a later contribution a fuller and more detailed account of the history of its occurrence. It may be noted in closing that, as in former cases, only male medusæ have been observed. And, furthermore, that no foreign plants have been introduced in these aquaria for several years, and that the *Victoria regia* has never been grown here.

P. S.—A communication was received by the writer dated September 30, stating that the medusæ had suddenly "disappeared as mysteriously as they came," and that not a single specimen could be found where for weeks they had been abundant.

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September 20, 1907

GAMBUSIA IN NEW JERSEY

PROFESSOR JOHN B. SMITH has called attention to the introduction of *Gambusia affinis* in New Jersey waters as a check to the development of the mosquito, as neither he nor his assistants have met with it in their investigations. It was, therefore, with considerable interest that quite recently Messrs. H. Walker Hand and O. H. Brown assisted me in finding this little minnow in large numbers in Teal's Branch of Pond Creek, a small tributary of Delaware Bay at Higbee's Beach. We also found it very abundant in New England Creek, another tributary of Delaware Bay just north. There it was associated with large numbers of mostly young or small *Fundulus heteroclitus macrolepidotus, Lucania parva, Cyprinodon variegatus, Menidia menidia notata, Eupomotis gibbosus* and *Palæmonetes vulgaris.* The streams mentioned are mainly brackish, though fresh near their headwaters, more or less shallow with muddy bottoms, though with even a clear and gentle current. The males of *Gambusia* were equally abundant with the females, though the latter were usually larger. The occurrence of *Plethodon erythronotus* at Higbee's Beach is also interesting.

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COLOR SPORTS AMONG THE INSECTS

IN the August 16 number of SCIENCE Mr. A. Franklin Shull puts on record the occurrence of a pink katydid, *Amblycorypha oblongifolia* DeG., which was taken near Detroit, Mich., on August 12, and he invites others to place on record their captures of similarly colored insects. Professor J. B. Smith has, in years past, taken several pink katydids in the pine barrens of southern New Jersey, and on August 1 of the current year I took a male specimen of the above species at Lahaway, Ocean County, New Jersey. None of Professor Smith's specimens retained their delicate color more than a few weeks at most and the Lahaway example lost most of its pink color in about two weeks, though the head, pronotum, wing veins and parts of the legs are up to this date still a decided pink. The

specimen, when fresh, agreed very well with the description given by Mr. Shull, but it has a third row of brown speckles on the tegmina between the radial and cubital veins. Mr. Scudder's figure in the *Entomological News* is undoubtedly overcolored, being more reddish than pink and the speckles are also probably more prominently shown than really exists in the living insects.

Dr. Wm. M. Wheeler in a recent number of the *Journal of the New York Entomological Society* says, that of the twenty records of these insects the only male known is that taken by Mr. Scudder. Mr. Shull's specimen and the one under present consideration, both being males, are therefore of unusual interest.

The theory that the pink coloring is due to the influence of cold on the developing nymph seems to be completely upset when we consider that August 1 is an early date for a full-grown specimen and that the species is found until frost.

These pink "sports" are not confined to the Orthoptera but occur in the Hemiptera also. I took a pink specimen of *Amphiscepa bivittata* Say, a normally green insect, at Lakehurst, August 23, a rarity with this species; but the tettigonid, *Gypona octolineata* Say is almost as often pink as green in my experience.

John A. Grossbeck

SPECIAL ARTICLES

PLEISTOCENE TERRACING IN THE NORTH CAROLINA COASTAL PLAIN[1]

Terraces of Pleistocene age occurring in the coastal plain of Maryland have been described by Professor G. B. Shattuck in several papers, including the recent report on the "Pliocene and Pleistocene Deposits of Maryland." In the fall of 1906 the writer, while engaged in the study of the underground waters of the coastal plain of North Carolina for the United States Geological Survey, noticed similar terracing in that area, and a series of terraces extending across the state from north to south, separated from each other by well-defined seaward facing scarps which extend approximately in a north-south line, rising one above the other from sea level to elevations of over 400 feet along the eastern edge of the Piedmont Plateau, were traced out.

Reentrants, sometimes of great breadth, extend from the lower up into the higher and older terraces. In North Carolina the conditions existing during Pleistocene time were such that the terraces were formed over broad areas and each succeeding terrace was well developed and still preserves much of the level character which it had when first uplifted. The lowest lying and most recent terrace retains almost perfectly its original level surface, being but little dissected by stream erosion. Each succeeding higher and older terrace is more and more dissected until in the oldest and highest mere remnants of the former level surface remain and the separating scarps can only be traced with difficulty.

In general, the materials composing the terraces are thicker, more highly colored, more heterogeneous in composition, more highly cross-bedded, and contain a large per cent. of pebbles and boulders of the crystalline rocks near the Piedmont border than farther eastward. Seaward the material becomes finer, the deposits thinner and the coloring less brilliant, until in the lowest terrace the sandy loams are gray or mottled with a small amount of yellow, and grade down into interstratified bluish quartz sands and bluish to drab clays.

A noticeable feature in nearly all sections of the terrace materials is the gradation from a mottled sandy loam at the surface (the mottling at places showing evidences of being due to the disturbance of stratified material of slightly different colors) to stratified sands and clays or sands and gravels of different colors at the base.

The lowest lying and youngest of the terraces in the North Carolina coastal plain attains at its maximum development a width of over 60 miles in the northeastern part of the state. It includes the area enclosed by the present "banks" from Beaufort to the Virginia line and east of the meridian 76° 35′. In the southeastern part of the coastal plain this terrace is present only as a narrow strip

[1] Published by permission of the director of the U. S. Geological Survey.