

the anterior region of the organ. The labyrinth is continuous at its anterior median lobe with a short duct which leads to the exterior and opens on a tubercle on the base of the antenna. The large vesicle lies dorsal to the endsac and opens into the duct leading from the labyrinth, but has no direct communication with either the endsac or labyrinth. The histological structure of the labyrinth and endsac are different and the transition at the point of communication between their cavities is sharp. The histological structure of the vesicle is very much like that of the labyrinth.

The first appearance of the organ in the development of the embryo is at the time when the first and second pair of antennæ, the mandibles and the first maxillæ are marked off. This is approximately 15 to 18 days after egg extrusion in summer (August) eggs. The organ at first consists of a differentiation of certain mesodermic cells in the axis of the second antenna near its proximal end. These form the endsac. The lumen is intracellular. About ten days after the first differentiation of the cells which are destined to form the endsac, and at a time when this part of the organ is well marked, there appears an ectodermic ingrowth from the ventral face of the second antenna. It is at first solid, but within a short time an intercellular lumen is formed. From this ectodermic ingrowth arise the labyrinth, the duct to the exterior, and the vesicle. Thus the two parts arise independently, one from the mesoderm, the other from the ectoderm, and each has characteristic histological conditions throughout development. They are both well marked and with distinct lumina at about six weeks (for summer eggs) after egg extrusion, but not until a comparatively late period of embryonic development (about one month before hatching) do the lumina of these two parts become confluent. At the time of hatching each part is a re-

latively simple sac, but during larval life a complexity approaching that in the adult organ is reached. This is brought about by a series of evaginations of the walls of the sacs, which later anastomose in a variety of ways, and not by the coiling of a tubule. The histological conditions seem to indicate that the organ is not functional until the beginning of larval life.

The results obtained as to the development are in general accord with the conditions found by Kingsley in Crangon and by Boutchinsky in Gebia, but are at variance with the development of the organ in *As-tacus* as described by Reichenbach.

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*RAISED SHORE-LINES ON CAPE MAYSI, CUBA.*

At the eastern end of the island of Cuba, on and in the vicinity of the promontory known as Cape Maysi, is the most magnificent example of raised shore-lines as seen from the ocean that I know of. They are in the form of huge wave-cut benches extending with perfect regularity and practical horizontality along the face of a long moderate slope and around several promontories. When a profile of the latter is seen from a passing ship the sharp-cut, step-like form readily attracts the attention even of the unscientific observer. The terraces are found one above another at somewhat irregular intervals, are of different degrees of development, possibly as much as a dozen in number, and seem to extend to an altitude of about 1,000 feet above the sea. Above the last terrace visible the land has a topography indicative of sub-aërial erosion. The view is backed by the high range of the Copper Mountains, whose crest along this portion of the island is smooth and even compared with most West Indian mountain ranges.

To the geologist the terraces of Cape Maysi are chiefly interesting because they demonstrate a recent uplift of this part of the island of Cuba. This is singular, be-

cause the island of Jamaica, but little more than 100 miles distant, is without evidence of such a very recent uplift. To a certain extent the two islands have had a different geologic history.

The extreme recency, geologically speaking, of the uplift of Cape Maysi is indicated by the perfection of the terraces. They have suffered practically no sub-aërial erosion. Although the land is a comparatively steep slope, constituting a very favorable situation for erosion, no gutters, ravines or valleys were seen from the ocean, with two exceptions. Even these exceptions tell of the newness of the land surface. They are two deep narrow cañons formed by streams flowing down over the terraced slope. Where exposed on the precipitous face of one of the large raised sea-cliffs, the cañons are just as narrow at the top as at the bottom.

I am inclined to believe that the beginning of this series of unsteady or periodic uplifts of the eastern end of Cuba belongs later in the geological scale than the opening of the Modern or present period, and it is continuing at the present day. The sea is now engaged in forming a sea-cliff and narrow submarine shelf precisely like the raised shore-lines above it. In not a very long time, perhaps a few hundred years, another incipient uplift will be due and another and lower bench begun.

These few remarks have been given to stimulate the study of this eastern Cuban region, which will result in some important additions to our knowledge of West Indian geology. Undoubtedly other travelers have noticed these beautiful terraces on Cape Maysi and studied them from passing ships, as I have, but a landing should be effected on the coast and a close examination of them made, particularly of the two dark cañons above mentioned.

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#### CURRENT NOTES ON ANTHROPOLOGY.

##### ARCHIVE OF THE SCIENCE OF RELIGION.

THE second number of this journal confirms the favorable opinion created by its first issue.

Professor Siecke, of Berlin, begins a profound study of the god Rudra in the Rig Veda (the Vedic prototype of Siva), and one by Dr. Waser on the Greek Charon. Professor Steinthal discusses the associations of the toad in mythology, while the editor, Dr. H. Achelis, considers the theory of the origin of religion from social psychology. Several reviews close the number, one a note upon 'kynanthropy,' or the transformation of the human into the dog form. This is allied to the better known 'lycanthropy,' but is familiar even in American folk-lore, where the 'black dog' is still regarded as the uncanny embodiment of the Evil One. The article reviewed is by Roscher in the *Transactions* of the Saxon Society of Sciences. The *Archiv* is published by J. C. B. Mohr, Leipzig.

##### ARCHÆOLOGY OF CORSICA.

A REPORT by M. Caziot in the *Bulletin* of the Paris Anthropological Society (1897, Fasc. 5) contains new information on the archæology of Corsica.

Neither the caverns nor the fields yield traces of palæolithic man; but numbers of axes in polished stone, points of arrows and lances, scrapers and hammers show that in neolithic times the island was inhabited.

Pure native copper occurs in the mountains, and was exploited during the neolithic epoch. The quarries are still found, and many objects in pure copper must be referred to the late stone age. To this time, also, are attributed the dolmens and ancient graves where inhumation was practiced. Pottery in that epoch was scarce and rarely made.

Following the close of the polished stone age, those of bronze and of iron are dis-