

1829. Certain corals have been observed living in brackish or even nearly fresh water, others in the mud about the mangrove roots, and one species seemed to suffer little from exposure at low tide to the sun and air. The statement of Edwards and Haime, that a species of coral common in the Red Sea is found in the Dead Sea, is another matter which will bear renewed examination. The report supplements in a satisfactory manner the valuable work of Professor Moseley, and will add materially to the reputation of its author.

This valuable contribution to comparative osteology ('Report on the human crania and other bones of the skeleton,' part ii., by Sir William Turner) is largely devoted to the discussion of the pelvis. The characteristics of the black races differ among themselves as well as from those of the European type, which, as by far the best known, is adopted as a standard of comparison. In most of the negroids the conjugate diameter is long compared with the transverse, and the height increases. In the negroes and Tasmanians these characters are less pronounced compared with Europeans. In nearly all the black races the average length of the sacrum is greater than its average breadth, contrary to what occurs with white races, and, in so much, more like a tail. The lumbar curve in the black races, as derived from the vertebrae alone, is concave forward; the clavicle may be longer in proportion to the humerus than with the whites; the scapular index is apparently higher, except with the Bushmen and Australians, while in the Tasmanian it may have been distinctly lower; the radius and tibia are longer in relation to the humerus and femur; the shaft of the upper limb is proportionally shorter than that of the lower limb. In general, racial characteristics appear in the skeleton as well as in the skull. Among existing races osteological characters may be found similar to those of the most ancient known remains; and the differences which exist between the bones of primitive people are no more, in kind or degree, than are to be seen in corresponding parts of men of the present day.

#### AGRICULTURE IN MICHIGAN.

THE Michigan board of agriculture is likewise the governing body of the Michigan agricultural college, and considerably more than half of its twenty-fourth report relates to the latter institution. The general report of the secretary is followed by the inaugural address of the new president, Hon. Edwin Willits, and the reports of the

*Twenty-fourth annual report of the secretary of the state board of agriculture of the state of Michigan, 1884-85. Lansing, State, 1886. 8°.*

president and professors upon the work of their several departments. This, in most cases, is of a twofold character, — instructional and experimental. Of the instructional work it is hardly necessary to speak, further than to say that it follows the modern methods of teaching the physical sciences, and that, as is well known, ample facilities are provided in the way of laboratories, apparatus, farm, garden, park, etc.

The experimental work of such an institution is necessarily subordinated to the work of instruction; and, while valuable experiments have been made, the college by no means takes the same high rank as an experiment-station that it does as a college. In this connection we note that President Willits, in his inaugural, speaks of the Hatch bill, now pending in congress, as a bill "to make all the agricultural colleges experiment-stations." If this is the intent of the bill, it were better left to slumber in committee of the whole. We certainly shall not look for great good from its passage, if the theory prevails that the professors of an agricultural college can successfully conduct an experiment-station in their leisure moments with an income of fifteen thousand dollars per annum.

AN ingenious gentleman of Evanston, Ill., has succeeded in applying the principle of the injector to a grain-elevator. The grain is run from the car to a revolving hopper, through an aperture in the bottom of which is forced a powerful blast of air, which carries the grain a certain distance up a horizontal tube. At intervals in this tube are bends, or horizontal curves, forming relays. These relays act as auxiliary hoppers, a fresh blast of air being admitted at each one, which carries the grain to the next higher relay. In this way the grain may be raised to any desired height. A modification of this device is arranged to raise grain from the hold of a ship or boat.

— A new method of manufacturing illuminating-gas from crude petroleum consists in conducting a stream of the petroleum to a moderately heated chamber, thereby producing vapor and liquid, and then separately conducting the vapor to decomposing-retorts heated to a certain temperature, and at the same time conducting the liquid portions to decomposing-retorts heated to a higher temperature, whereby the respective products are decomposed, and converted to permanent gas, without overheating either portion.

— An Austrian electrician named Marcus is supplying the German navy with a newly invented petroleum-engine for torpedo-boats. The engine is set in motion by electro-magnetism, and is more powerful than a steam-engine of the same size.