

distributed specimens of *Demodex* and *Coccidium* parasites for class work, and made a plea for a more adequate study of parasites in college work as a preparation for medical studies.

Dr. Bigelow (Institute of Technology) described observations on the budding of the scyphistoma of *Cassiopea*, which tend to uphold the views of Claus and are opposed to those of Götte. The bud forms in the plane of one of the principal radii as an evagination of both layers. It is set free as a ciliated free-swimming planula and the mouth is afterwards developed, not at the distal, but the proximal or basal end. No stomodæal invagination of ectoderm occurs, and the proboscis is therefore lined by entoderm. The gastric pouches do not arise as evaginations, but by the inward growth of septa from the mesogloea. The first tentacles to be formed are the four per-radial; the numbers in following stages are normally 8, 16 and 32.

CURRENT NOTES ON PHYSIOGRAPHY.

TOPOGRAPHICAL MAP OF ITALY.

FOUR sheets (Nos. 7, 18, 33, 46) of the topographical map of Italy—1 : 100,000—published recently by the *Istituto geografico militare*, cover a stretch of country from the crest of the Alps in the Bernina group, with many glaciers, to the northern side of the plain of the Po, where the river Adda emerges from the foothills. The northernmost sheet includes the divide between the Maira and the Inn, separating the waters of the Po and the Danube; here the northward migration of the divide, as described by Heim, has caused the formation of the little lakes of the Engadine (*Die Seen des Oberengadin*, *Jahrb. Schw. Alpenklub*, XV, 429); certain back-handed branches of the Maira, once tributaries of the Inn, are clearly shown. The second sheet exhibits the deep longitudinal valley of the Adda about Sondrio, 2,000 meters beneath

the mountains on either side, the stream being continually thrown to one or the other side of its well-graded floor by the large alluvial fans of lateral streams. The two southern sheets show a number of torrential streams with tangled channels flowing southward in almost parallel courses across the great alluvial plain, whose slope is here about twenty feet to the mile; the banks of the streams often being somewhat higher than the ground between them, and thus indicating that portions of the plain consist of numerous alluvial fans, confluent laterally; a form very well adapted to the construction of the numerous canals that are led from the streams to the fields. The maps being printed in a single black impression, it is often difficult to distinguish streams and canals from roads.

MAP OF THE GERMAN EMPIRE. 1 : 1,000,000.

SEVERAL interesting features appear on certain sheets of the German topographical map, published last year and this. One of the broad dry valleys cut in the Piedmont slope of Bavaria by some extinct glacial streams, is exhibited on the Mindelsheim (636) and Burgau (622) sheets. The tangled channel of the torrential Inn and a glimpse of the shallow canyon of the Danube below Passau are found on the Neuhau-a-Inn, sheet (628). Further up stream the Inn manifests a peculiarly strong tendency to follow the right-hand side of its broad valley floor, here at least two miles from side to side (Landau sheet 612). The great north-facing Jurassic escarpment of the Swabian Alp in Wurtemberg, is in part shown on the Aalen sheet (592), east of Stuttgart; the location of Aalen at the northern base of the escarpment, and of the road and railroad southward across the Alp from it, depend on the occurrence there of one of the several notches in the rim of the upland, representing the trough of a beheaded river, whose winding lower course

on the southern slope of the Alp gradually gathers a little stream, the Brenz, as appears on the next sheet (607). Railroads crossing the Alp at Geislingen and Ebingen, further southwest, are similarly located; thus exemplifying the principle announced by Oldham (SCIENCE, II., 688). There are three sheets, 559, 574, and 590, of somewhat earlier issue on which the deep-incised meanders of the Neckar and its abandoned loops are beautifully portrayed.

TOPOGRAPHICAL MAP OF DENMARK, 1:100,000.

THE beautiful sheets of this series, printed in six colors for different soils and cultures, with most delicate expression, have comparatively little of importance to show of the flat inland topography, but exhibit many interesting coastal outlines.

On the inland waters of Limfjord (Lögstör sheet), the shore frequently swings in curves of small radius or projects in fine sharp spits, appropriate to the easy turning of litoral currents of small volume and strength; but on the exposed coast of the west and north, facing on North sea, the shore is modulated in long sweeping curves, adjusted to the slow swinging of the larger bodies of water there in movement. The Thisted sheet and others of previous issue as far north as Skagen, contain many examples of this kind. This recalls the different scale of meanders adopted by small brooks and large rivers. The *offset*, or outstanding position of one stretch of shoreline with respect to the next, may be taken to indicate the up-stream portion of the prevailing litoral current; this feature also being neatly shown on the North sea coast of the Thisted sheet, where the current seems to come from the southwest. Along the eastern coast, a north-to-south movement is implied by the offset of the coast north of the outlet of Limfjord compared to that on the south (Aalborg sheet); and this is clearly confirmed by the long sandbar of

Stensnæs near by, tangentially overlapping southward (Frederikshavn sheet).

W. M. DAVIS.

HARVARD UNIVERSITY.

CURRENT NOTES ON ANTHROPOLOGY.

THE ETHNOLOGY OF MADAGASCAR.

THE occupation of the island of Madagascar by the French, in the year 1895, led to the publication of a number of articles on the history, languages and ethnology of the island. The two which I have found most instructive are one in the *Revue Scientifique*, by Prof. E. T. Hamy, 'Les Races Humaines de Madagascar,' and one in the *Journal of the Anthropological Institute*, by J. T. Last, 'on the languages of Madagascar.'

It is gratifying to find that both agree on the main question involved—the relationship of the oldest historic inhabitants of the island. This is distinctly *not* African, as many have supposed; nor is it Arabic, as some have argued; but it is 'Indonesian,' or 'Malayo-Polynesian,' that is, the earliest known possessors of the soil came from Malasia and Melanesia, and belonged to the so-called 'brown race.' Their language to this day is strongly affined to the Malayan; and this is true not merely of the dominant Hovas, but of the mass of the people. For about a thousand years, however, there has been a constant importation of negroes from Africa, and an arrival of colonists from the northern Semites; and these two admixtures have deeply tinged the blood of the stock.

PRE-GLACIAL MAN IN ENGLAND.

PROFESSOR Joseph Prestwich has lately published a volume entitled 'Collected Papers on some Controverted Questions in Geology' (London, 1895). Two of these papers have a deep interest for the anthropologist, one on the glacial period with reference to the antiquity of man in western